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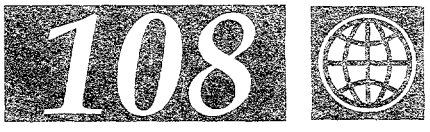

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Debt and International
Finance Division

The World Bank
Washington, D.C.

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Acronyms

ADB	Asian Development Bank
ADETEF	Association pour le Developpement des Echanges en Technologie Economique et Financiere
BIS	Bank for International Settlements
CMEA	Council for Mutual Economic Assistance
CS–DRMS	Commonwealth Secretariat Debt Recording and Management System
DAC	Development Assistance Committee (of the Organization for Economic Cooperation and Development)
DRS	Debtor Reporting System (of the Debt and International Finance Division, IBRD)
IBRD	International Bank for Reconstruction and Development
IDB	Inter–American Development Bank
IDRC	International Research and Development Centre, Canada
IMF	International Monetary Fund
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Program
UNITAR	United Nations Institute for Training and Research
USAID	United States Agency for International Development

Preface

The second Debt Systems Conference, sponsored by the Debt and International Finance Division of the World Bank, was held in Paris on April 24–26, 1990. Tape recordings were made of the daily sessions, which included presentations, the question and answer sessions following presentations, and panel discussions. Many presenters submitted drafts or outlines of their presentations prior to the Conference, for distribution to the participants. Some presenters provided supplemental supporting materials.

During the initial editorial review of this entire corpus, comprising the recordings, the transcripts of the sessions, and the written submissions, it was evident that the results most valuable to a wider audience lie in the interactions among the participants. These proceedings have therefore been structured to retain the sense of dialogue that pervades the recordings. In many instances, presenters departed appreciably from their submitted drafts during the actual presentation. In these cases, the presentation as recorded and transcribed was edited for use in this volume. The paper as submitted will be found in Volume II. In cases where the presenter closely followed the prepared text, the edited text is included here and not in Volume II. Supplemental materials were also consigned to Volume II.

Conference participants were free to use English, Spanish, or French, either in presentations or discussions. For each speaker, simultaneous translation into the other two languages was provided. When a participant spoke in French or Spanish, only the English translation was recorded. The recordings and transcripts therefore already stand at one remove from the speaker's original words. In addition, considerable editorial license has been applied to clarify speakers' verbally expressed thoughts in clear and consistent written discourse. Square brackets have been used to set off those editorial changes or additions which may have affected the substance of the speaker's intended meaning. Obviously, this is a matter of judgment; we apologize for any inadvertent misrepresentation of what the speaker intended to express.

Conference participants were urged to speak frankly and candidly about their experiences as individuals, rather than as official spokespersons for the institutions or governments from which they came. This candor contributes immeasurably to the value of the proceedings; we encourage readers to take what was said in the "unofficial" context in which it was spoken.

Finally, the editor has attempted to identify individual speakers wherever possible. Those who spoke frequently or made presentations became recognizable from their voice. Allusions by the speaker or others were also used to establish identity indirectly. We regret not being able to identify all speakers and apologize for any misidentifications.

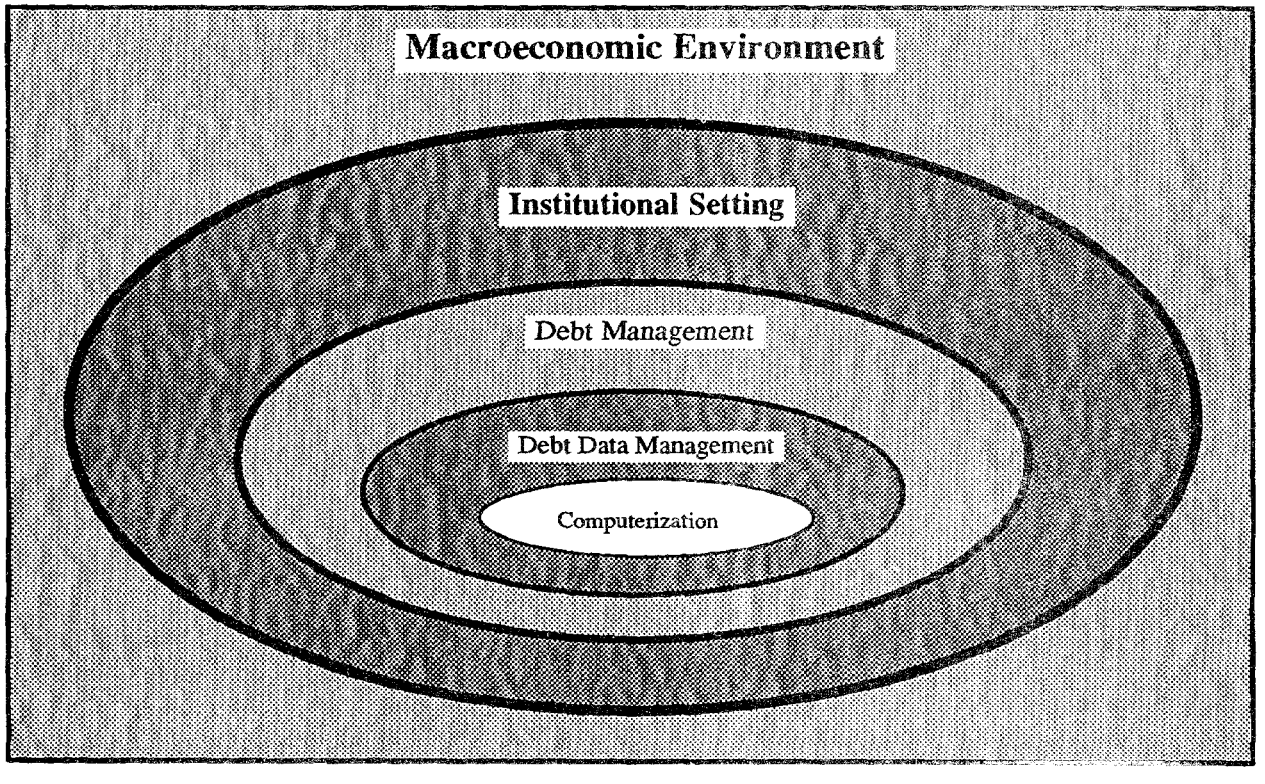
Introduction

I. Summary

The Widening Horizon of Debt Systems

One of the principal goals of the first Debt Systems Conference, held in 1984, was to disseminate information on computerization options for debt management. That initial goal appears to have been largely attained. However, the second Debt Systems Conference, held in April 1989, shows that successful functioning of a "computerized" debt office depends on far more than informed acquisition of hardware and software. Before the benefits of a smoothly functioning debt management system can be reaped, the *institutional setting* for that system must be appropriate, both to supply the system with data and to make use of the system's information products. To apply the metaphor introduced at this conference by one of the participants, success now depends more on solving the data-gathering problems *upstream* from the computer system and the data-dissemination problems *downstream* from the system than on machine capacity or program power.

Both the potential benefits of automating a country's debt office and the obstacles to successful computerization can be graphically summarized by the nested contexts shown in Figure 1. Computerization directly affects *debt data management*, the processes and procedures for collating, storing, retrieving, and analyzing data on a loan-by-loan basis. Debt data management, in turn, supports the information requirements for effective *debt management*. The ambit of debt management extends from policymaking, control, and advisory functions, through the operational functions of contracting new borrowings and preparing for debt reorganizations, to the monitoring, statistical, and accounting functions. Every country that manages its debt must perform all of these functions, whether they reside in one agency or are distributed among many.



The Institutional Setting of Debt Management

The Conference participants came from diverse backgrounds: debt office managers and systems managers from the developing countries, staff of international organizations, consultants to high government officials, and computer experts. Despite this diversity, their accounts of problems, success factors, and general experience weave a strikingly clear pattern of the interrelation between the institutional setting of debt management in a developing country and the country's experience with computerization of its debt office.

Debt management is in a country's own best interests. Sound debt management is, first and foremost, a sensible and flexible way to aid governments in taking informed decisions to minimize the cost of borrowing, refinancing, or reducing the country's debt burden. This theme found explicit statement and illustration in many of the discussion sessions; it is also a clear implication of most of the presentations. The debt reporting requirements of institutions like the World Bank should only be a secondary consideration in the government's support for its debt office.

One conference participant estimated that a highly indebted middle–income country could pay for all staff and computers required for good debt management with what it pays out in debt service every two or three hours. The potential savings from good debt management should be adequate incentive for governments to invest in their debt offices as potentially cost–effective operations. This reasoning, however, must be directed to a level of government high enough to respond to the trade–off between increased budgetary support for the debt office and the balance of payments implications of continued poor debt management. Here again, the relative position of the debt office in the government hierarchy is a vital factor in its chances for success. Where the debt office lacks the requisite status, the best hope seems to lie with active intervention on its behalf by the international bodies to whom governments do listen.

Success Factors

Good debt management requires high level decisionmaking. Debt offices have often failed in their efforts to sell the benefits of sound debt management to the ultimate decisionmakers: the political establishment. Help in impressing upon the higher levels of governments the importance of debt management was singled out as a major contribution that international organizations have made in several countries and should pursue far more vigorously in the future.

Two other success factors repeatedly cited for well–managed debt offices are a strong legal framework, to improve data gathering compliance upstream, and long–term staff stability. A strong legal framework is the key to alleviating institutional rivalry and enforcing data reporting requirements, particularly the flow of information from parastatals and the private sector. Well–functioning debt offices retain key staff for ten years or more. Trained staff with a balanced skills mix contribute to successful debt management, as do good procedures and methods.

Location and Function of the Debt Office

The location of the debt office is an important issue. However, no single solution was found to be best in all situations; the best solution is the one that works best within a given country's governmental framework and traditions. There are examples of division of responsibility along functional lines, as well as across types of borrowing. It may not be practical to centralize all functions in one agency. A more pragmatic approach is to establish a centralized statistical unit that integrates data from all participants in the upstream processes and produces reports for the other debt management functions downstream.

If a centralized approach is chosen, then sufficient legal and administrative powers must be vested in the debt office to ensure that it can carry out its mission. Ready access to the higher echelons of power is also important.

Staffing, Training and Technical Assistance

The key problems that debt managers face in the area of staffing and training are high staff turnover, low salary and poor career prospects, lack of training opportunities, differences in the quality of staff across institutions (for example, central bank versus ministry of finance), and isolation among debtor countries.

Low salaries pose special dilemmas in recruiting, training, and retaining human resources. The debt office staff that can be hired at going rates require special training. Yet this training increases the turnover rate, because staff can now command a higher salary in the private sector.

On–the–job training seems more advantageous than formal training. When combined with communication among debt offices, on–the–job training

was considered the most effective way to train staff. In the past, external technical assistance for both institution–building and debt office computerization has often taken the form of "expert" consultants, typically from a developed country. The debt office managers, and some participants from multinational organizations, were far less sanguine about this form of assistance than about debt office staff development. The participants judged external consultants to have been largely unsuccessful in training local counterparts. The difficulty of getting rid of an unsatisfactory consultant was raised; clearly better quality control is needed over the provision and receipt of technical assistance.

There now exists a largely untapped resource base for technical assistance within the debt offices of the more experienced debtor countries. The resource base for debt management technical assistance rests primarily with debt office staff or people with similar experience. Positive recommendations in this respect were to train debt office staff by organizing inter–agency and inter–country visits, perhaps lasting a month or more.

The competence governments need to perform good debt management is available within the debtor countries. To muster it, governments should lower the barriers between the public and private sectors; eliminate rigid staff rules; and modernize hiring practices, salary scales, and outmoded bureaucratic decisionmaking systems. One long–term solution that could be profitable in some situations is to establish the debt office as a parastatal institution. If well run, the debt office can be a very profitable investment.

Also, debtor countries should cooperate and share information with each other, as the creditor countries have been doing for years. In addition to ministerial–level contacts, there should be regular contacts on substantive issues at the technical level, similar to the ongoing communications among mid–level managers and technical personnel of the developed countries. Participants urged the multinational bodies to support efforts that would bring debt offices into better contact with each other. This might occur through one–time meetings or on a regular basis.

Participants also voiced a need for a central source of information on training and technical assistance opportunities. UNITAR has a project to coordinate information of this sort for Africa; it was suggested that the World Bank support a similar service for other regions.

Debt Data Management Within Debt Management Functions

The statistical/accounting function of debt management is the one most closely tied to managing debt data. This function obviously provides better support to the other debt management functions when computerization of its debt data succeeds. In addition, though, the conference's presentations and discussion sessions emphasize the less obvious but powerful ways in which debt management problems undermine successful computerization. The obstacles confronting debt data management in many countries were reported to include:

- Proliferation of uncoordinated debt data sources
- A lack of standard lending practices
- Complexity of the debt environment resulting from restructuring, financial engineering, the complexity of the legal framework, and outdated decisionmaking and audit processes
- The low level of the debt management function, including skilled and trained manpower, in the government hierarchy.

The most recalcitrant problems of debt management in developing countries trace to two key factors: the lack of resources—human and material—and the low access to power of the debt office. Until debtor governments face this issue, debt management will continue to be a problem. The sources of these problems—and the methods of addressing them suggested by the Conference participants—move us farther still from data processing issues to the entire institutional setting for debt management.

Debt offices should develop tools for debt data cross–checking: within the country, by comparing data from period to period of each debt–incurring entity; externally, by comparing their national data (gathered from both debtors and creditors) with the international sources of creditor data. Foremost among the latter are the OECD's Creditor Reporting System and the data on assets and liabilities of banks, compiled by the Bank of International Settlements (BIS). Where appropriate, the results of external cross–checking should be used to improve data gathering activities in–country.

Debt Office Computerization in Its Institutional Setting

A good deal of information emerged from the conference on the existing relations between debt office computerization and the larger institutional setting. An encouraging sign is that debt management information

systems have improved; they were no longer listed among the critical problems facing debt managers. Despite some missing functionality and flexibility, most of the systems in place seem to be meeting at least the immediate needs. This success has in turn fostered an overdue awareness of the real requirements for institution building and the need to address both the upstream and downstream aspects of debt management.

Computer systems can help countries organize their debt management, but they are not a panacea. Nor do they operate in a vacuum. In addition to the computer system itself, debt management requires stable, trained, staff, appropriate legal and institutional arrangements, and effective communication and cooperation between suppliers of data and users of data.

Until recently, computer systems have supported only the accounting, statistical, and monitoring functions of debt management; little emphasis has been placed on the information needs of other functions: the policy, regulatory, and operational functions. The information base for these systems is normally at least partly available within each country and partly available from commercial or noncommercial international sources. In this as in other debt management areas, sharing information among borrowers can be highly productive.

Among the serious problems that continue to plague computerized debt systems were mentioned:

- The absence of accurate user requirements
- The lack of a coordinated plan for debt information management
- Duplication of effort within an office or across offices in different institutions
- Little or no data interface between systems carrying the same or complementary information
- Inadequate resources, both material and human
- The lack of express political will to support the system.

Although software supplied by the international organizations or commercial vendors is clearly not a panacea for debt management problems, it can be a cost–effective way to deliver knowledge about debt management. Even the preliminary effort to prepare for the introduction of a computerized system in a debt office forces a modicum of organization. Both debt office managers and international consultants reported that initial feasibility studies for system procurement often uncovered the need to organize the existing debt information better, before undertaking system development or procurement.

Likely directions for future enhancements of debt management systems were outlined. The suppliers of software packages should provide the capability to customize the package. Analytical support tools to facilitate policy and strategy evaluation are in demand. Ways are needed to employ the computer in organizing and accessing legal, regulatory, and procedural information. Access to other relevant databases and networks, nationally and internationally, can support information sharing among debtor countries.

Role of External Technical Assistance

The participants' negative assessment of highly paid consultants from the developed countries as a means of providing technical assistance has been noted already. There were also important positive recommendations on where external assistance could be most effective.

Technical assistance should focus more on the upstream and downstream aspects of debt management, rather than merely providing computer software. Because debt management is closely linked to public administration issues, one suggestion was to fund it under the UNDP's recently adopted Management Development Program (MDP). This program is designed to help countries restructure their public sector for more effective administration.

A variety of technical assistance services are now being offered to the developing countries by both official and private agencies. These services include:

- Diagnostic studies
- Project design, to help prepare for project loans with a technical assistance component
- Monitoring and supervision of projects
- Training courses for debt office staff
- Conferences and seminars
- Development of software tools
- Building capability for in–country financial engineering.

Technical assistance in financial engineering, a relative newcomer, is being provided by the World Bank in conjunction with the UNDP. It involves training personnel from the debtor countries in the use of futures, options, caps and swaps, applied to both assets (such as export commodities) and liabilities (such as external debt). The aim is to enable debtor countries to make their

own decisions on whether and how to hedge their exposure to volatility in interest and exchange rates or commodity prices. The discussions of these techniques emphasized the importance of good debt information systems as a sine qua non for these operations.

Debt Management as a Tool of Macroeconomic Management

The example of technical assistance in financial engineering brings us to the widest context shown in Figure 1 and its relevance to debt management systems. Ultimately, successful debt management requires coordination among all the institutions that (1) incur debt for which the government is or may be responsible; (2) control, manage, or monitor that debt; and (3) raise the resources needed to repay the debt. This must include not only the central bank and the ministries of finance and planning but also the major executing agencies for projects: the ministries of transportation, power, and public works. To the extent that the private sector raises capital that incurs obligations in foreign currencies, it too, must participate, voluntarily or not, in the country's debt management program.

External debt cannot be treated in isolation from other macroeconomic aggregates. It is a factor in both the domestic fiscal environment and the management of balance of payments; it affects and is affected by other factors. For example, in some debtor countries, private non-guaranteed debt has been converted into public debt, with substantial fiscal impact. The country's inflation rate spirals; the result is a chain of unfavorable consequences for real economic growth.

It is, therefore, becoming imperative that debt management units provide accurate forecasts and projections of the macroeconomic impact of proposed borrowing or debt restructuring operations. Debt offices have not always been listened to by their governments; perhaps some fault lies with the debt offices themselves, if the analyses they provide do not address the germane policy issues.

To date, efforts to improve debt management have focused on data collection, validation, and dissemination. As noted above, these efforts fall in the area of debt data management. To a lesser extent, effort has been directed towards organizational issues; these have brought some attention to the institutional setting. But the mechanisms to ensure a regular use of debt analyses, in conjunction with other variables, in economic decisionmaking has not been put in place in a large number of countries. The interactions and the feedback between the borrowing decisions in the current period, the debt servicing profile in the next period, the evolution of the current account balance, and consequences for domestic fiscal policies have not taken firm roots. Some ad-hoc simulations or approximate calculations are carried out, but in a number of countries, a systematic evaluation of the various options in a consistent framework is conspicuous by its absence.

II. Conclusions

Although problems remain both upstream and downstream from the computer-supported operations of debt data management, the Conference participants agreed that these information systems are much closer to an acceptable solution than was the case four years ago.

Debt management is a relatively new (five to ten years old in its present shape) function of government. Building a successful debt management office can take as long as ten years. Perhaps some of the failures reported by participants were necessary steps on the way to better debt management. Seen from this long-term perspective, the developing countries have, perhaps unwittingly, been involved in a research and development activity; governments should not worry too much about false starts, or time and money lost. As in all research activities, the goal must be to learn from past mistakes, to learn from others' successes and errors, and to apply these lessons towards the future.

The creation of a debt management unit and the coordination required for good debt management can be expected to generate resistance from both other agencies and the private sector. Thus, the international organizations with an interest in improving debt management in the developing countries have a major role to play in taking the issues of debt management, including the importance of the debt office, to decisionmakers at the highest levels in their policy dialogue and lending activities.

There is a need for practical demonstrations of how debt managers have saved money for their countries through the intelligent use of debt system information. Documented case histories should be collected and published under the sponsorship of one or more international organizations.

1 Issues in Debt Management
Opening Remarks by the Conference Chairman

Ishrat Husain, World Bank

Good morning, ladies and gentlemen. On behalf of the World Bank and the International Economics Department in the Policy, Planning, and Research complex of the Bank, it is my great pleasure to welcome the delegates from our member countries who are attending this conference and the representatives of the various international and bilateral organizations who have joined us.

Four years ago, when we met here for our first Debt Management Systems Conference, there was a general realization that the developing countries could take advantage of the rapid advances in computer technology to strengthen their debt accounting, statistical, and projection systems. At that time only a few countries had successfully made the transition to fully computerized debt data processing. Since then, a large number of countries have developed or improved their own indigenous systems, bought systems built by private vendors, or relied on systems built by official multilateral agencies.

The first conference thus appears to have met one of its stated objectives, which was to disseminate information on the range of options and choices available in the technology of computerized debt systems. In my view, this is an achievement in which we all can take satisfaction and pride. I also believe that our first conference was successful in raising the consciousness of those making choices to address the right set of questions, concerns, and issues: those which should be addressed to meet the requirements of each specific country situation. Since then, technological advances have taken place that will provide still more powerful tools to solve more complex and sophisticated problems. Such problems include floating interest rates, the diversified set of currencies, and new financial instruments. The system developers have made strenuous efforts to make these products more friendly and responsive to the needs of the users. I am sure that over time this process will gain momentum, and we will all benefit from these advances.

But this morning I would like to raise the following question: Despite considerable progress in the adoption of software packages and very flexible microcomputer (personal computer) hardware systems, have the institutional aspects of debt management kept pace with the technological advances? Among these institutional aspects, I include the supply of manpower, the training of personnel, the consistency and reliability of data, the capacity to maintain and adapt the systems, and the ability to provide meaningful inputs to decisionmakers. My casual empiricism suggests that this hasn't happened; institutional aspects have not advanced at the same pace as the technology. The establishment of administrative and managerial mechanisms to ensure a regular flow of accurate, quality, data in timely fashion for use, in conjunction with the other economic variables, in economic decisionmaking has not been seen in many countries. Therefore, the benefits of computerization have not been maximized to their ultimate potential. I do not want to preempt the discussion of this problem by Mr. Lars Kalderen, who has conducted an in-depth study of it for the UNDP recently. He will be sharing his views and findings with you. But our contacts in the World Bank with our member countries suggest that there are areas which need further focus and development effort. These areas include, first, the validation, cross-checking and reliability of the data, and second, presentation of the data in a form or mode which is sensible to policymakers.

This year we have brought together a different congregation of key players from the developing countries. We have a combination of the people who are responsible for debt management policy, as well as the systems development and maintenance people. We would like these participants from the developing countries to interact with the international organizations and agencies and the bilateral agencies that are active in this particular field. By reflecting on the experiences of the last four years, we want to find out what has worked under which particular set of conditions, what has not worked, and what were the reasons responsible for the

failures. I think that by looking back, by doing and adapting things that have worked well, by adapting them to our own environments, and by avoiding things that have been a disaster or a failure in other countries, we can learn from each other. This would be the best process of learning, one from which we can all benefit.

I would like to leave a few issues for your consideration, and I would very much appreciate it if the discussions from both the country representatives and our institutional representatives could focus on these six issues during the next three days.

First, what is the appropriate role of external technical assistance in developing the local institutional capacity? What has worked in technical assistance, what has not worked, and what can be done to improve and strengthen the delivery of technical assistance? It is not only with respect to debt management that technical assistance has mixed reviews. However, we should try to focus on our experiences with expert advisors, with consultants, and with their local counterparts, to determine whether there has been a synergism among these modes of delivering technical assistance.

The second issue includes the role of staffing, recruitment, and training of debt managers; their relative position in the governmental hierarchy; the skills which are required; the authority and powers they enjoy; and the access they have to the decisionmakers. To my mind this issue has not been very well analyzed so far in our work on debt management systems.

The third issue is how to capture, coordinate, and integrate the information flows originating from different agencies, departments, ministries, and the private sector without actually taking over those functions directly or even posing a threat to the agencies responsible for generating the primary data. It is easy to ask for a centralization of all debt management functions, but I would argue that, pragmatically, this is not the way to go about it. If, then, you do not want a total take–over of all these functions, how do you ensure that all the information flows originate from the primary sources through a decentralized network but are integrated in a central debt data system that is eventually accessible to everyone involved?

The fourth issue is how to sift, distill, and provide to policymakers useful information that is both timely and well focused, and which can be linked with other economic variables, like the balance of payments and fiscal aggregates, so the policymakers can look at debt as part of a broad picture, rather than looking at the debt situation in isolation or in a compartmented manner.

The fifth issue, which to my mind has only recently been touched by the World Bank, IMF, OECD, and BIS, is how to standardize data definitions and concepts, how to classify them into various categories that meet the multifaceted needs of users both internal and external, and how to develop standards and specifications that ensure the data are of acceptable quality. Private non–guaranteed debt may mean one thing to me, but may be classified in the country to mean something else. And when we try to do a comparative, cross– country, study of this animal we call private non–guaranteed debt, we end up talking about apples and oranges. Therefore, there is some need to develop standardized definitions and concepts.

Finally, with so many countries running into increasingly domestic debt problems, does it make sense to continue dealing with external debt by itself? Or, is there justification for combining domestic and external debt management into a single national debt management system, rather than keeping them on parallel tracks? Some of you from Latin America and also from the South Asian countries realize that your obligations on internal debt are creating more pressures on your fiscal policies and domestic balances than do your external debt obligations. Does it make sense that we pay so much attention to trying to get a very articulated system for capturing external debt but neglect the internal debt and do not pay much attention to it?

These are some of the issues which have occurred to me during my brief experience with the debt problems of the developing countries. I am sure that many other problems will come to your minds—the people who are more experienced and have to deal with these problems from day to day. We would all like to have very frank and candid discussions on these issues, so that, during the next three days, we can make the best use of the cumulative knowledge and experience we have in this room. I hope your deliberations are successful and that, at the end of the three days, we all leave better informed of what is happening, what the problems are, and how we can handle them. I welcome you once again on my behalf and on behalf of the World Bank. Thank you very much.

2 Organizing for Efficient Debt Management

Ishrat Husain, IBRD

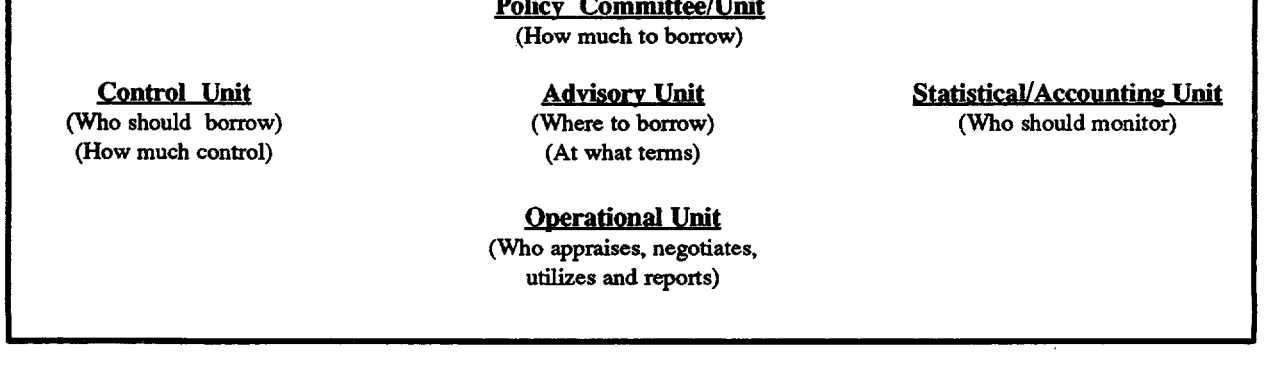
External Debt Management refers to the technical and institutional aspects of organizing external liabilities. The technical aspects focus on the need to determine the level of external resources required and to ensure that terms and conditions of those borrowings are commensurate with the future debt service capacity of the country. The institutional aspects include the administrative, organizational, legislative, accounting, and monitoring aspects of managing both new borrowings and the total stock of debt.

Institutional Aspects of Debt Management

An assessment of the level of external borrowing, its composition, and the terms and conditions at which new resources are borrowed is usually related to macroeconomic goals and balance of payments projections. In the session today, we will talk about the institutional aspects of external debt management. Current practices in organizing the national debt office vary from country to country. They are a function of historical precedent, constitutional division of responsibility between various tiers of governments, the relative role and limits of decisionmaking provided to the private sector, the internal organization of the government itself, and the importance of external debt in overall economic management. Thus, to argue as though one particular model for organizing a national debt office is superior to others is tantamount to fanciful thinking. But there are a number of known functions and processes in the management of debt that must be performed, irrespective of the particular mode of organization. For example, there should be at least several units with clear and distinct terms of reference, manned by personnel with different types of skills. These units should also be able to interact, or feed back into each other's work, in a coherent manner. The exact number of such units or combinations of them may vary, but a few units are a "must." Figure 2–1 summarizes the functional classification of units and their relation to one another.

The first unit is the *policymaking and approving body* that coordinates the activities of different government agencies dealing with external debt. This body, comprising heads of economic ministries such as finance, planning, and the central bank, decides how much should be borrowed in a particular year. It indicates broad parameters about the type of borrowing and gives general guidelines about foreign borrowing policy to other borrowing entities, including private borrowing, if this function is decentralized. It also approves the annual borrowing program of the government and public enterprises.

Figure 2–1. Functional Classification of Debt Management



In a few developing countries, private debt is not subject to prior approval; they only require ex–post registration with the central bank or the ministry of finance. In most other countries, it has to be approved by the central bank on a loan–by–loan basis. In some instances, approval may be automatic if the loan meets conditions of minimum maturity and size or if it is for certain types of projects.

The second unit is a *control unit*, which performs the staff function for, or serves as the secretariat to, the policy body. It usually approves direct government borrowing or delegates approval powers up to certain limits or for certain projects to other tiers of the government, chosen public enterprises, financial intermediaries, or other specified entities. This unit carries out analysis and makes recommendations about the sustainable level of debt servicing burden and the composition of the foreign borrowing appropriate to that level.

The control unit also ensures that guidelines and instructions issued by the policy committee to the operational units (to whom the powers to borrow are delegated) are carried out and implemented. These instructions may pertain to negotiations of loans or guarantee agreements, on–lending terms, etc.

The control unit also continually assesses the impact of new borrowing on overall debt structure. It makes projections of payment obligations so as to coordinate draw–down of loans with reserve management. It also assesses the risk of private capital outflows and guarantees that are being invoked. It may decide to prepay or refinance, in order to take advantage of new loans at better terms or in more desirable currencies. It may also decide to avoid accumulation or bunching of debt servicing by altering the commitment and disbursements patterns of various types and from various sources. This can be accomplished by delaying certain public sector commitments, slowing down private sector approvals, or regulating short–term borrowing in an effort to extend average maturities.

The third unit is an *advisory unit*, which acts as a central focal point that follows trends in international financial markets and interest rate and currency developments. It analyzes and appraises different types of financial instruments for their relevance, applicability, and use by the country. The advisory unit monitors the country's market access, borrowing capacity, lender characteristics, volume, and cost of borrowing. It advises the government on the time to enter the market and the best available borrowing opportunities at the most favorable and acceptable terms. This unit is particularly useful for those market borrowers that float bonds, syndicated loans, and other commercial paper in the international financial markets.

The *operational unit* may be either the financial intermediary that borrows abroad, a parastatal entity, the state government, or other authorized borrowing entities. It should appraise all proposals concerning external capital to be raised by borrowing. The appraisal should consider the type of lender, interest rate, currencies of disbursement and of repayment, maturity, grace period, fees and commissions, prepayment options, default options, and other characteristics of the loan. On the basis of this appraisal, it either approves or disapproves the proposal, if it falls within the unit's purview, or makes a recommendation to the control unit for approval by the policymaking body, if the amount is beyond its ceiling. The unit then either selects the lead manager for commercial flotation or directly participates in the negotiations of all loan contracts. It reports all transactions, draw–downs, interest, and repayments of principal to the statistical unit.

The important functions of registering all agreements and contracts negotiated by each authorized borrower, collecting detailed loan–by–loan information, and providing for the timely payment of amortization and interest due are entrusted to the fifth unit, which is the *statistical and accounting unit*. This unit also keeps track of all government guarantees provided for private debt. The statistical unit establishes a worksheet for each loan negotiated and signed by the operational unit and registered with the statistical unit. Transactions against each loan are recorded as they take place. For planning purposes, it projects disbursements against undrawn balances and repayment of principal and interest as due.

At the disbursement stage, evidence from lenders such as a statement of account, debit advice, withdrawal authorization or notice of disbursement is recorded. The repayment schedule for the loan is drawn up and recorded on the loan worksheet. After the operational unit, the ministry of finance, or the central bank makes the repayments according to the schedule, these are recorded on the loan worksheets and the outstanding balance of each loan is calculated.

The statistical unit then prepares a monthly or quarterly status report on the overall debt situation of the

country and projections for the near term. The report usually contains the following summary information:

a. Outstanding debt at the end of the preceding fiscal year and at the end of the latest quarter, aggregated by currency, debt instrument, interest rate, maturity, type of borrower, and type of creditor.

b. Cumulated interest payments in the current fiscal year through the latest quarter.

c. Cumulated gross borrowings and debt repayments in the current fiscal year through the latest quarter.

Location of the Debt Office

The location of a debt office in the appropriate ministry or the central bank of a country is an important issue, but one for which no generally satisfactory single answer can be given. It should be determined on a case–by–case basis depending upon the distribution of functions, delegation of authority, and configuration of responsibilities among various government ministries and agencies. In essence, there are two parallel sets of considerations. The first one is how the various functions relating to management of debt are allocated. The general pattern that can be discerned is that at least four entities are involved in varying degrees. The power to negotiate, approve the amount of new debt incurred, and identify the sources of external finances usually rests with the ministry of finance. The planning ministry allocates foreign resources among various development projects and investments and monitors resource utilization. Integration with balance of payments and reserve management, foreign exchange approvals, and remittances for servicing the debt fall within the domain of the central bank. In countries with access to international markets, the central bank usually also manages the amount, timing, currency, and instruments and modalities of participation in the markets. The actual transactions, the receipts and payments in local currency on obligations due on loans to public sector, are handled by the accountant general. Finally, the statistical function is either centralized or fragmented among the various agencies.

Besides these functional division, there is a division of responsibilities across the types of external financial flows. In some countries, the flows from multilateral development banks are handled by the Ministry of Finance. The Central Bank deals with the IMF, private non–guaranteed debt, and short–term debt. The Ministry of Economic Cooperation or Planning is responsible for bilateral grants and loans, while commercial bank lending is restricted to a select group of borrowers.

This division can be illustrated with the example of China. The Ministry of Finance has the responsibility for all dealings with the World Bank. The Peoples' Bank of China does the same for the Asian Development Bank and the IMF; likewise, the Ministry of Foreign Relations and Trade for bilateral loans and grants. The Bank of China, the China International Trust and Investment Corporation (CITIC), and a few provincial investment and trust companies handle commercial bank loans, international bond flotations, and private placements. The State Administration of Exchange Control records, maintains, compiles, and publishes comprehensive data on the country's external debt situation.

This diversity in assignment of responsibilities across functions as well as across types of borrowing does not make it easy to provide an unambiguous answer to the appropriate location for the debt office. In practice, it may not be feasible to combine all these functions and responsibilities and centralize them in one debt office. The more pragmatic approach is to establish a centralized statistical unit, which coordinates and integrates the data gathered by the various decentralized participants of the system. This unit uses the data to prepare a comprehensive report for the high–level policymaking body. There is an added advantage if this unit has the analytical function, but the *same* data can be analyzed from different perspectives and for different purposes by the ministries of finance and of planning and by the central bank, each of which then presents its findings to the policymakers.

However, if a country concludes that the balance of convenience lies in the creation of a centralized debt management office, then it should ensure that sufficient legal and administrative powers are vested in that office to carry out its functions. If the debt office is to be held ultimately accountable for the accuracy, timeliness, and comprehensiveness of the data and for efficient management of the country's debt, it should have commensurate authority, status, and powers. Ready access to the higher echelons of the government can reinforce the perception among the concerned agencies that the debt office has the support of the authorities in

eliciting and enforcing compliance with the reporting requirements.

To summarize, effective debt management requires that several important functions be performed. In some countries, where the debt is limited to official concessional sources, it is quite conceivable that one or two units can combine the functions described above. In other cases, where a whole array of borrowing is carried out, all five units may be needed. The choice of particular organization is determined by the circumstances peculiar to each country.

The performance of these functions and their appropriate organization are necessary but not sufficient conditions for good debt management. Equally important are the quality and skill mix of the personnel manning these units and the procedures and methods adopted. Also, the status of the debt office in the bureaucratic hierarchy, and thus its access to the policymakers, are important ingredients.

Thank you very much. Any questions or observations I would very much appreciate.

DISCUSSION SESSION

Speakers: *Ishrat Husain, IBRD*
David Hunsberger, IBRD
Duvvuri Subbarao, India
K. Radhakrishnan, India

Mr. Hunsberger: May I ask that any countries that wish to make observations and use their own experience as a contrast might save their remarks for their own presentations later in this conference. It is precisely these issues that we hope countries will speak to, as they talk about their own structure and organization of debt management. But we would welcome questions from any one at this time, whether or not from a country delegation.

Go ahead sir.

Mr. Subbarao: I am Subbarao from India. You were talking about one national debt management office for both internal and external debt. Sir, how would you suggest that we integrate internal debt into this set-up that you were talking about?

Mr. Husain: I haven't thought about the integration of the internal debt in this particular presentation. As usual, just because my division deals with external debt, we were worrying about external debt management, and in my initial presentation, I raised that as an issue. I frankly haven't done any thinking, nor do I have any preconceived ideas, as to how this could be done. But I am sure lots of people present here would have some contribution to make about this particular issue, which is to integrate the debt both internally as well as externally. My remarks on organizing for efficient debt management were limited to external debt aspects only, because of our experience in the World Bank.

But that doesn't preclude us from discussing it, because I did raise it as an issue [in the Opening Remarks]. I would most welcome any observations on this integration.

Mr. Hunsberger: I might note that several of the Latin American countries that have Oficinas de Deuda Publica o Credito Publico [Offices of Public Debt or Public Credit] typically do merge internal and external borrowing. During their presentations, they may want to address the success or interesting difficulties they have experienced with that integration.

Another question? . . . Yes sir.

Mr. Radhakrishnan: You referred to an organization for debt management called the debt office, which would be for management of external debt and for providing management information. You emphasized the need for making this office a little bit more powerful and of sufficient status. Does this mean that this office will also have some say in policy formulation?

Mr. Husain: If you look at my written remarks, you will see I have left that open-ended. In some cases the statistical unit may also have the capacity to analyze the data and make recommendations to the policymakers. But what I emphasized very much is that there should be a common, agreed-upon, data base. Then the analytical work could proceed from different perspectives and express different viewpoints. So the ministry of finance, which is basically interested in resource mobilization issues, could look at the same data and say that we need to

do more domestic resource mobilization because our external flows are waning. The central bank, which may be providing the balance–of–payment perspective, will say that there is an inconsistency between our target for the current account deficit and the actual capital account in–flows. Or the planning ministry may say that our planning target for investment had a combination of 60 percent domestic counterpart funds and 40 percent foreign exchange, but we do not think we are meeting that foreign exchange target of 40 percent. So you are looking at the same information, but using it for three different purposes.

My view is that it may be better to have the statistical unit prepare a common set of data, which is employed by the various analysts for policy decisions, otherwise you have potential conflict between your external balances and internal balances. The policymakers have to look at the trade–offs and make decisions on how to resolve conflicts. Are they going to have a lower domestic resource mobilization effort and higher borrowing, with a very difficult profile of debt servicing payments ten years from now? Or do they want to cut down on the external borrowing at this stage, to keep a desired debt service profile in eight or ten years' time, and instead accelerate domestic resource mobilization?

I think different perspectives from the analytical point of view may be quite good, but in some places it is quite possible that you could obtain this from the statistical unit. An example of this is the Economics Affairs Division in the Government of Pakistan. It is a policymaking body, as far as external resource mobilization is concerned. But it is also the statistical unit. So it may be able to use its data to go to the Economic Coordination Committee of the Cabinet and say, "This is the picture, so far as debt servicing is concerned." The Ministry of Finance may come up and say, "Look, we are not going to buy this, because it is going to create difficulties for our budget." So I am quite agnostic about the distribution of the powers and the functions. The only reason why I said the statistical unit should have power is that if you just pass on pieces of paper that nobody takes seriously, then the coordination of the information flows to this unit are never going to be perfect. You will always have either a lack of comprehensive data, or information that is not timely, or inaccurate information. So the access and the authority have to be there, to ensure the quality of the data.

3 Country Presentation by Participants from Chile

Jorge Alamo, Banco Central de Chile

Mr. Hunsberger: A major objective of this conference is to allow each of the countries present to describe briefly their own experiences and to highlight for us the most interesting elements of those experiences that would be useful to other participants. We have invited the country speakers to describe very briefly their organizational structure for debt management and to raise interesting issues about their development of systems and procedures. I encourage the countries to be as brief as they wish in these presentations. There is no fixed requirement that you fill 30–40 minutes. If you can, and wish to, you are free to give me hand–outs, which I shall include in the daily distribution of papers.

To begin these country presentations, I have asked our colleagues from Chile to speak to us about their own debt management experience. I have selected Chile to begin, in part because they have been very aggressive in exploring new techniques for debt management—for branching into things having to do with swaps, for getting involved in what we now are beginning to call 'financial engineering'. I thought the delegation from Chile could, in a sense, describe something of the present state of the art in debt management, so that the rest of us could draw our own comparisons. As we lead up to our coffee break, which will be a bit delayed, I shall ask the delegation from Chile to speak for perhaps 20 minutes, if that's all right, and give us time for questions. This would get us back on our program schedule, but it's up to you. So, Mr. Alamo . . .

Mr. Alamo: At the outset I should like to express my gratitude to the World Bank for inviting us to take part in this conference. We are convinced that this will be extremely valuable for us, and I say this even though we were not present at the previous conference. I must say that we did get the documentation from it, and this was beneficial in and of itself, without even having been able to attend the first debt management conference.

I would like to speak on behalf of the Debt Management Unit of Chile, which was organized some time ago. I have come up with an outline of the various points which I think would be of interest to you. Of course, if you have questions as I go along, please interrupt me, and I will be glad to reply. I hope that the reply will not be too lengthy.

So, the first question is, how does the need for a Debt Unit arise? Now Chile, like most all the countries, or all the countries here, is a member of the World Bank, and we have had to report to the World Bank since 1959. We know that there is a mission from the Bank, and you have to have a report for each of the different creditor loans in the public sector. This is reported, then, once a year.

Then, sooner or later—for example, in 1972 for us—there may be a shortage of foreign exchange. And there may be a decision to unilaterally suspend payments to the Paris Club. So there is a suspension of payments, which is paradoxical in fact, because you don't know what the debt is, or how much payment is required. This was when it became clear to us that we needed a unit to provide coordination and administration of at least the public external debt of the country. After investigating the different public structures, for example the Ministry of Finance and the Central Bank, we discovered that the unit reporting to the Central Bank would be the most appropriate one to deal with Chile's external debt, which we were trying to renegotiate with the creditor countries of the Paris Club. Once the renegotiation was completed (this occurred in three stages, it was completed in 1975), the conclusion was that it would be very useful to have a special unit that would take advantage of the experience acquired by the negotiating team. The team had in fact worked on a manual basis. We have with us [attending the conference] Mr. Jorge Espinosa Carranza from the IDB, who produced a report very quickly; this report gave rise to the unit, or office, in which I work.

We have a fairly good legal framework now for this unit. In Chile, there is control of the foreign exchange market. This provides us with an institutional framework that is very useful for a centralized debt management office. The unit was established by a legal decree, which is one of our strongest legal documents. This legal decree set up the unit that deals with the public and private sector and empowered it to seek information from all the different sources. The unit has very wide powers to get this information. Also, within the Central Bank of Chile

there is a rule whereby all recordings of external debt must, on a compulsory basis, go through the Central Bank of Chile. This is the only channel; there is no other registry for external debt. The only body that has responsibility for this registry is the Central Bank of Chile. And there is foreign exchange control, as I told you earlier. Therefore, an entity or person who contracts a debt must go through the Central Bank to get this foreign exchange, unless that entity or person goes through the parallel markets, where it is much more expensive to get the foreign exchange. So everybody does in fact register with the Central Bank.

When the debt unit was set up, it was to be an advisory unit with management responsibility as well. It reports directly to the management. The idea was to set up a statistical registry with computational facilities as well. The unit has a number of different kinds of authority; it is empowered to seek information from any source which generates debt, be it public or private, or the government as well. In this respect, the unit has appropriate authority and powers.

The staff of this debt management unit was in fact derived from the working group that had worked on the debt renegotiation. The working group had gone through these three stages of the Paris Club negotiations. I am the head of this unit, and I have been on this team for 17 years. I was born, if you will, when this thing first arose, and my colleague, Mrs. Pilar Freidl, has been on the team for 14 years. One of our colleagues has been with us for five years. We have five professionals, who are economists. In fact, they can deal with both the public and private sectors. We also have eight staff members who are nonprofessionals and not economists, one of whom has been working for 20 years. This person was involved with the first reporting procedures to the World Bank, which goes back a very long time. So you can see, we have good stability in the unit. People have not left the unit in great numbers at all.

I think that for us, once the unit began to function and to generate information, we became increasingly more operational, but always dealing of course with debt issues. For example, at the present time, we evaluate any proposal for different kinds of credits and loans. In conjunction with the World Bank, we analyze different possibilities for securing loans.

We also have an advisory secretariat, called the Finance Committee. Every public entity that wants to contract a loan from abroad and wants to have a commitment must get authorization from the Finance Ministry. Prior to receiving this authorization, the entity has to submit a report to the Ministry. We evaluate these requests and recommend either approval, or at least the initiation of the proceedings that will lead to the actual contracting of the loan, [or disapproval].

We also evaluate financial institutions. So we have a range of different activities.

In addition, we have had an ongoing cycle of renegotiations of the debt; this happens approximately once a decade. In the previous decade, the renegotiation was essentially with the Paris Club, that is to say, with official creditors. But, as you know, in this decade it has instead been with the commercial banks. Still, the role of our unit has been to assist the whole renegotiation process. We incorporate the new terminology and new instruments for debt renegotiation and debt reorganization as we go along.

Thus, the unit has been stable, but we have constantly incorporated new activities. And of course we are involved in meetings of this sort, as well as in the Cartegena Consensus, where I attended meetings in connection with debt renegotiations. Keeping abreast of all these developments has made it possible for our unit to be very much involved in all this.

Now, as to training—this has been a passing on of information from the most senior people to those who join the team. There is no specific training for debt activities. When somebody leaves it is very difficult to replace him, because there are very few people who have the necessary experience. This is an international field; we use as a basis the terminology of the World Bank's reporting procedures. But, if we need to replace someone, it is very difficult to find somebody in-country who can come forward and say, "We know everything about international credits, how to deal with all the draw-backs for reporting procedures, and so on." So this information is passed on as someone joins the team, but there is no outside training that you can get for this kind of activity. Also, within the unit we have tried to rotate activities among the different staff members, so that everyone is conversant with different activities. Unfortunately, in recent years a few people have had to leave the team, and we realized that our office was based on individuals and not on a system. When someone leaves, there is a very great gaping hole in our overall organization, because we are all very interdependent. We want to try to make it possible to have a little less interdependence. We want to

have an operations manual, so that if somebody does have to leave us, we can continue to work efficiently.

As to our equipment and facilities, there is not all that much to be said. Like any developing country, we have financial restraints. We wanted to have a fully dedicated computer, but this was not possible; we were told that we would not make very good use of it. So we have six VAX computers; we use DEC [Digital Equipment Corporation] equipment. We have a waiting–list system. You have to get on–line, and as soon as one of the computers is available, you are informed. Then you can run your program on that computer, but it is a time–sharing operation. All these computers run simultaneously; we all have the same allocation of time; and we can access the mainframe of the central computer as our time comes up. This is a very slow process. It is far from being ideal, as far as our hardware is concerned. There is some internal bureaucracy as well, which tends to complicate all our dealings with this system. We have four terminals with printers, and we have been incorporating microcomputers. At least we have one so far that is already operating, and we are expecting the arrival of a second one.

As to the functions of our team or unit, we have to generate official information for the country to report to the international organizations, such as the World Bank. We continue to report as in the past, but we now have a different mechanism. Any external debt information that is produced is in fact generated in our office. At the present time, we are trying to make the report generation process more flexible. We have a monthly report now, which is published in the Central Bank's monthly account and thus gains a wide distribution. So we can have up–to–the–minute information. For example, by the last week in April, we can give the closing figures for March.

Well, if I have to draw a conclusion I would say that our unit has been recognized, as far as its statutes are concerned, within the general organization, which is an excellent management body. It has what I would call more satisfactory equipment at its disposal. The only really major disadvantage this causes us is not to have the systems analysts that we have wanted. We have had to put up with that. The Central Bank has a similar system. One of the main problems here is the high rate of turnover of computing personnel. Since this is a very difficult field for recruitment, it usually takes a year to find someone who has the right profile of knowledge in external debt and systems skills. It usually takes a year before we can find someone to put back into the system, so to speak. We think that we should have at least one person whose job would be to help us shorten this long recruitment process and period.

As far as computer development is concerned, as I said, one of the unit's first duties is to have computerized records of all this data. In fact, in 1976 we were able to computerize our debt in 9 months. The first reporting began shortly after that. These reports were very broadly disseminated throughout the government. It is only public debt [that is involved here], and this [reporting process] is an annual exercise. We are really continuing the same methods used by the World Bank and developed by them to follow an annual cycle. They use surveys for public sector agencies. And this is what we do. We go through the entire public sector and send out surveys.

We don't put these reports down on paper any more. We put them on magnetic tape now and send the tape to the World Bank. Even in the very beginning, we were sending these tapes once a year, and we still do. A few years later, we also decided to cover private debt in our computing system. I would say from today's perspective that this might not be the best way, but at that time we certainly thought an excellent initiative was to cover the private debt. We also stuck basically to the same structure used to provide information to the World Bank. We had the capacity to generate this kind of information on the debt. We were able to even make projections of debt repayments for debt that had already been contracted.

In time, we had the crisis of 1982. And once again we had to fortify our system, making a few additional changes. One of these was to include short–term debt in our bookkeeping. This is registered on an operation–by–operation level. In other words, the medium–term debt for us covered about 5,000 different loans, and the short–term covers 17,000. Now the time came when we realized that we were parceling out our system. We had public debt, private debt, short–term, and so on. But each time we had to produce the annual debt reports, we had to do this manually by combining and cumulating all of these different figures. In 1984 we realized that we had to have a single computing system that would integrate all of these kinds of debts: long–term, short–term, medium–term, public, and private. Then, when we wanted a report, we wouldn't have to do it manually, but

could use automated information processing to produce it.

Along with that we had another idea, which was to use our computers to improve the coverage of debt, by using one [form of debt] as a measure [for another]. Private debt, especially that related to foreign trade, has increased, yet we haven't been able to achieve total coverage of it. One reason to have this integrated system was to include the private sector, i.e., the private banking debt and corporate debt, and have improved quality of reporting for it. As I have said, we have been producing monthly reports but only for the last two years. Previously, reporting was annual, as per the rules of the World Bank, and we had to use those annual reports all year long until the new one was issued. We felt it was a better idea to have more timely information.

Because of the complexity of gathering the information, this system is made up of four modules. One module, for example, deals with the merchant banks—the private banks—because not all the lines of short-term credit that are granted by the Central Bank to the private sector are registered. Our first idea was to have a system that would register all of these loans, all of these operations. Some people thought, why go to all the bother of, for example, listing all 17,000 of these short-term creditor contracts? When we had to decide, we took a close look at the commercial sector and tried to see what was the easiest way for them to provide us with this information. It was decided that weekly reporting could be used. That made it much easier for us to look at our short-term debt, but without complicating things unduly. The banks were able to provide this information to us by putting their own names and codes upon the different operations. For this reason, we decided that we should register this credit on the basis of individual, separate operations.

Another module deals with the private sector, which was already computerized, but here we wanted to increase the coverage and improve the speed of processing the different data.

These two modules of the four that I mentioned have been implemented. The public sector debt is not registered in the Central Bank; here we had different problems in gathering information. For debt incurred by private firms involved with imports, we do not have the computing and registration reporting systems set up yet.

Our computing unit, the one that centralizes all of this information, is very important to us, and our relations with it are important. At one point we wondered whether we should integrate it totally, so as not to have any problems of relations. The first problem dealt with appointing people to work in it. These had to be people who had the right skills, and they were often taken from other computing fields, which made for gaps in their background. Finally, we broke off from the computing unit and decided to purchase our own equipment. We looked at a lot of different proposals, a lot of different dossiers on equipment, on hardware and software.

We asked the World Bank for advisory assistance.We wanted to have advisory assistance from an international organization, so that they could verify what we were seeking and support us vis-a-vis our authorities. So David Hunsberger, my friend, and other people, such as Mark Huberts, were very helpful. They came to Chile; they carried out an evaluation assessment, and they made recommendations that were very useful to us in continuing our work. We also took a look at software on the market. We quickly realized that the best thing for us was to continue along the lines that we had sketched out for ourselves. Perhaps it was enough to try to broaden the scope of our unit, so we wouldn't have any interference from outside units. I would say that ours is the only Central Bank computing project that has specific authorization from the Executive Board of the Bank or the Trustees of the Bank, with annual spending audits. Its functions are set forth in writing. I am talking about the control system for all of our computer system. We therefore had a legal framework that allowed us to have total use of the entire system and its personnel. This was made clear in writing and, in the following year, in the report by the World Bank.

Previously in working on the system, we were trying to think about how to gather information and data. Now we are more interested in the computing process itself. Let me explain. We are setting up a module that looks only at the long-term and medium-term debt situation. The previous system could deal with both of these. As I said, we have 17,000 short-term debt operations and 5,000 medium-term, so we have a lot to do. The idea at first was that the module should be as broad as possible. But often, instead of trying to get the most sophisticated system, it is better to be more practical. This led us to give up on a lot of our initial objectives and identify more clearly what we really

needed and what our objectives were. Now we are working on one module that will deal only with medium–term and long–term debt and on another module to deal only with very short–term debt. In the short–term case, we have to program the module to deal with about 40,000 credit operations; when we have to include the private sector, the total is going to be near that amount. It includes all kinds of small operations from US$4,000 or US$5,000 up to US$1 million. But we will have to continue along these lines if we want to be able to deal with these debt operations in this way.

To avoid manual work, we have a third module [planned], which we call the integration module. This is where we are going to revise all data monthly. Someone who needs information on the debt, instead of going through all of the papers and bulletins, will be able to link up to this system from his or her own office and pull the information out from the integration module, where it will be stored. All of our reports will be there, and so on.

Along with this, but on smaller units rather than on our big computer, we are working on simulation modules where we will be able to project our future indebtedness, future needs for servicing debt, ratios, economic indicators, etc. This information will come from the balance of payments agencies of the government. Here I also must thank people from UNCTAD who, during this time, have given us invaluable help and information. This effort is moving along, but there have been bureaucratic problems, because of which we once again decided to proceed independently of other parts of the government.

The software that is provided by the Central Bank is Chilean software; it is called Orden Dunga. I am not a computer expert, but I am told that this is fourth–generation software, the characteristic of which is that it helps develop the system in itself. It is more oriented towards developing the system than towards the user. The user has to know what he is doing, but it is very useful for developing the system. There are a lot of things that are already done by the software or are already included in the software, and this saves us time and effort.

As to where we stand now, I think we have completed about 50 percent of this module. We have been working on it for the last two years. Unfortunately, a few days ago we lost staff in the computing department, and this has once again brought things to a standstill. We have to recruit new people. A real problem here is our salaries. Compared with the private sector, we cannot provide [competitive] salary levels and therefore lose people. This is, as I said, a problem, but I hope this particular case will be resolved in the next few days.

We have had problems in terminology. Here I am thinking in particular of syndicated loans. In such a loan, there is one single credit to be registered, so it has just one number. But it involves the participation of various banks when the debt is negotiated, which makes for a very complicated situation. For example, the Central Bank has more than 300,000 creditors on record; there may be as many as 300 of these on one loan. When we want to look at data on the basis of creditors, these loans cause a kind of multiplier effect that makes things very complicated.

Let me just sum up by saying that we have concluded that there must be a clear separation between a permanent, ongoing, computer system [for the debt office] and another one that is shared at times with others. We have decided that anything involved with debt and debt renegotiation was going to be kept in the same computing system, and systems should be kept separate. The permanent system should list credits individually. Any debt information in any other national system, should be incorporated—even manually, if necessary—into that system's data base. This prevents the system from becoming obsolete, having insufficient information, or having a data base that would be so large as to be difficult to use. There are instances where the concepts of, say, amortization or disbursements can be applied but where there is not really a corresponding credit. An example is rescheduling. On the old credit we've got an amortization. When the rescheduling happens, it might be [recorded as] a new credit, but the credit doesn't really come into the country. It's just a change in the registry. We have programmed our system so that it only follows true movements of currencies in and out of the country. Well, of course this information is in the data base. But I was talking about an occurring system with which one can very easily identify the money that is going in and going out.

Data collection is also an interesting point. At first we thought that the best way of gathering this information was to go directly to the unit that was collecting it. In this way, we would be getting it not just monthly but perhaps on a daily basis. In fact, the first time we tried to implement this kind of integrated system for gathering data—and this is how our first two modules worked—we immediately ran into a problem. The difficulty was how to encourage the unit to feel responsible enough to

provide the right information in the right time, in the right way. We had a system in which the operational unit involved was handling all of the paper linked to movements of money, capital interest payments, approval for credits, and so on. We wanted to have this information coming into the system on a timely basis, and it was difficult. The situation is fairly fluid now: the information is flowing, but the quality can vary. Sometimes the quality is good, sometimes the information is not very useful.

We feel there must be some kind of incentive so that people feel obliged to update the data base in the right way. In this case, what was the incentive? Well, we tried saying that the operational unit could use the computing system for their own operational activities. Unfortunately, the quality of operational personnel was not what it should have been, and they were not very highly motivated to take advantage of this. They did not require much information from us, and so the incentive really did not work. There was a kind of dependency relation with these units that has been pretty painful for us. So, if I could make a recommendation, I would suggest using a centralized system that feeds information directly to the debt unit. I think the more direct the system is, the easier it is, and the better it is.

As I mentioned, our short-term debt module generates information on a contract-by-contract basis. But we have another short-term system that just records the balances of all the banks. This is a fairly reliable system. The information comes from the accounting sources, therefore it is fairly trustworthy and viable on short-term credits.

To conclude, let me just say that my main comment here as to what a good system should be is that it should get timely information. This has always been a great help in dealing with all of these problems. We talk about scheduling reserves, and other technical aspects. Well, we truly and surely have signed contracts with many entities; we have to report to the World Bank and to the IMF. This reporting includes all kinds of things, such as coverage, assets, liabilities, different kinds of swaps, swaps and interest rates, swaps and currencies, renegotiation of debt, etc., plus, of course, any economic and tax policies and budget policies that should be included.

Let me summarize the advantages and disadvantages. I would say the one good thing about our system is that it has an excellent way of projecting payments on principal and interest, especially as concerns the calculation of interest. We know the exact number of days between each date. We even have the different interest rates that can be applied. This is very easy to do. We have what we call multi-classifications, or indexing. We can look at the debt from many different angles: by money, by creditor, by borrower, etc. We have a system that not only generates statistical reports but also can display reports. That is, it provides rapid access through its displays to any kind of information, by credit, by lender, by borrower, and so on. This system has given us excellent results. When you really appreciate this kind of a registration system is when you can pull out information like this on a display, not just on the entirety of the country but even on even individual operations.

Now, what are the draw-backs? Well I have already mentioned our relations with the central analysis unit of the Central Bank. We have never registered internal debt; this is kept in a separate accounting by a different unit, and we did not feel it was our responsibility. I would say [another draw-back is] a lack of computers. I would say one of our current problems is that we have had to give up gathering certain amounts of information in order that the system be more operational—this is kind of a trade-off. Well, that's all; I think I'll stop there for now, sir.

DISCUSSION SESSION

Mr. Hunsberger: I want to underscore one point, which Mr. Alamo made at the very beginning of his talk, that has a lot to do with the success of the Chilean debt office. It is that Jorge himself has been there 17 years. One circumstance we often find as we travel around the world is excessive turnover in the management of debt offices, [which may reflect] changes of political administration or simply the inadequate career paths for professionals in debt management. I want to stress the importance of having attractive career paths in your debt office, to attract professionals who will stay and make it a career dedication. As Mr. Husain said in his opening remarks,

the stability and quality of staff is one of the most fundamental parts of debt management.

In view of the late hour, I would like to take one or two questions to Mr. Alamo, but then ask that any remaining questions be addressed to him at the coffee break or at lunch time. Are there any questions at this moment?

Ms. Silva: My question is in fact a technical one. I wonder whether you are working with a single data base—with a single, structured, data base—or are you attempting to develop a [custom] computer system that will provide you with the kinds of information you are using at the present time?

Mr. Alamo: I am not a computer expert. But we have a system with a data base. However, we had problems with the slow pace of data processing, particularly for projections of principal and interest payments. Now we have an index system, which gives you a much more rapid processing of the data.

[Discussion of the Chile Country Presentation continued after the Malaysia Country Presentation.]

4 Country Presentation by Participants from Malaysia

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Introduction

The implementation of various development projects and programs require heavy resources. As in any other developing country, Malaysia finds it necessary to borrow in order to finance such projects and programs and to ensure continued growth of the economy. The development efforts of the Government of Malaysia over the last two decades have contributed directly to the current level of debt. The need for such borrowings, both from domestic or foreign sources, will continue in keeping with the government's development plan.

Under the prevailing economic conditions, many countries are facing various financial and social problems. The ability to manage its debts will be critical to many governments. Economic, budgetary, and monetary policies need to be formulated to overcome continued recessionary conditions at both the domestic and international levels. The decline in commodity prices has, to a large extent, affected the ability of countries to service their debts. Beyond any doubt, structural adjustments of the economy require willpower and commitments on the part of the government.

This paper intends to provide a brief analysis of Malaysia's debt position and the debt management strategies adopted by the government in the late 1980s. The following areas will be covered:

1. Power and legal framework under which borrowing is undertaken
2. Profile of outstanding debt
3. Debt management system in Malaysia
4. Prevailing issues related to debt management
5. Public policies on debt and its management.

The emphasis of this paper will be on public sector debt management. As in any other developing country, the Government of Malaysia has been the main driving force behind the country's development efforts. This trend will be reversed in the future, with the private sector assuming a greater role and ultimately becoming the main "engine of growth."

Power and Legal Framework under which Borrowing is Undertaken

Malaysia's Federal Constitution provides the legal framework under which the government can undertake borrowings from both domestic and foreign sources. As stated under Article 111 of the Constitution, the government "shall not borrow except under the authority of Federal law." Since Malaysia is a federation, the Constitution does not authorize state governments to borrow except from the Federal Government or from financial sources approved by the Federal Government or with Federal Government guarantee.

Appendix A (in Volume 2) lists some relevant legislation governing the power and procedure to borrow through either domestic or foreign sources. There are laws and legal requirements related to loan activities with international financial institutions such as the World Bank, Asian Development Bank, and Islamic Development Bank. Even loans taken within the country are governed by specific legislative requirements. It is also stipulated that any loan agreement signed by the government must be tabled in the Parliament (in the form of statute papers).

Through legislation, the Parliament sets the ceiling on the debt level of the Federal Government. At present, the maximum level of borrowing from each source, as stipulated in the relevant Acts, can be summarized as shown in Table 4–1. [1]

The respective legislation will, in addition, identify the objective or purpose of the loan. It has been the guiding financial principle of the government that expenditure for development purposes will be financed through borrowings and surplus available from revenue. A review of section 2(1) of the External Loans Act, 1963,

1. Figures quoted in this paper are in Malaysian ringgit (M$). One U.S. dollar was equivalent to M$2.715 as of December 1988.

specifies the purpose of external loans. The Section reads as follows:

> The Federal Minister (that is to say, the Federal Minister for the time being charged with responsibility for finance) may from time to time raise loans outside the Federation:
>
> (a) for the purposes of the Development Fund or some one or more of those purposes, or;
>
> (b) for the repayment or amortization of loans raised outside the Federation, whether under this section or not.

The respective Acts of Parliament provide a very important limitation to the extent of debt that can be committed by the government. They constrain the public sector debt to a manageable level.

Profile of Outstanding Debt

The current level of debt in Malaysia is closely linked to the size of various Five Year Plans that were implemented in the past. Appendix B (included in Volume 2) shows the trend in the public sector development expenditures over the years. For the First Malaysia Plan (1966–70), actual development expenditure was only M$4.2 billion. However, development had increased nearly twenty times by the end of the Fourth Malaysia Plan (1981– 1985), i.e., to M$81 billion. However, given the unfavorable economic scenario for the Fifth Malaysia Plan (1986–1990), the total public sector development expenditure is estimated to be less than M$50 billion.

Table 4.1

Legislation	*Maximum Amount Permitted*
External Loans Act, 1963 (to cover all foreign borrowings of the Federal Government)	M$30 billion
Loan (Local Ordinance) 1959 (to cover loans in the form of government securities	M$60 billion
Treasury Bills (Local Act), 1946 (Revised 1977)	M$5 billion
Extended Credit (Amendment) Act, 1973 (to cover external suppliers' credits)	M$3 billion
Government Investment Act, 1983 to cover the issue of non–interest investment certificates)	M$1 billion

Table 4.2. Public Sector Borrowing
M$ billions

	Foreign Sources	%	*Domestic Sources*	%	*Total*
First Malaysia Plan	0.5	21	1.9	79	2.4
Second Malaysia Plan	2.1	32	4.4	68	6.5
Third Malaysia Plan	3.9	29	9.6	71	13.5
Fourth Malaysia Plan	27.1	53	24.4	47	51.5
Fifth Malaysia Plan	16.7	35	30.9	65	47.6

The ever–increasing size of development plans over the years has resulted in an increase in the level of borrowings from both domestic and foreign sources. For the First Malaysia Plan (1966–70), public sector borrowings were small, i.e., M$0.5 billion from foreign sources and M$1.9 billion from domestic sources. For the Fourth Malaysia Plan (1981–1985), the level of public sector borrowings increased substantially; a total of M$27.1 billion was drawn from foreign sources and M$24.3 billion from domestic sources. Under the Fifth Malaysia Plan (1986–90), it is estimated that public sector net foreign borrowings will be M$16.7 billion and domestic borrowings will be M$30.9 billion.

As of the end of 1988, the total outstanding debt of the Malaysian Government was estimated to be M$89 billion. (The detailed breakdown is given in Appendix C, included in Volume 2). An analysis of the outstanding debt highlights the following features:

- As of the end of 1988, domestic debt constituted 75.7 percent of the nation's GNP, whereas the external debt represented 31.8 percent of the nation's GNP (M$85.3 billion).
- Domestic debt accounts for 71 percent of the public debt outstanding.
- Market loans, (i.e., loans from financial institutions) turned out to be an important source of foreign borrowing, accounting for 67 percent of the Federal Government's outstanding external debt.

An analysis of the Federal Government domestic debt shows that government securities are mainly held by the social security and insurance institutions, which account for M$35.1 billion, or 63%, of the total securities

outstanding. The Employees Provident Fund, the single largest institutional investor, held M$32.5 billion or 58 percent of the total. The holdings of the banking sector were M$10.6 billion or 19 percent of the total. The outstanding Treasury bills (M$4.3 billion) at the end of 1988 were held by the banking system and the discount houses for liquidity purposes. It is significant to note that a major portion of the M$1 billion of outstanding non-interest-bearing investment certificates were held by one of the commercial banks.

These figures on domestic debt indicate that the Government has been relying mainly on domestic resources to implement various development projects and programs. In addition, the Government also tapped largely non-inflationary domestic resources to prepay external loans from financial institutions. Since 1986, Malaysia has not been drawing on the IMF facility.

Malaysia's external debt[2] amounted to M$47.3 billion at the end of 1988. The breakdown is as follows:

Malaysia External Debt, 1988

	M$ billions	*Percentage*
Federal Government	25.9	54.8
NFPEs	16.2	34.2
Private Sector	5.2	11.0
Total	**47.3**	**100.0**

In the 1970s, Malaysia's outstanding debt rose, at an average of 22.5 percent per annum, from M$1.3 billion at the end of 1970 to M$10 billion at the end of 1980. This increase reflects the important role played by external resources in developing the country. In the period 1971–80, external borrowing financed about 16 percent of the government's development expenditure and 27 percent of private sector corporate expenditure. In the early 1980s, the government depended increasingly on external resources to finance large fiscal deficits and the historically unprecedented current account deficits in the balance of payments. As a result, the external debt more than trebled in the first three years of the 1980s to a total of M$31.7 billion at the end of 1983. Recourse to external borrowing moderated significantly during the period 1984–86, following the adoption of a comprehensive structural adjustment program to reduce the twin deficits. However, the external debt outstanding continued to increase markedly, peaking at M$50.4 billion, or 76 percent of GNP, at the end of 1987. The increase was largely due to the sharp appreciation of major currencies (notably the Japanese yen, the deutsche Mark and the Swiss franc) vis-a-vis the Malaysian ringgit, which raised the ringgit value of the debt.

In 1987–88, Malaysia's net external borrowing turned negative (–$9.8 billion) following new initiatives to reduce the absolute size of the debt through selective prepayment of external loans by both the government and the private sector. Consequently, Malaysia's outstanding external debt declined to M$47.3 billion at the end of 1988. This was the first decline in external debt in more than a decade. The current level of external debt needs to be closely monitored so as to ensure that debt servicing is contained within sustainable limits.

An analysis of the Federal Government external debt shows that Malaysia has to formulate appropriate economic, monetary, and fiscal policies to control the level of external borrowings and to overcome issues related to external debt. The composition and structure of Malaysia's external debt include the following features.

Direct Loans of the Federal Government

- **Market borrowing** of the Federal Government was the fastest growing category of external debt in the early 1980s. At the end of 1980, market loans comprised only M$2.2 billion or 21.8 percent of total external debt. By the end of 1988, there were 44 outstanding market loans comprising syndicated loans, bonds, and Floating Rate Notes (FRNs) equivalent to about M$17.3 billion or 36.5 percent of total external debt.
- **Project loans** obtained from multilateral sources (i.e. World Bank, ADB, and IDB), bilateral sources, and miscellaneous project loans formerly accounted for the largest share of external debt. Malaysia's access to cheap official or multilateral loans with long maturities has been limited because Malaysia was classified as being more developed than other developing countries. As of the end of 1988, project loans amounted to M$7.9 billion or 16.7 percent of total external debt.

2. This paper uses the definition of "external debt" used by the World Bank, i.e., debt that has an original or extended maturity of more than one year, that is owed to non-residents, and that is repayable in foreign currency, goods, or services.

- **Suppliers' credits** are a fairly recent source of funds for the government. At the end of 1988, such credits amounted to M$0.7 billion or 1.5 percent of total external debt.

Loans of Non-Financial Public Enterprises (NFPEs)

The debt of NFPEs with and without government guarantee has grown in importance in recent years due to the increase in external borrowings by these enterprises in the early 1980s to finance their large investment programs. Total loans amounted to M$16.2 billion or 34.2 percent of total external debt as of the end of 1988. The debt comprised syndicated loans, project financing from bilateral and multilateral sources, and suppliers' credits.

Loans to the Private Sector

Private sector external debt increased markedly from M$2.7 billion at the end of 1980 to a peak of M$7.5 billion at the end of 1986. It then decreased to M$5.2 billion, representing 11.0 percent of total external debt at the end of 1988.

At the end of 1988, the currency profile of external debt is fairly well diversified. About 42 percent of the total external debt was denominated in U.S. dollars; 35 percent was denominated in Japanese yen; and the balance was in pounds sterling, deutsche mark, French francs, Swiss francs, Canadian dollars; Netherlands Guilders, and Singapore dollars.

Debt Management System in Malaysia

In Malaysia, the following four major agencies of the government are responsible for debt management:

- **The Federal Treasury**, specifically the Finance, Debt, and Loan Management Division, is responsible for approving all public sector borrowing and meeting public debt payment obligations.
- **The Office of the Accountant-General** maintains government accounts related to public debt and executes all debt payment transactions.
- **The Bank Negara Malaysia (Central Bank of Malaysia)** undertakes the issue and management of the government's domestic debt. It also services and maintains records of the public debt for the government. In addition, the Bank administers the Exchange Control Act of 1953 on behalf of the government. In the discharge of this function, among other tasks, the Exchange Control Department supervises, records, and monitors all foreign exchange flows. It approves the foreign currency borrowings of residents and the local indebtedness of non-resident controlled companies in Malaysia. The Bank maintains records on the foreign assets and liabilities of the financial institutions under its supervision. It also assists the government in raising foreign currency loans from the financial markets and is the banker for the servicing of outstanding foreign loans on behalf of the government.
- **The Economic Planning Unit (EPU)**, which is the planning agency of the government, is involved in drawing up the country's foreign exchange budget each year.

The involvement of many agencies in debt management has, to some extent, resulted in some differences in interpretation among them. These concern the terms of coverage, timing, and classifications and definition. To improve the existing system, the government is in the process of establishing a Debt Management Unit in the Finance Division of the Federal Treasury to design, manage, and monitor the overall public sector debt, including the medium and long term (MLT) external obligations of the government as well as private debt guaranteed by the government. The Central Bank will cover the private MLT debt. This institutional establishment is in accordance with one of the recommendations made by a World Bank mission in 1985.

Malaysia has achieved a certain level of progress in a computer-aided approach to debt management. The Treasury itself has succeeded in developing a Public Debt Monitoring System (PDMS) supported on microcomputers. A detailed description of the PDMS used by the Treasury is given in Appendix D (included in Volume 2). The Central Bank also developed a computer-aided system for debt management, the details of which are given in Appendix E (included in Volume 2).

To further streamline the collection of statistical data on debt between these different agencies, the government is in the process of developing a common data base system, which is described in Appendix F (included in Volume 2). The system, which is called the Investment and Loans System (ILS), is housed in the

Office of the Accountant General. The first stage of this process which involved only the public sector debt, is expected to be in operation by July 1989. The second stage will incorporate the private sector debt. With the establishment of this system, there will be only one source of data, namely, the ILS.

Prevailing Issues Related to Debt Management

The debt incurred by a nation means economic and social costs to the country at large. Therefore, funds available from loans have to be utilized for productive purposes. Loans should be invested in projects that generate growth in the economy, so that the country will be able to service its debt commitments.

Malaysia in recent years has been monitoring the level of debt service closely, to ensure that the debt service ratio falls within a sustainable level. The debt service ratio of Malaysia increased from 4.3 percent in 1980 to 18.7 percent in 1986. It moderated significantly to 16 percent in 1987 and declined further to 13.3 percent in 1988. The improvement in the debt service ratio in the last two years is due mainly to the country's efforts to minimize external borrowing, to initiatives taken to refinance and prepay external loans, and to the strong growth in the country's exports of goods and services.

Public Policies on Debt and Its Management

The Malaysian Government has given serious thought to formulating policies on debt issues and problems. A committee called the External Resource Committee (ERC) has been established in the Treasury. The committee's objectives are as follows:

- Formulate policies and strategies on foreign borrowing
- Study the impact of foreign financing on the balance of payments, ordinary budget, and development budget
- Explore both traditional and new sources of foreign financing
- Review and assess the effectiveness for project implementation of external assistance received
- Monitor foreign exchange and external debt arising out of the need to finance large public sector projects
- Determine the level of foreign debt under varying circumstances
- Set guidelines on publicly-guaranteed loans
- Monitor and control private sector operations that affect the balance of payments.

The ERC will be renamed the External Debt Management Committee (EDMC) as soon as the Debt Management Unit is fully established. The EDMC is expected to be given more authority to manage the country's debt when its role is reviewed.

Malaysia will continue to borrow mainly from non-inflationary domestic sources. However, the government has taken steps to ensure that in the process of getting domestic funds, the private sector will neither suffer nor be unable to obtain local resources for their activities. The recent amendments to the Employees Provident Fund Act that allow EPF to invest their funds with the private sector was intended to achieve this objective. External borrowing will be contained at prudent levels so as not to jeopardize the government's future access to, and its favorable standing with, the international markets, as well as to ensure that the debt service ratio is within manageable limits.

The government continuously monitors developments in the international capital markets for refinancing opportunities. This is in line with the objective of lengthening the maturity profile of the external debt to smooth out any "bunching" of repayments and to achieve cost savings. Reflecting this policy, the government took advantage of easier conditions in the international capital markets to obtain new loans on more favorable terms to repay its more expensive loans. Since 1980, it has prepaid a total of M$14.9 billion.

Malaysia has also been successful in maintaining its high credit rating in the international markets through careful management of its presence in individual markets and by employing diverse financial instruments. Over the years, the government has diversified its borrowings in terms of currency, instruments, markets, and sources. This was done to achieve a better balance in the currency and maturity profile of its external debt.

The government will in the future give special attention to sectors that can earn foreign exchange. For example, implementation of the Industrial Master Plan will focus on projects and sectors that are export-oriented. Industries and local producers have

been encouraged to increase their productivity and reduce their cost of production, so as to enable Malaysian products to compete in the world market.

Conclusion

The Government of Malaysia recognizes the importance of proper debt management. In its efforts, priority is given to the creation, maintenance, processing, and dissemination of debt–related information. With such information, the government can determine the proper level and structure of debt and debt–servicing obligations, maintaining them within manageable levels, and managing them to meet the country's best interest. Hence, the monitoring and management of public sector debt will continue to be an important government policy in the future.

DISCUSSION SESSION

Mr. Husain: The country presentations for this morning, Chile and Malaysia, were deliberately chosen because both countries have done remarkably well in managing their external debt. Chile, as you are aware, has been able, since 1982, to reduce about 30 percent of their commercial bank debt through very proactive management. Malaysia, as you have just heard, has been very prudent in managing the exposure of their external liabilities, and has been successful. But the lesson I commend to you is that external debt management was an essential ingredient of sound macroeconomic management, both in Malaysia and Chile.

For the last five or six years, Chile has maintained a five percent to six percent growth rate. It has contained fiscal deficits along with lower inflation, and debt management was part of their particular strategy of macroeconomic management. Despite its dependence on copper, Chile has diversified its exports to other sectors. Malaysia, despite its dependence on rubber and palm oil and timber, has gone into manufactured exports. It has maintained very respectable growth rates and has reasonably good fiscal management. So that was the background in which external debt management was carried out. And it is the context in which their external debt management should be viewed.

Any questions, clarifications, or observations on either Chile or Malaysia?

Mr. Alamo: Let me confirm what you just remarked with respect to Chile. Chile has a good system of debt conversion reduction, which is fairly interesting. It is very close to the Brady Plan, primarily, but . . . well, if we are not taking the time here, if anyone is interested in talking about this with me and getting more detail, I would be happy to provide it.

Unidentified Questioner #1: Malaysia, it was mentioned, has four different agencies which are concerned with the management of external debt. Is there any coordinating agency at present, which coordinates the activities of all, so that a common perception is presented to the policymaking body?

Mr. Hussein (Malaysia): Thank you. That is a very good question indeed. Let me just mention what the four bodies are: the Central Bank, the Treasury, the Office of the Accountant General, and the Economic Planning Unit. Now, the last– mentioned Economic Planning Unit actually is our government institution for formulating five–year plans. So really, they indicate to us what are the requirements for development purposes, how much of it should be borrowed abroad, and how much should be raised domestically. So they really, I think, act in an advisory manner. The Office of the Accountant General actually is the operational arm of the Treasury because they keep track of our expenditures and income receipts. So that was why I said earlier in my introduction, basically it is the Central Bank and the Treasury. And we have the External Resources Committee, which meets very often and monitors this institution, but as you remember this External Resources Committee will be upgraded to an External Debt Management Committee sometime near the end of the year, once our debt management unit is operational. So to answer your question again, there is very close coordination indeed and most of the time we are in close consultation. Thank you.

Unidentified Questioner #2: I would be interested to know if the computer systems that you have been working on in Chile and in Malaysia have played any part in the success that you've had, or has your success been despite your computer systems not because of them? I am

referring to the system that you have operational right now.

Mr. Hussein: Yes, the computer systems that have been recommended to us have been tested, using trial methods, and where possible we tried to modify to suit the local situation. Because when it was first presented, of course it was based on certain assumptions. As we developed it along, we had to make the necessary modifications. Certainly, I do appreciate your contribution, it has been very well accepted and much welcomed.

Mr. Alamo: As far as Chile is concerned, the truth is that our system was of great support in renegotiating our debt. In fact, we even were able to both interact to help the [debt renegotiation] process and develop the system at the same time. We had short-term credit facilities. The bank agreed to these along the same lines as prior to the crisis. This short-term plan was approved and we have been able to receive financing in the proper amount and in fact we are happy to say that we received not only what we wanted but more than we expected. I would say that the systems have been of great help. Unfortunately we didn't have this system entirely ready before our debt renegotiation. At one point we expected it in 1984, but then the crisis occurred and slowed things down.

Unidentified Questioner #3: I see that there are three important agencies in Malaysia as far as debt management is concerned: the Treasury, Accountant General and the Central Bank. What I would like to know is, who really performs the most important function of debt management, that is registering new loans, and monitoring disbursements and the balance of payments? Because these three things have to be presented in a single unified manner for decisionmaking, for accounting purposes, and so on.

Mr. Hussein: The Federal Treasury actually is responsible for external loans. The Office of the Accountant General will be entrusted with the job of the ILS [Investment and Loan System] that I mentioned earlier. In other words, they have to set the base for a common data entry so that whatever information they generate will be used collectively by the Central Bank, by the Treasury, and by other users. So, that is how the system works. But the raising of external borrowing is by the Federal Treasury.

Now, Mr. Chairman, if I just may go beyond that. I listened with interest to the very good comments you made just now about maintaining the element of continuity in any organization—because my colleague from Chile has been there for 17 years. This is a common problem in all developing countries, because of the nature of the system there, where officers tend to be transferred every couple of years or so. The element of continuity appears to be lacking, and I think it is worthwhile for this forum to tackle that issue and to come out with a recommendation. I think this problem affects Malaysia. Let me quote my own example. I am perhaps 6 months on the job. I was there last September. My predecessor was there about one and a half years. The man before him was about 2 years. The turnover is very rapid. Luckily, the workers at the lower level tend to be in place longer. But what will happen, if they in turn are promoted and transferred? Then whatever system we devise, no matter how good it is, may not come out with the desired result. So perhaps, this is an issue to which Malaysia and other countries will have to give due attention.

Mr. Husain: Any questions or observations?

Unidentified Questioner #4: With respect to Chile, I was wondering about the legal instruments that they had to deal with this issue of debt.

Mr. Alamo: Yes, there is a law that establishes our unit—that is, the compulsory nature of providing this register to the Central Bank. However, within the Central Bank, there was a specific department under the International Department, in fact, to which this [responsibility] was assigned. So this comes under the law that governs the Central Bank itself.

Unidentified Questioner #4: So the law didn't provide for you to be able to combine the different resources, coming from all of the different ministries? It is just a law covering, in fact, the external debt and includes facets of other laws on income, and so on?

[No specific response to this question was recorded.]

Mr. Husain: If there are no more questions on Malaysia and Chile, we will move to the next item on the agenda.

5 Technical Assistance in Debt Management: Recent Findings

Lars Kalderen, Consultant (Sweden)
Robert Valantin, IDRC, Canada

Mr. Husain: We are very fortunate this morning to have two gentlemen who spent a considerable part of last year looking at the issues of technical assistance in debt management. As I mentioned earlier, Mr. Robert Valantine, who is from the IDRC in Canada, and Mr. Lars Kalderen have, on behalf of the UNDP, been investigating the impact of technical assistance on debt management. Given the importance of their study, I thought we should share their thoughts and ideas with this particular group. So I would like to request Mr. Kalderen and Mr. Valantine to make their presentations.

Mr. Kalderen: Thank you, Mr. Chairman. As you just said, Mr. Valantin and I have had the benefit, together with Mr. Hunsger—who is now in UNITAR and is our training specialist—to travel around the world last year with the task of interviewing debt managers, as well as many providers of technical assistance to debt management in order to report to the UNDP in New York on [issues such as:]

- What debt management really is; how it is in fact being done in the field.
- What technical assistance has been given so far, and how successful it can be judged to have been.
- What are the wishes of the recipients and the plans of the donors for the future.

We have now reported our findings and recommendations to the UNDP. They will be considering what we have suggested for some time, I presume, with the aim to have some stand by the time of the next Council meeting in June. Whether or not this will result in a major action on the part of the UNDP is something that we will see.The UNDP is represented here today by Mr. Chapelier; he might wish to comment further on how this project looks from the inside.

Mr. Valantin and I feel we are free to give our impressions at this time to the Conference, particularly with regard to some of the problems we have confronted. Of course, we were particularly concerned with the effectiveness of computerized debt management systems, since UNDP had financed a number of projects, executed mainly by UNCTAD, and was under considerable pressure to continue and expand that activity. Mr. Valantin will speak expertly about the computerized debt management systems and what he found there.

I would like to take up a few other things mentioned by Mr. Husain this morning. I think he gave us a very useful list of items to discuss during this conference. I hope we will discuss some of them a little more fully, particularly the linkages between domestic and external debt management, which we found have been accentuated because of a number of reasons. Not least is the fact that foreign assistance and external finance have been drying up for many countries. They have to find money to finance their development domestically, and one way of doing that is to raise it through public budgets. But I suggest, Mr. Chairman, that we might come back to this in a more organized fashion, perhaps on Wednesday morning or some other time that hasn't yet been filled on the agenda.

I would also register an agreement in support of the idea that any good debt management needs a high level decisionmaking and coordinating body somewhere in the government. It should really be a committee, with the heads of the economic ministries and the governor of the central bank as participants. What we have seen of debt management in the field makes us quite convinced that this is indispensable for success. In fact, one of the major difficulties is the coordination problem which was highlighted here earlier and is getting worse rather than easier to solve.

Well, to give you some impressions, let me start with a couple of stories which you may find slightly blasphemous. First, in one country we found two, if not three, different systems for keeping track of external debt. One system gave the debt service ratio for the country as 34 percent of exports; the other one gave it as only 26 percent. We were of course appalled at this lack of consistency and the duplication of effort which was

behind it, so we queried somewhat heatedly how they could live with this. They said this was a very useful state of affairs for the government because, when the IMF came around, the debt ratio was only 26 percent. So the country was clearly creditworthy; they didn't have to go to the Paris Club. When the local politicians clamored for more expenditure on their pet projects, the government could show that the debt service ratio was already too high; it was unadvisable to borrow any more. So that gave us something to think about.

In another country with a tremendous debt portfolio, both in size and variety of loans, everything seemed to be put on computer. All data were, in principle, there in the data base. But, there were so many other demands on computer time that, for quick decisions by the debt managers, it was hopeless. They had to wait for weeks to get all the data for the underpinning of the decision, so they happily and creatively managed their debt with seat–of–the–pants flying techniques. I was reminded of one of these funny American postcards that says, "My mind is made up, don't confuse me with facts."

Of course, these two stories illustrate that for all the beautiful debt management systems the computer specialists can put together, politics is really at the bottom of it all. But that notwithstanding, clearly you need good management information and control systems in any kind of financial activity. Mr. Husain this morning went back to 1985, to the conference that the World Bank held then. I wonder if we realized at the time how complex the developing country debt portfolio really was, from a management point of view, given the conditions that all the various lenders, both official and private, put on their streams of finance. There is a lack of standardized practices of lending, a lack of clarity in definitions, which create obstacles for the debt managers. The World Bank might wish to look into this, to see if some effort could be made to simplify and standardize some lending techniques, documents, and so forth. To my knowledge, the DAC has not looked into this particular problem, but it's time that somebody devotes effort to it. The task of sifting through anywhere between a few hundred up to several thousand loan agreements to bring out some 50 or 60 bits of information and put them on the computer, to check and validate, etc., is very time consuming. As long as this goes on in a small debt office—and it may take a year or two years—no real debt management is taking place, in the sense that people try to improve on the structure of the debt. I think our colleague from Chile gave a very good illustration of this problem this morning. And since 1985, things have gone from bad to worse because of two main factors. First, the speed of restructuring debt at the Paris Club and the London Club has actually increased somewhat. The acceleration was of course the result of the inability of debtors to fulfill the obligations. Each layer of restructured debt makes the task of managing more difficult. The second factor is the rapid development of financial engineering and the introduction of debt reduction techniques, such as debt–for–equity swaps or debt–for–nature swaps. Now the Brady Plan is coming along with further complications, I am sure. It may relieve the burden of debt, but I don't think it will relieve the burden of debt managers.

Another factor that has struck us as we traveled around the world is the difficulty of quickly adjusting debt management systems to the kind of government decisionmaking that characterizes most countries, developed or developing. We did not expect the degree of complexity shown by the legal framework, which makes international borrowing and debt management very difficult. In one country that we visited, there were at least twenty laws regulating public sector borrowing abroad. In another, the legislature was considering, after a constitutional reform, whether the new constitution really allowed the administration even to pay interest on foreign debt without a case–by–case decision by the legislature. We found cases where loan agreements were pending decision by the legislature for years, so that finally the lender had to cancel the offer.

Efficient debt management certainly requires that the legislatures delegate authority to contract foreign debt to the administration. If the legislature wants, it can set limits and demand reports on the current status of debt and on the new loan agreements that have been contracted. It seems that legislatures are not very keen on putting a price on time. But debt is very much a matter of using borrowed money and paying for its use over a certain period of time, so the cost of not taking the right decision can mount very rapidly. It [the cost of lost time] can always be calculated as a real cost paid or as opportunities lost.

Government decisionmaking is often based on openness, on the slow and deliberate process that will enable anybody to have his say who thinks he has some right to put forward an opinion. The cost factor seldom

enters into the picture. On the other hand, modern finance and particularly the new debt management techniques require that there be somebody close to the action who is empowered and willing to take commercial risk in order to gain rewards, essentially saving the taxpayers' money. This is something that governments will have to find ways of arranging. It is not normally a feature of government administration to empower operating officials at the level of directors or below to take decisions that may cause losses or create gains of perhaps tens of hundreds or millions. But this is what has to be done in order to reap the benefits of modern financial techniques, of opportunities that are presented by markets that come and go, and of windows that open perhaps for only a few days. So an overhaul of the system for delegation of decisionmaking and the accountability of officials is often required in order to use to the full the benefits of modern financial instruments.

I talked earlier about the division of responsibility between the administration and the political layer—the parliamentarians plus the general public and the media, which also have a political say. This is one set of problems that is not always well tackled. But within the administration, complications also arise from the fact that all good financial management needs some audit by the end of the day. The auditors must understand what they are auditing, and they must have some instructions on how to react to procedures that they feel are not in keeping with good government practice. There is a fair amount of confusion in many governments on how one should look at these things. Government auditors are not always familiar with business ways of taking quick decisions in the risk–reward area. One way to strengthen the hand of the operators and make it easier to delegate authority to the real experts is to build up the expertise by enabling people to stay with their jobs. This rapid turn–over in staff definitely is debilitating to the professional decisionmaking ability of the debt offices. It enhances the encroachment of the political area into the day–to–day operation of debt offices. It is clear that if you change the director of a debt office every year or so, the political supervision and guidance will be that much closer because the responsibilities were really never quite delegated to the operating levels. Since political priorities and the things that drive the political process are different from the professional one, this conflict can be acute at the operating levels. There is not enough professional competence built up over time.

At the back of all this, there is also the problem that governments have not been able to sell the benefits of debt management to the ultimate decisionmakers: the establishment or the political establishment. This is of course a very complex issue. Again, consultation among borrowers should bring quite a few examples to light where good debt management actually earned money for the government and for the country. This is also an area where someone like the World Bank could put together some good illustrations of how debt management can be beneficial to the public sector and to the country.

Of course, this is not just to enable good decisions to be taken. The whole matter of building up sufficient structure to run debt management has to be based on some idea of the pros and cons of devoting resources to it, a calculation of the benefits against the cost and the risk. This morning, Mr. Husain has pointed to the problems in getting debt offices centrally placed and getting the resources needed. It is a matter of whether the debt managers can market their services sufficiently to gain the ear of the politicians and the ministries of finance, who set aside the resources for debt management. It would be useful to have a number of success stories in this area, to prompt governments to *do* more in order to *earn* more from good debt management.

I don't think I should say too much about technical assistance as a special branch of bringing debt management to higher stages in many countries, because I believe we have a panel on this topic later on the agenda. But very briefly, it seemed to us as we went around and visited country after country that some active work could have been done by the government to relieve the lack of resources—the lack of experts, information, and technical equipment—in the government and in the debt offices. This could be done by more cooperation with the private sector, by using what is available in their banking systems, by freer use of resources that are available within the government but are kept away from the debt managers because of bureaucratic inflexibilities.

There is also a striking lack of contact between debt offices, even in neighboring countries. We felt that a major effort should be mounted with the support of international organizations to bring debt offices in better contact with each other. This should take two forms: (1) a

one-shot operation to inspire debt managers by discussing with their colleagues and learning of their experiences, problems and successes; and (2) on a regular basis, enabling debt managers at the operating level to come together every six months or so to exchange views on various technical matters. This could be done regionally, subregionally, or among debtors with the same kinds of problems. It could be done for special experts within debt management, such as the legal experts who are the drafters of loan agreements, and all sorts of variations, possibly depending on history and local conditions.

In any event, much of the resource base for technical assistance is available in the debt offices of more advanced debtors. One can find a sort of seniority with respect to the structure of debt management and technical assistance. A flow of information between those at various levels of sophistication in debt management should be one of the main objects of technical assistance.

After these rather general remarks, I think I should leave the floor to Mr. Valantin to come to the specifics of debt management with the aid of computers. Thank you.

Mr. Valantin: Thank you very much, Lars, although I am beginning to wonder if your comment about not confusing one with facts really is the death knell of all of these computer systems that we have been talking about. On the other hand, the success stories to which you referred, and your own successes in a previous job as a debt manager for a sovereign nation, did depend upon the supply of information. As any commercial bank portfolio manager will tell you, it is information that really is the key commodity. So I am not afraid to read my first sentence, [1] which I wrote several weeks ago: the debt crisis really has heightened the awareness, in both developing countries and the technical assistance agencies that assist them, of the need for better debt management information, so that decisions can be made.

A very important part of this, at least in my mind, has been the development of a number of computer-based debt management systems within the private sector, in the international organization sector, and in developing countries. Such systems have been seen by many as a panacea for the problems involved in providing a usable information base for debt management decisionmaking. However, as we all know very well, such systems do not operate in a vacuum, but depend upon effective communication and cooperation among the data suppliers and the users. They also depend on the availability of trained staff, on the staff's continuing presence, and on the existence of appropriate legal and institutional arrangements.

The debtor requires two main resources for successfully dealing with debt: an adequate source of funds based on an economic base, trade, and so on, and a good supply of information to enable it to develop and implement the necessary policies and to structure and administer its debt portfolio effectively. Unfortunately, there is not much that we systems people can do about supplying the money, but there is something we can do to help to supply information and to organize it in such a way as to make it more usable.

We heard this morning from Mr. Husain about the functions of debt management, and of course, each of these functions has a counterpart within computer systems that may be developed to assist with the operation of those functions. I won't go into details on these; they can be found in the paper which I prepared, and they do follow very much along the lines of the standard functions of a debt management office. However, I would like to emphasize that, by and large, when we have been talking about computer-based tools to help with debt management, we have been talking about the statistical or the accounting function. There are many other functions—the policy, the regulatory, and the operational functions—which also depend upon a supply of information. To date, as far as I know and as far as we saw during our review last year, very little emphasis has been placed on the information needs of these other functions and the systems necessary to support them. So later on this morning, I will concentrate a bit on some of these other functions and the information they need.

Of course, much of the information that is needed by a debt manager is scattered and duplicated throughout the various files within a developing country. In some cases, it is simply retained in the heads of officials who sometimes are not around when you need them because they have gone on to other things. The information is generally not organized into a coherent information system that would enable easy access for a variety of

1. The draft paper for Mr. Valantin's presentation is included in Volume 2. The material here follows his oral presentation, which added significantly to some topics in the draft paper.

users. In some cases, much of the highly pertinent information never reaches the officials who need it. It might be available within the country—for example, within the private, and often foreign–owned, banking sector. A lot of information is also available from sources outside the country, both commercial and non–commercial sources. As Mr. Kalderen said towards the end of his presentation, we believe that information exchange and "south/south" exchange of experience among developing countries can be extremely useful. I will be coming back to these points as well.

I would like to talk now about the functional capabilities of these computer–based debt management systems. I have developed a list of thirteen functions which I would like to go through quite briefly. Some of these will be very familiar to those of you who have used some of the packaged systems or those of you who have developed your own computer–based systems. Others may not be part of what you would call a computer–based debt management system. I would like to discuss this towards the end of my presentation.

These computer–based systems can vary a great deal in their sophistication, complexity and functional capabilities. I have seen systems which operate on two mainframes running in tandem and have sixty subsystems on line to several hundred banking terminals throughout the country. I have also seen systems which are nothing more than a LOTUS 1–2–3 spreadsheet set up by an individual. These are all computer–based debt management systems. To the extent that they help answer the questions that their users want, they are perfectly valid. In many cases, one does not need a very complex system to handle debt management which is itself being carried out in a straightforward way.

Let me go through my list of these functional capabilities. They are listed roughly in the order of increasing sophistication and power, as well as being roughly in the order of the historical evolution of most of these systems:

1. The first function is **data entry validation and editing**. It is, of course, what is needed to create the debt data base. Normally, systems for debt registration and recording and for debt transaction accounting focus heavily on issues of entering the loan information, validating it, sorting it, and printing it out in various ways.
2. The second component is **generation of projected transactions**, based on either rules for periodic disbursements payments and fees or an explicit schedule for these transactions. Some systems have rather sophisticated facilities for allowing the user to enter a set of rules that determine these periodic transactions, from which the system automatically generates the schedules. In others, projection must be done manually, transaction by transaction. When you have several thousands loans, each with an average of 1 or 2 transactions a month, manual projection adds up to quite a bit of work.
3. All of these systems produce a variety of **standard reports**. The systems have varying degrees of user parameterization for selecting records, aggregating, computing various parameters and variables, and formatting the output. The reports may be based on debt and exogenous data entered by the users, on data extracted from other systems, or on data generated within the computer–based data management system (for example, debt data which have been generated by the projection module). And there are a variety of reports; at the last count, I think about a hundred standard reports could be seen, if you looked at the various systems that are in place.
4. The next function is **querying and ad–hoc reporting**. This would include an interactive query program that enables the user to select records that meet some particular criterion and a reporting language or report generator that allows the user to define individual reports. Depending upon the way the standard report function has been set up, you might find its parameters are very broad, so they allow one to do almost any sort of ad–hoc reporting that might be desired within the confines of these "standard reports." However, in most cases, users manage to come up with questions that no one has ever thought of before. So it is nice to have some facility for letting them access the data and manipulate it in ways that only they seem to know.
5. Systems must of course have **utility and maintenance functions**: back–up, security, and so on.
6. Systems must also have a number of **analytic and management tools** to provide the information that the end–users—the debt manager and his political and policymaking masters—require. These analytic tools include things like sensitivity testing

and new loan testing modules, calculation of exchange rate gains and losses, calculation of the grant element in loans, etc.

These first six functions can be found in pretty much every debt management system of the type we have been talking about this morning. Of course, there are varying degrees of sophistication and complexity in all of these functions. The next set of functions has arisen in more recent years because of changes in the market and changes in the ways debt is being handled.

7. I call the next function **facilitation of structural changes to the debt portfolio and data base.** These structural changes include global changes or changes which occur on a section of the portfolio as a whole, as a result of refinancing, rescheduling, or restructuring exercises. If anyone has been through one of these exercises, one does not want to go through the data base loan by loan and transaction by transaction, changing each and every entry in the data base that has been affected, because many thousands can be. So systems have been developed to enable a more automatic kind of facilitation of these changes across the data base. The capacity for various other kinds of global changes resulting from optimization of the debt servicing strategy—for example, through currency exchange rate options and swaps—are also under development in some of the more sophisticated systems. Again, for example, some people want to manage on-lending operations, and they want the system to be able to handle these global activities.

8. Another important category of systems functions are those related to **interfacing to external systems.** Interfacing may occur for the purpose of importing debt data, for example, transaction information from an accounting system or from an operational foreign exchange control system at a Central Bank. Much of the data needed for the national debt data base may be available [in other systems], but it has to be converted and brought into the [central debt management] system. When I say "system," I don't necessarily mean one set of computer software, running in one computer, but a system in the broader sense. The problem of interfacing systems is one that we have run across in many of the countries we have visited. It is a problem I will be discussing in more detail below.

Of course, one also may want to interface for the purpose of exporting debt data. For example, one might want to take aggregate data and send it out to a spreadsheet, so that it can be analyzed by an economist or entered into a macroeconomic model. Some systems already have such an interface and a model already built in. One might wish to have an interface for the purpose of administrative or operational control. Examples include: interfaces we have seen in some Central Banks to pass information on payments to an authorization tracking system; reporting debt data in machine readable form, for example to the World Bank; and accessing external financial and statistical information sources such as Reuters and I.P. Sharp.

9. Another important function relates to **customizing data structures, processes, and reports.** This ability is especially important for people who are using packaged software. When the off-the-shelf, ready-made suit fits, it's great, but when it doesn't fit exactly right, you want some minor alterations made to it. As the suppliers of standard packages become busier and busier, it becomes more important that their systems enable the user to do as much of this customizing as possible. In some of these systems, there are explicit functions or explicit hooks, which allow users to do some of the their own customization work.
10. Moving more toward the future, one can talk about **decision support systems and tools** to help in policy formulation, in evaluating alternative strategies, in developing negotiating strategies, and in managing the portfolio to optimize its composition with respect to maturities, interest, and exchange rate exposure. These tools are really just sophisticated extensions of the analytical and management tools I mentioned above. Of course, one can really "blue sky" about what computers may be able to do for debt managers in the future.
11. An important part of a debt management information system in the broader sense of 'system' is **access to information sources,** both within a developing country and from other countries, for policy formulation, regulatory functions, and debt coordination. This information is not the debt stock numbers inside the debt data base. Rather, it is information about such things as:
    - **The laws, regulations, and procedures for authorizing, contracting, and administering**

loans. Each country has its own legal framework; in many cases, as we have heard, there may be twenty different laws that are applicable. There are probably hundreds of different regulations. The people who are involved in operational debt management must be familiar with all of these. When they work with four or five agencies coordinated by a central body and deal with this number of different regulations and procedures, keeping track of it all becomes quite a task. This information seems to be a good candidate for some assistance from the computer side.

- **Foreign exchange regulations and procedures.** Economic and financial policies that are contained in various budget documents, position papers, plans, and so on are all part of the information with which the debt manager and the debt management office must work. Yet this information is rarely easily available to them through any computerized access. For some things such as current international loan practices, information may be shared in conferences and proceedings. But it is not in a form that debt managers in a developing country can easily get to. I recall one developing country debt manager saying that what was important was to be clear about what creditors could or could not require in a particular loan agreement or in the execution or the meeting of that loan agreement. Information about sample loan agreement clauses should be made available as well. (In fact, Mr. Kalderen has edited an interesting book on this subject, in which these clauses are explained in great detail.)

- **History of debt management practice in-country and elsewhere.** An example is detailed experience in previous negotiations: What has the country done? When the staff leave after a year or two, where is the history of what happened? Where is the history of what they were able to do with particular banks or with particular multilateral donors? As another example, what has been the experience from neighboring countries who have been successful or unsuccessful in using particular techniques?

- **Training opportunities.** Training is an important factor, and there is a lot of information about it. But it is difficult to get the information or the sources of technical advice.

This is quite a long shopping list I have given, but none of this information is really handled, as far as I can tell, by what we usually call "computer-based debt management systems."

12. Another function of concern is **information needed for operational portfolio management,** things like market conditions, availability of information, instruments, maturities, etc. Also in this category are sources of finance, or even things that are available locally, like the undrawn amounts of existing loans. This information, which would help manage the portfolio better, is scattered all over the place.

13. Finally, as the last function of the ideal debt management system, I see a capability to **access networking facilities for information exchanged among debtors.** This could include things like electronic mail or computer conferencing as ways to support some of these "south-south," technical exchanges. A lot of personal consultation occurs, but it could be facilitated through electronic means. This capability could also have the advantage of providing some sort of history, which could still be accessed after staff changes have occurred.

The last three or four functions I mentioned are not, as far as I can tell, currently part of what we call "computer-based debt management systems." I would be very interested to hear if any of the countries represented here have been working on some of these aspects. It is a very labor-intensive job to collect and organize some of this information, but the information is needed and it is there. One way or another, the developing country debt manager will find out what the current regulations are. He will go to his library or ask around. But perhaps there is something we can do with computers to improve this process.

During our visits to developing countries, we found a number of problems with the implementation and use of these computer-based debt management systems. Interestingly enough, I noticed this morning that problems with the software itself came at the very bottom of my list and took up only four or five lines, whereas the

other problems I will mention take up several pages. I think this will also be reflected in some of the presentations to be held tomorrow. Some of the comments this morning also indicate that the problem with computer-based debt management really isn't the computer; the problem is the information and the use that is made of it: "Don't confuse me with facts." If people are really not concerned about the facts, if people are involved in inter-institutional battles, questions of territory and so on, then the computer problems really are seen as very minor. Another way to look at it is that the computer systems people have been able to meet their immediate needs either through packages, outside technical assistance, or their own ingenuity. Although they aren't stretching the managers to the limit by providing them with information which would then force them to do better debt management, they are at least meeting the immediate reporting and analytical requirements that exist today.

Some of these problems are well-known. For example, the first is the need to identify the principal systems and user requirements in the logical selection of an approach or of specific software and hardware. This is the old data processing problem where the computer people don't really understand what the users want, and the users don't really understand what the computer people are telling them. And no one is really sure what they can get, or what it can do. This problem has diminished to some degree because of the availability of information about systems. Conferences such as this one play a very important part, and I think that Mr. Hunsberger will have a few words on working with consultants and outside technical assistance. Nonetheless, the first problem people do have is how to decide what approach to take, what system to use, what hardware, what software, and so on.

The next need or problem is the need for the development of a detailed plan for coordinating debt information management in a country. We have seen this time and time again. Ideally it should be done as part of the initial assessment, through outside technical assistance. This would help eliminate many of the potential overlaps. Unfortunately, this is rarely done to the extent that is really necessary or, when it is done, various inter-institutional problems, rivalries, and mandate questions tend to overshadow it. As a result, the comprehensive plan is never really put into place.

This results in the third problem we have seen, which is duplication of effort. A country's computer-based debt management system does not have to be a centralized system; it doesn't mean there is one computer where everything sits and one group that controls the whole thing. It does mean that there is some measure of coordination and agreement on standards and methodologies, etc. I recall very clearly one country we visited where the Ministry of Finance and the Central Bank—the two traditional rivals—were busily collecting the same debt information, knocking on the same doors, and each complaining that they didn't have enough people to do the job. It seems rather obvious that if they divided the job in half and each took the half that seemed most appropriate, they could do the job in half the time. But this was not something we were able to see implemented, at least while we were there. This is particularly tragic in many developing countries, where trained, skilled personnel are in short supply, are turning over frequently, and are very busy with negotiations—Paris Club rescheduling operations, etc. Yet they find themselves doing the same job over and over again.

We have also run into problems of interfacing to related external computer systems. My own experience is that, if you have reasonable expectations and two reasonable systems, the computer people can always be locked in a room, and told to find the way to get the data from one system to the other. I don't want to minimize the technical difficulties, but they can be solved technically. Rather, the problems tend to be institutional. The institutions really don't want to have their data flowing out or they don't trust the data of another institution to flow into their system. Nonetheless, coordinating committees can provide some very useful assistance in terms of setting the system standards. In some cases, the standard is dictated or required by an external agency like the World Bank, which has reporting requirements. As a result of the need to report in a uniform way to an external agency, a country may set its own internal standards so that the information can be collected and compiled in a meaningful way.

I am sure you are very familiar with the next type of problem we found: inadequate resources. Debt management projects always seem to suffer from a lack of resources, whether the resources are allocated locally or through external assistance. We have seen a number of

projects that have had to go through several budget revisions and extensions. Human resources, equipment, and technical support seem to be the three main areas for which inadequate provisions are made. I think we are all learning lessons, and if one can save one percent on a US$20 billion debt, that adds up to a lot of money. So I think one should really look at the value of debt management and not be very stingy in allocating necessary resources. If you look at the current cost of a microcomputer, it is clear one doesn't need to be very cautious about having two or three in a debt office; you shouldn't try to get everybody using just one.

The next problem is lack of express political will. In many cases, perhaps because senior officials haven't been convinced that debt management is something that can provide strong economic benefits, the clear political signal from the top has been lacking. In cases where the signal was available, it really has made a major difference. Debt managers are suddenly able to get cooperation from all of the different agencies that must be involved for debt management to succeed.

Staffing is a problem we have talked about. Again, this is a particularly major problem with a computer–based system when technical professionals are at a premium and, in developing countries, can often move into the private sector with salaries two or three times more than they would receive in the public sector. Or, they can even move into an international organization in another country. So there are all sorts of tricks that one must use in order to keep them on staff. This holds for other types of economics professionals as well.

We may hear more about training later on, but it seemed to us that problems arose most frequently with respect to basic or introductory training related to computers, information systems, and debt, rather than the more advanced, product–specific technical training. Where a supplier had a particular package, once the people have been given enough background, the training was usually adequate and did not cause major problems.

Finally, there is the problem of hardware and software maintenance. We didn't run into too many hardware failures, although I am sure that, by Murphy's law, these occur all the time. Software problems tended to focus more on *missing functionality* within systems rather than *bugs* which caused work to grind to a halt. In some cases, these were functions which people thought were in systems, but then they discovered were not there, or the functions didn't work exactly the way the users wanted them to, etc. The suppliers of package software had the problem of trying to anticipate everyone's needs and write something that is general enough to meet a wide variety of uses but yet can be customized. Countries that have decided to build their own systems of course don't have this problem. They can build from scratch and have it exactly the way they wanted. Or is it really that way, because tomorrow what they want will change?

Based on all this, it seems to me there are three main areas that should receive emphasis in future systems work. The first area includes facilities for customizing data structures, processes, and reports and for developing new functions that can be integrated into those provided by the package. In general, many of the users of package software have been satisfied with using these systems in a turn–key modality, although as they become more sophisticated as users, they start to want more from the package. It is a benefit to both the supplier and the user to make this as easy as possible for the user. In cases where the debt management package is built on a data base management system (such as DBase or a relational data base), the data are in a known location. So the user should be able to write application programs to access the data, add fields, or interface to other systems. It is important that suppliers in the future provide as many "hooks" or connections as is feasible, or documentation to enable the users to do this work.

The second area that I think will lead to interesting future work is the area of decision support systems and tools to help in policy formulation, evaluation of alternative strategies, negotiation strategies, and so on. I will only mention one group of tools that some people are starting to look at. These employ expert system techniques. The day when we can have the computer–based portfolio manager who puts many of us out of a job is still some time away. But, in constructing these computer–based assistance systems, one learns a great deal about how one really manages debt. There is a lot of experience that one might be able to capture and share among countries, just by going through the process of developing these more sophisticated kinds of decision support tools. I won't say they will be systems to replace debt managers, but I certainly say they will be tools to assist them.

As a simple example, consider the question of constructing scenarios and determining the effects of changes to various parameters, such as interest rate

sensitivity testing. With the systems today, the user usually has to generate the required variables, perhaps by printing a report, or by computing them and exporting them to a spreadsheet. Then the user has to save the contents of the data base, modify the parameters in questions (e.g., to show a change in an exchange rate) and run through this process again. He compares the results of the two runs, and does this perhaps through several iterations, to see the net result on exposure in the particular currency. This can be quite a time-consuming process, although it is a lot better than doing the computations by hand. But people would like tools to enable them, in a more systematic fashion, to run through some of these scenarios. For example, to be able to specify them in a simulation language and let the computer do all of the grinding necessary. I know that some of these systems developers are starting to look in that direction.

Finally, to return to my information theme, there are many different ways to provide access to the types of information I have mentioned. For example, one can build a data base of laws, regulations, and procedures for authorizing and contracting loans. In fact, some countries are building legal data bases. At the regional and global level, there are opportunities to establish or participate in existing information systems and networks. For example, there are regional information systems set up by the UN economic commissions that contain documentation, publications, and working reports dealing with economic matters. But debt is not really singled out in these systems. So there is a lot of information methodology that is in existence already and that could be turned to the question of debt documentation. One might want to support things like global information services in particular areas. I understand that UNITAR is just starting up a resource center on debt management training. So there may be one source of information that people can go to on training opportunities and courses.

Of course, some of this information may be sensitive. For example, a country's experience during previous negotiations, how they managed to get a good deal out of a set of difficult circumstances, may be tricky [to make widely available]. On the other hand, if they have this information for themselves, it could help them in the future. So there may have to be some give and take in this area.

Finally there is the whole question of networking. It seems that a global communication network is extending itself. There is a lot that the technology can do, and I think developing country debt managers should start to take advantages of this to start working together more closely. Some coordination may be needed for all of these sorts of systems, but I don't think it has to be a heavy, monolithic, structure. I think there is a role for all of the actors: the developing countries, the UN agencies, technical assistance donors, the World Bank, the regional economic commissions, the regional development banks, possibly even developing country resource centers. So there is quite a bit to be done.

I would like to say just a few words about the agency for which I work, because somewhere in my invitation letter I was told to say what we are doing in the area of debt. I work for IDRC, which is a Canadian public corporation set up by the Parliament of Canada to support scientific and technical research. Information has been one of the themes that we have supported from the very beginning, and I work for the Information Sciences Division. So you can understand why I keep saying this word often. We have provided some assistance in the area of computer-based debt management systems, primarily through the Commonwealth Secretariat Technical Assistance Group. We provided some technical and financial assistance for the early developments of the CSDRMS software, which you will be hearing about later on, and for some of the training materials. We have supported a couple of projects with the Commonwealth Secretariat, including the pilot project for testing the system in Sri Lanka and another interesting project for setting up a subregional debt reporting and management system for the Eastern Caribbean Central Bank.

Another important issue for us has been to find ways to make software available to a large variety of countries—in the case of the Commonwealth Secretariat, how to make CSDRMS available to non-commonwealth countries. We hope to be doing this in a joint project with USAID in Thailand, in which the Commonwealth Secretariat will be participating, even though Thailand is not a Commonwealth country. I think they will have more to say about that.

We have been involved in some projects with UNCTAD as well. We participated in a technical review of their software two years ago and provided some suggestions. I understand they are now seriously working

on them, in terms of redesigning and reprogramming the system. They are looking at new systems development technologies to help solve some of the problems they have encountered, to increase the generality of the system and functions, to improve performance, etc. I am sure they will be telling us about their plans in that area.

We also have been talking to UNITAR, which recently put out an interesting report on training. It addressed in particular the training needs in sub–Saharan Africa countries, and we are studying that with great interest. We have been involved not only in the information field but also on the economic side, through the economic programs in our social sciences division. For example, we supported a project on debt renegotiation in several Latin American countries. The project is looking at the bargaining process and the factors determining the bargaining power of debtor countries. Now they are looking at cross–conditionality, and so on. We have a national project in Nicaragua to look at the distribution of costs associated with balance–of–payment problems. And as a final example, very quickly, we are supporting UNCTAD's work to assist the Group of 24 in technical briefings and studies on international issues which are currently under negotiation and which will come up for decision at a later stage in the IMF Internal Committee. This involves supporting specific studies, reports of expert groups, and so on. So we are not a big player in the international debt field, but we have a number of interesting areas that we have been supporting.

Let me close with a little dream that some developing country debt managers have. This is, of course, the dream of having a computer terminal on their desk which accesses all of the national debt data, neatly organized and accurate at all times. It also accesses other national information systems, economic systems, macroeconomic plans, models, administrative systems, global and regional information sources. It has access to all of these wonderful tools to locate, analyze, develop, process, and repackage this information to their hearts' content.

I know that Mr. Kalderen has often told me about this dream when he was in the Swedish Debt Office. I think we are making steps along the way, but it will still be a while before we can have everything we want out of one screen. I do believe that there are many things computers can do to help debt managers, and I have listed some of those on which we are not now concentrating. I hope that, over the next few days, we can talk about some of these nontraditional forms of computer assistance in debt management. Thank you.

DISCUSSION SESSION

Unidentified Questioner #1: First of all, I would like to know your opinion of the different regulations or standards on informatics.

Mr. Valantin: You want to know if there are standards we would want to support?

Unidentified Questioner #1: If the systems are to be made better, is it better to first make the administrative rules or the informatics rules?

Mr. Valantin: Well, I think ultimately, systems should be dictated by the users, not by the computer people. In the ideal situation, what you have to do is look at what you really want to do, what you want out of the system, and then try to pick something which will give you what you want. I realize that there is always some exchange back and forth because the computer people can tell you what you can have and for an additional price either in dollars or in months of labor, you can have more. There is always a bit of trade–off. But I personally think you have to start off with what you want and what you think you are going to want in the future. This may be dictated by present administrative systems. I don't think you should limit yourself to present administrative systems, but I also don't think that the computer people should dictate to you what you can or cannot have.

Unidentified Questioner #1: Sometimes there are problems. . . . For example, you mentioned something about audit control. It seems that if you don't have the informatics rules to begin with, you are going to have problems because sometime the administrative rules are not as good as the system rules. So in this way, don't you have to put the informatics rules first?

Mr. Valantin: It seems to me that the computer, the informatics, can only implement what you tell it. I mean, it is true that the computer requires more precise

statements of rules, in order to have a program that it can execute. But the precision has to come from the user—from the administrative system. Perhaps what you are referring to is the fact that often, it is only when people try to use computers that they make explicit their rules, or the ways in which they work, and put them down in a very clear fashion. That may be so, but I still think the ultimate responsibility rests with the user, the administration. If it takes the computer to make one put these rules down in a very clear fashion, that is fine. But no one can ever audit on the basis of a computer program; they are just too difficult to work with. Somewhere there has to be a very clear set of rules, guidelines, or regulations, which the computer people may help you develop and make explicit. However, then they must follow these explicit rules when creating the system.

I have yet to see a computer program entered as part of a law—for example, a law stating that you *shall* have your data so that the following program in Fortran will execute it correctly. Laws are stated in legal terms, in English or Spanish or in another natural language, not a computer language. Then it is up to the computer to be able to handle what the laws require. I think then, we are really talking about the need to make the administrative procedures and regulations explicit and clear. The computer people can help you do that; but you should never really let them take over, because we are a dangerous group of people.

Mr. Stillson: When you were identifying problems, you said something that is consistent with our experience at the IMF: computer problems per se probably would come at the end of the list, possibly because of the good work that has been done over the last several years on the computer aspects of debt management. But then when you went down to one of the main areas to get [future] emphasis, somehow it was back to the computers—customizing packages, better analytical tools, nonquantitative information systems. Did you look at how to resolve some of the non–computer problems of debt management, or even more specifically of debt monitoring: the problems of administration or politics, of avoiding duplication of effort, and perhaps of designing better systems to get information into the computer system?

Mr. Kalderen: This is of course the crux of the matter, as I tried to indicate. There aren't many technicians who can handle the administrative and political problems in governments except those who work inside the government. They are not always accessible for this kind of work. Also, I think we were basically looking at technical assistance that had been rendered by international organizations and some bilateral donors, to see how effective it had been. Essentially this has been technical assistance for systems development and for getting debt data flowing. The main source of inspiration has clearly been the World Bank, demanding debt reporting over the years.

We don't have any ready–made solutions for these other major problems, except to point to the need in many countries for an overhaul of the whole economic management. In some cases, that has been undertaken through consultants. In other cases, there are institutes of public administration or development management that are working out solutions. We found in one country an institute set up outside the central government ministries to provide service to the government in informatics and a number of related disciplines. This seemed to work very well indeed, partly because it recruited people from outside the government and paid them non–government salaries. They felt free, as sort of built–in, in–house, consultants to the government, to propose straightening out procedures and even streamlining the number of ministries and the functions of ministries.

I don't think we came across a single country where there was a detailed and up–to–date set of "terms of reference" or instructions for various government units: who was supposed to do what in debt management. Nor was there a country where such instructions translated into specifics for each department of, say, a ministry of finance, each section of the department, or individual posts. In other words, there was not the kind of framework or skeleton that you will have in a major international company, where people know what they are supposed to do and how they should relate to levels above and below them and units to the side of them. That is mostly missing in governments in this area of debt management, and probably missing in financial management generally. To provide that sort of structure would be a major task for "management development."

Incidentally, the UNDP now has a program to assist countries to improve their development management as part of economic adjustment. Something may come out of that, but so far they seem to be looking at individual

country programs rather than trying to provide some overall solutions.

The World Bank, incidentally, does not seem to have a specialist unit or division to foster modern economic management in government. Whatever competence there is in the international system is supposedly with the United Nations Secretariat in New York, which has been responsible for a number of projects in past years. I don't know the exact state of affairs today.

These overriding problems are so tied up with general government "deficiencies"—the problem of running a country properly as an economic system, basically on the strength of the political ideas and directives given by whoever is in charge, be it the people or someone more or less like a dictatorship. It seemed to us that debt management has to be, at least to the extent possible for technicians, sorted out of this general government entanglement, for purposes of defining and strengthening the structures through outside technical assistance. But to be effective, as a first measure it always has to identify the "good guys" in the government, the forces to be strengthened through outside support. This is necessary to achieve what we felt would be the benefits of good debt management: lower cost and lower risk to the government, the advantages of being able to negotiate more successfully with the creditors, etc. We can develop this theme of why good debt management is good for the country at some later stage. Thank you, Mr. Chairman.

Mr. Husain: I only wanted to clarify a few points about the World Bank. We *do* have very active national economic management courses offered by EDI [the Economic Development Institute]. Also, in our technical assistance projects for structural adjustment, we do provide technical assistance in national economic management. But the whole area of development management and economic management is not a very hard science. And the USAID has, I remember, invested millions of dollars in training in public administration and development management—in Pakistan, for example, where I benefited from it.

You really have an interaction of the political, cultural, and administrative forces, which determines what your administration or your economic management is going to be. When I went to Indonesia, somebody said there is an inverse correlation between the number of economists and economic growth. They said in jest, "Look, India is one of the highest in number of trained economists, and their growth rate has been three percent. Indonesia is one of the lowest in number of trained economists, and their growth rate has been five percent or more." This was of course a joke, but the real point of it is that you cannot train people formally and expect that, because they have been trained in economic professions, as economic managers, that they are going to be extremely competent in managing national development.

I think these are very difficult issues, to which there is no easy solution. There is a realization [of this] among the countries themselves.

One point made by both Mr. Kalderen and Mr. Valantin that I liked is the value of sharing experience between the countries within a region or similar subgroup. Caribbean countries, for example, or the South Asian countries, or the South East Asian countries, because they share historical background, could benefit from each other's experience. I think this is a very important aspect of technical assistance that we have not fully exploited. I am very much inclined to [have the World Bank] work with the UNDP and with other agencies and regional development banks to see how we can strengthen that particular linkage.

Unidentified Questioner #2: Mr. Kalderen, from your experience, I wonder if one of the factors in the staff turnover at debt management offices might be the extent to which debt offices have been transformed through technical assistance. In listening to the experiences of Chile and Malaysia, it seems to me that for debt offices where there has been a significant transformation, where its role has become operational—where, for instance, the office is not merely a statistical recording unit or hasn't, on the other hand, become very taken up with just administrative procedures—might not that be a factor in retaining staff in the debt office?

Mr. Kalderen: Yes, I think that once you decide you want to pursue active debt management, active liability management, then you recruit people who can do the job. Most of them would come from the private sector with an experienced background in banking or finance. You encounter a whole new set of problems, one of which is that even if government salary scales are stretched to the limit and beyond, this will not be satisfactory, in the end, for these people. The career path of this kind of staff is really within the national and international financing sector, including government, banking, major

corporations' financial departments, and so forth. They will join the governments, stay for a few years, learn, and make the right contacts in the public sector. Then they will sell their services to the private sector again at 50 percent above the salary that they had before and 200–300 percent of their government salary.

This is a dilemma. It is difficult to see how you can resolve it if you really want the government to become an efficient partner in what is essentially a business context and profit from it. Except, to replace the ones who leave, you might have a very extensive facility for recruiting new people and for upgrading, through training, some of the regular government staff who would like to join the debt office, make a career there, and maybe stay in the government by going off to a parastatal or something after 5 or 10 years with the debt office.

The problem is often that ministries of finance in particular—central banks a little bit—have never had a good staff-training unit. I came across ministers of finance who have never even heard of staff development. They recruit people fresh from the university and start them on a traditional civil service career path: two years with the treasury, then off as an assistant district commissioner somewhere in the bush, and then back to the ministry of education, and so on.

One really has to look at debt offices as packages, including recruitment and training facilities. And one must accept, as a part of life, taking on new people and seeing them leave. This high degree of circulation should be accepted and worked on, rather than the opposite. The fact that they are going off to good jobs in the government or outside could be an advantage used when recruiting the best people one can afford, the next time around.

Mr. Stillson: Could I ask how this was done in Sweden? I don't think this problem of training is unique to developing countries. Certainly in the United States, public sector salaries are much below private sector salaries. But my understanding, and I'm sure it's true in Sweden, at least maybe not to the extreme degree of some countries, but Sweden certainly had, and probably still has, a very sophisticated debt management group within the public sector. Surely this group is run by people who have opportunities in commercial banks and who would command salaries many times higher than what the Swedish public sector could pay. Yet Sweden has managed to maintain this very sophisticated operation. How did you keep staff that were technically qualified to do that?

Mr. Kalderen: Well, as head of our international loans department, I recruited a former staff member of the International Monetary Fund.

Mr. Stillson: Yes, I know him quite well. That was the basis of my question.

Mr. Kalderen: I myself have a background at the World Bank. The head of the domestic loans department was hired from one of our big commercial banks, where he had been in charge of capital markets. We had done business together in some of the international loan markets. In that case, there was a mixture of motives. He stayed for five or six years and was extremely useful in developing a whole range of new debt instruments in the domestic market, based on his knowledge, experience, and his contact with the investors who bought these papers. As for the rest, I think about 50 percent of the department for raising domestic debt and about 60–70 percent of the international loans department staff were recruited from the private sector. Most were from banks and insurance companies; some were from the airlines and private industry, where they had been working in the finance departments.

After the peak of our borrowing operations in the mid–1980s, I guess about one–half of the staff has left again, and gone back to private business. Some moved to better jobs in the government, but quite a few have left for the banking and finance sector. New staff have been recruited, and like the early recruits they are being trained extensively. They are sent out to spend time with various banks in the major capital markets. There are training courses; a lot of in–house training is being organized. We realized early that this had to be done.

The point is that once you create debt management as an ongoing concern, you can identify in the country a number of borrowers in the private and public sector. The debt management or the liability management units within those organizations form a fairly integrated network of competent people, maybe 50 to 100 all together. Within that group, those who want to stay in debt management make their careers. They move around and try to find new opportunities. People who are running these various units should keep in touch, not steal staff from each other but regard themselves as sort of a collective employer of this kind of competence for the benefit of the country.

Mr. Stillson: Is this true even though one of the collective employers can only pay a small salary compared with the others? What you have said shows that you were in fact successful, but you didn't really say quite how you did it. Is the secret really just a good circulation? If that's true, how long is it necessary to keep staff [to be productive], when a certain amount of their time "in office" is taken up with training? I ask because I think we have a lot of debt managers here who have this problem very acutely. If there are ways, tricks, whatever, it would be very useful to know.

Mr. Kalderen: It is difficult to tell what makes debt managers tick. I think one has to play, as an employer in the public sector, a number of strings, not just the salary, and not necessarily things like plush offices and plenty of equipment. It's true that sending people abroad for study trips or extensive training courses, which do not make too great a demand on them, can be useful as an enticement to stay on. But essentially, what makes life in a debt office attractive is the fact that you are playing an important role in shaping the economic future of your country. You have access to decisionmakers at the high level with pertinent information. If you can influence what goes on at a political level and make your financial decisions, then you feel that you are doing a good day's work. If on top of that you're given some authority to handle funds, to take decisions that may mean major profit to the government, then you are also getting the excitement of running some risk. I think these are factors that outweigh the low salary and the spartan accommodation that one would have—your lack of amenities compared to what the people in the banking world might enjoy.

6 The Technical Assistance Program of the United Nations Conference on Trade and Development

Enrique Cosio–Pascal and Jacques Baent, UNCTAD

Mr. Hunsberger: We are reducing the presence of the commercial packages at this conference and are focusing instead on the widely used packages offered by the multilateral organizations: the Commonwealth Secretariat and UNCTAD. In addition, we will be presenting some ideas about a training package we have developed. To start off the afternoon session, we will present first the technical assistance program of the United Nations Conference on Trade and Development, known as UNCTAD. In this presentation, we have agreed to work a little bit with the software, but we don't limit ourselves to the presentation of the computer system. We would like our colleagues of UNCTAD to describe their entire technical assistance services. The same will be true later this afternoon when we get to the Commonwealth Secretariat. So, I now will pass the microphone to my colleague from UNCTAD, Mr. Enrique Cosio–Pascal.

Mr. Cosio–Pascal: Thank you very much, David. I would like to make a presentation of the technical assistance services that UNCTAD provides to developing countries. Briefly, allow me to give an introduction on how we came into that business.

An UNCTAD Board Resolution wrote us into the Paris Club in 1979. Since then, we have attended more than 100 Paris Club meetings. We have acquired a lot of experience in how the developing countries have to present their cases, how to present the economic memorandum to the creditors, etc. When we started to help them in their presentations, the first fact that we found out is that they did not know how much they owed to whom and when the payments were falling behind. Starting from this position made it very difficult for them to present their case to the creditors. So we started to develop a Debt Monitoring and Financial Analysis System (DMFAS) in order to help these debtor countries to put some order at home.

When we started to implement this package in developing countries, we realized that even if they had the DMFAS tool, they would be unable to keep up with updating and organizing the data if they did not have proper institutional arrangements. So, we started to give a lot of importance to these institutional arrangements. We tried to have an analytical blueprint for this institutional, administrative framework. This blueprint is what we are trying to present through the paper called "Effective Debt Management." We are in fact presenting three papers to the conference:

1. "Effective Debt Management," which [follows in this Chapter]
2. An information note, which is a short note on the [DMFAS] system, including some sample screens, menus, and simple reports, which is to be found in [Volume 2]
3. The published report of our past year's activities [also included in Volume 2].

Let me first refer to this "Effective Debt Management" paper, which tries to analyze two things. First, debt management can refer to an international environment and to a national one. This paper refers to the national environment of effective debt management. We distinguish between the macroeconomic level of analysis, in which debt management is just a part of larger macroeconomic policymaking decisions, and micro, administrative management, in which the main point of view is within a public administration context.

[Mr. Cosio–Pascal then proceeded with presentation of the paper: "Effective Debt Management." The following version has been edited from his draft of the paper, as distributed prior to the commencement of the Conference.]

Effective Debt Management [1]

Introduction

The present debt difficulties of developing countries have a number of dimensions, involving both national and international issues. This paper deals with the development of effective debt management at the national level. Such management can assist debtor governments in overcoming present difficulties, avoiding similar difficulties in the future, minimizing borrowing costs, and ensuring the optimum use of both internal and external resources.

Since 1978, UNCTAD has participated in over 100 debt reschedulings within the Paris Club, involving some 40 countries. In preparing for these, its economists have come to know first-hand the strengths and weaknesses of debt management systems in a large number of countries. This experience has given rise to the development of UNCTAD's Programme of Technical Co-operation on debt management. The core activity of this program consists of helping countries establish the necessary institutional environment for effective debt management and installing hardware and specialized software, called the Debt Monitoring and Financial Analysis System (DMFAS). As of December 1988, 25 countries had received assistance through this program.

Effective debt management encompasses such issues as administration; operation of an office; communications; information flows and legal authorizations; analysis of credit, balance of payments and budget; control of borrowing; definition of strategies; and computerization of information systems, as well as training and retaining people.

Debt management has two dimensions: the macroeconomic and the micro-administrative. In the former, debt management must be seen as an integral part of a country's overall macroeconomic management; in its macro-administrative dimension, it is part of a broader process of public administration and management. The present paper aims to sketch out the requirements of effective management of a country's external debt, bearing in mind both these dimensions, and to present a conceptual framework for understanding and implementing corrective measures regarding these requirements.

The Concept of Debt and the Scope of Debt Management

Recently, an international working group on external debt statistics, composed of the Bank for International Settlements (BIS), the International Monetary Fund (IMF), the Organisation for Economic Co-operation and Development (OECD), and the World Bank (IBRD), agreed on a core definition of external debt:

> Gross external debt is the amount, at any given time, of disbursed and outstanding contractual liabilities of residents in a country to nonresidents to repay principal, with or without interest, or to pay interest, with or without principal. [2]

As this broad definition of external debt suggests, a comprehensive debt (or liabilities) recording and management system would require full knowledge of all external obligations of the country. This covers all government borrowing, central bank borrowing, and parastatal and private sector borrowing whether guaranteed by government or not, as well as other financial operations of domestic economic agents, including direct investment and leasing. Whether this full knowledge of each component should translate into full control is another matter.

While a general definition of external debt is important for ensuring that no essential components are omitted, for a particular country it is probably less critical than specifying the components that ought to be recorded and managed. With this management purpose in mind, a commonly used narrow definition of external debt includes all medium-term and long-term debt (for one year or more) owed by, or guaranteed by, the public sector to nonresidents. In principle, all private external

1. This paper was prepared by Messrs. Alain Bodin, Enrique Cosio-Pascal and Philippe Straatman. They benefitted from the knowledge and experience of the whole DMFAS team, as well as of various country officials. They bear sole responsibility for any error or oversight in this paper. This is an edited version of the draft distributed at the conference.

2. IBRD, IMF, BIS, and OECD, *External Debt (Definition, Statistical Coverage and Methodology)*, Paris, 1988, p. 19.

debt guaranteed by the government or other public institutions should be considered as public, since it will be submitted to the same regulations and procedures as debt owed directly by the public sector. In addition, such debt is a contingent obligation of the government. Public debt should also include liabilities of the central bank, government agencies, the states (where a country is a federation), provincial and local governments, and so on.

A broader definition adds short–term public sector debt and/or private sector (non–guaranteed) debt (both short–term and long–term). Definitions become complicated because the distinction between different types of external resources such as loans, grants, and direct investment is not always clearly discernible.

Leaving the issue of definitions aside, a discussion of the concept of debt and the scope of debt management must start by recognizing that external debt servicing obligations of a significant magnitude can raise two problems for a country. On the one hand, there is the need to earn (or save) the foreign exchange for debt service. On the other hand, insofar as debt is a governmental obligation, there is a public finance problem requiring the generation of budgetary receipts in local currency equivalent to the external obligations. Approaches to debt management are sometimes oriented toward one or the other of these dimensions. For some, external management is primarily an aspect of public finance and constitutes a part of the overall problem of managing public sector borrowing and debt. For others, external debt management is seen primarily in terms of its impact on foreign exchange availbilities and constitutes part of the overall problem of managing the foreign exchange budget.

As far as external debt is concerned, a government's immediate interest is, of course, its own external liabilites, which affect both the budget and foreign exchange reserves. However, government responsibility for foreign exchange reserves and regulations may also imply responsibility for providing foreign exchange to meet the servicing of private sector debt and, eventually, the remittances of profit from direct foreign investment.

To conclude, any system of debt management must necessarily allow successful management of public and publicly guaranteed external debt (mostly of a medium–term and long–term nature). This is the point of departure. However, such a system can also be extended in either or both of two directions:

a. To include private sector non–guaranteed debt or other external debt of the country, as deemed necessary from the foreign exchange point of view.
b. To include public domestic debt, as deemed necessary from the public finance point of view.

In brief, debt management is concerned with both external debt (including private debt) and public debt (including domestic debt); its ultimate objective is to help government manage both foreign exchange availabilities and public finances.

Debt Management Functions

Effective debt management primarily involves seven basic functions: policy, regulatory, resourcing, recording, analytical, controlling, and operating functions. The first three functions are part of what can be called **Executive Debt Management**. The other four functions may be considered as part of **Operational Debt Management**.

- **Executive Debt Management** might be viewed as the establishment of the "rules of the game" by the highest levels of government. It thus gives direction and organization to the whole, which might be called the **Debt Management System.**
- **Operational Debt Management** is the day–to–day management of debt in accordance with executive direction and organization. Operational debt management may in turn be viewed as being composed of **passive and active debt management.** Although the dividing line is not always clear, the former is meant to involve functions which do not include actions (interactions and transactions) on the debt front, while the latter does. Passive management will very much influence active management through the provision of information and analysis and is as important.

Each function of effective debt management has a major product or output, as shown in Figure 6–1. The various basic functions and their products are described briefly below.

Executive Debt Management

The **Policy Function** involves the formulation of national debt policies and strategies in coordination with the agencies with prime responsibility for the economic management of a country. Broad policy considerations

Figure 6.1. Debt Managment Functions and Output

Executive Debt Management	**Direction and Organization**
Policy Function	Strategy
Regulatory Function	Structure
Resourcing Function	Staffing and Means
Operational Debt Management	**Debt Dynamics and Practice**
Passive Management	
Recording Function	Information
Analytical Function	Analysis
Active Management	
Operating Function	Operations
Controlling Functions	Control
	Coordinating
	Monitoring

determine a country's sustainable level of external borrowing. This, in turn, is affected by the flows that the country can use efficiently and the ways it can generate the additional foreign exchange earnings needed to meet the service charges without risking external payments difficulties. These ramifications of foreign borrowing means that external debt policy affects national planning, balance of payments, budget management, and all government agencies that determine the type of investment undertaken in a country. The major output of this function is a well–defined and feasible national indebtedness and external debt **Strategy**.

The **Regulatory Function** of debt management involves the legal, institutional, and administrative arrangements for external debt management. It involves the establishment of a well–defined regulatory environment to provide for the well–coordinated and, where necessary, centralized administration of external indebtedness at the level of recording, analytical, controlling, and operating functions, supported by efficient information flows. The major output of this function is the establishment and continuous review of the administrative and legal framework that specifies organizational responsibilities, rules and procedures among units involved, legal reporting requirements, etc. This is the organization **Structure**. It will in large measure define the **Degree of Control** exercised and the data which can be recorded.

The **Resourcing Function** makes sure that the recording, analytical, controlling, and operating functions are performed by qualified staff. It involves recruiting, hiring, motivating, training, and retaining staff. At times, it might involve the hiring and supervising of outside consultants to provide for specialized technical expertise in particular areas such as computerization, debt audits, or preparation for rescheduling negotiations. This function must also be understood very broadly as the provision of adequate material resources (office space, communication equipment, etc.). The main output can be termed **Staffing and Means**.

Operational Management

The functions pertaining to operational debt management, particularly the recording, analytical, and controlling functions, are performed on two levels: the **Aggregate Level** and the disaggregated level of **Single Transactions**. The distinction is not always easy to make but is necessary for a better understanding of debt management.

The **Recording Function** requires collecting detailed information on debt on a loan–by–loan basis. The fundamental decision to make in devising a recording framework for external debt is to decide what constitutes an external debt and which data will be collected. The data collected on a loan– by–loan basis will be aggregated to provide statistics for analytical purposes. The main product of this function is **Information**, on both aggregated and disaggregated levels.

Very closely related to the recording function is the **Analytical Function**, which is a major consumer of the information provided by the former function. At the aggregate level, it involves macroeconomic analysis to explore the various options available, given economic and market conditions, and the future structure of external debt. It keeps under constant review the impact of various debt management options on the balance of payments and the national budget. It helps to form a view on such matters as the appropriate terms of new borrowing. At the disaggregated level, the analytical function looks at borrowing instruments, the choice of maturities, etc., and assists in the analysis of new financial techniques such as conversion schemes. The output here of course is **Analysis**.

The **Operating Function** involves a whole range of activities related to borrowing and other agreements or arrangements that imply some kind of action (interactions and transactions). This function might be segmented into three different phases: **negotiating,**

utilization of loan proceeds, and **servicing.** The activities or actions involved in each phase will be quite different depending on the type of borrowing involved (bilateral and multilateral concessional loans, Eurocredits, etc.). It thus deals with techniques, among which must be included those providing some form of debt reorganization (such as restructuring or refinancing). In recent years, new techniques have come into existence that fall under the heading of debt conversion schemes (debt–for–equity swaps, debt–for–goods swaps, "debt–for– nature" swaps, etc.). The products of the operating function are thus **Debt Operations: Negotiation, Utilization** and **Service.** (These terms must be understood as broad categories. The actual interactions and transactions taking place will depend on the type of borrowing).

The **Controlling Function** is the function of debt management that is the most difficult to define separately. Indeed, control is intrinsic to a debt management system. While the recording, analytical, and operating functions are described here in their "pure form," it might be argued that control is embedded in those functions. Notwithstanding this and the risk of becoming too abstract, separating the controlling function enriches the conceptual approach undertaken here and emphasizes the central role of this function.

At the aggregate level, the **Controlling/ Coordinating** function is essential to ensure that operational debt management is in accordance with Executive Debt Management. Strategy may, for instance, impose statutory limits or overall guidelines on how much borrowing can be done by the public sector or by the country as a whole. The controlling function must ensure that borrowing is kept within these limits.

At the transaction or disaggregated level, the **Controlling/Monitoring** function is more concerned with specific operations, such as negotiations, utilization, and service. It must ensure, among other things, that the terms of new borrowings fall within current guidelines, that the funds are being utilized in time and used appropriately, and that repayments are made according to schedule.

In practice, the degree of **Control** can vary widely (according to the different classes or types of debt and debt operations, the different—public or private—borrowing entities involved, etc.). It can range from close control to coordination and monitoring.

Globally and at the aggregate level, the above seven functions of effective debt management can be presented as in Figure 6–2. This figure should be interpreted as representing the functions and their products as building blocks for an effective debt management system. The lines link the functions or blocks at two levels: the executive and the operational level.

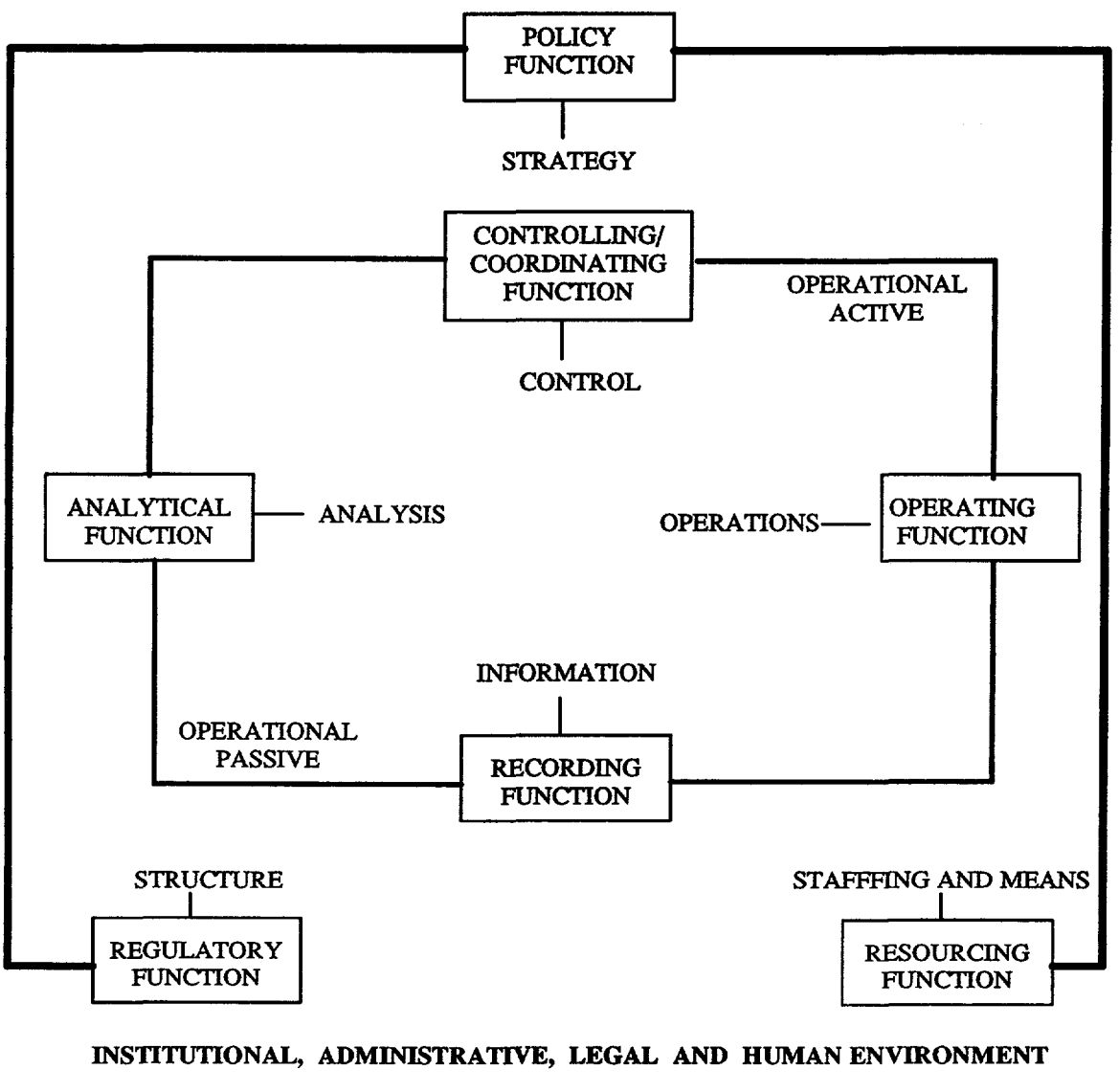
At the executive management level, the policy, regulatory, and resourcing functions give direction and organization to the entire debt management system. The macroeconomic environment and the analytical, institutional, administrative, legal, and human environment are both affecting and being affected by these functions. The evolving strategy, structure, staffing, and means determine the way debt management should be performed at the operational level.

At the operational management level, operations, information, analysis, and control are the results of the corresponding functions. An effective debt management system is thus constituted of seven building blocks as shown in Figure 6–2. While this figure presents the debt management functions at the aggregate level, a closer look at operational debt management is necessary. Indeed, debt originates at the level of individual transactions. In other words, a country's debt is the aggregation of various operations and the result of various functions performed on a loan–by–loan basis.

As Figure 6–3 indicates, there are various operations going on at any one time. These operations give rise to various interactions and transactions between the lenders and the borrowers, which will need to be monitored and recorded. The operations involved and the actual practice of operational debt management are complex and cannot be dealt with in detail here. As illustration, the operational areas of **negotiation, utilization of loan proceeds,** and **debt service** can generate the following types of interactions and transactions:

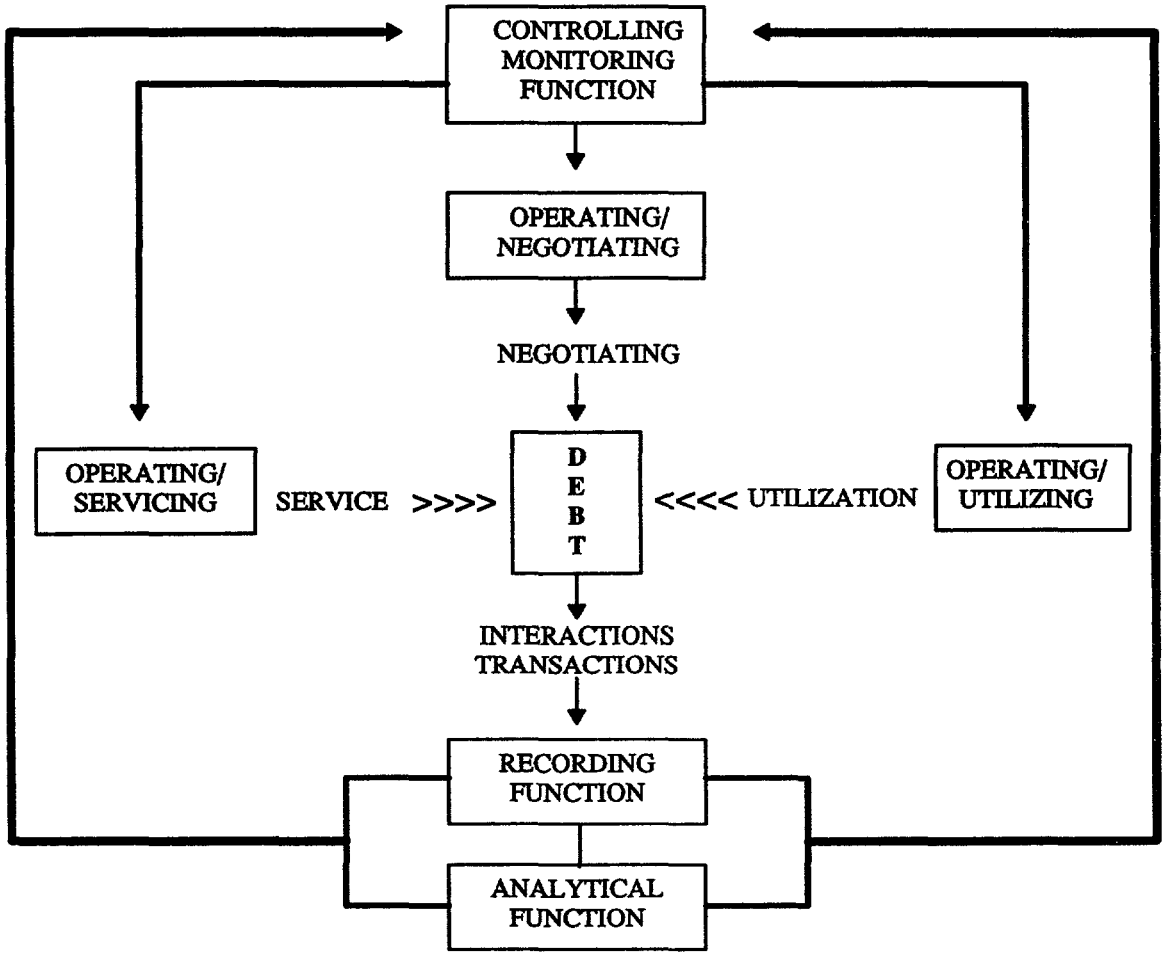
- Negotiation
  - Establishing a financial framework
  - Securing the necessary financial terms
  - Ensuring the legal acceptability of the loan contract
  - Ensuring the administrative acceptability of the loan contract (authorization, guarantee, signature)

Figure 6.2. Debt Management Functions – Global Level



- Utilization of loan proceeds
  - In some cases, the preparation of on–lending contracts
  - In some cases, the provision of local counterpart funds to external financing
  - Modifications to loan contracts (i.e. deferring final date for disbursements)
  - Disbursements and utilization of funds
  - Payments to suppliers
  - Follow–up on undisbursed committed amounts
- Debt service
  - Payments according to schedules
  - Updating of schedules and checking
  - Follow–up to budget allocation.

Figure 6.3. Debt Management Functions – Operational Level



Borrowing and other agreements or arrangements that imply some kind of debt operation can take many forms, such as bilateral and multilateral concessional loans, export credits, commercial bank loans, debt reorganization, debt conversion, etc. Negotiation, utilization of proceeds, and debt service will vary accordingly.

Debt Management Units and Their Related Functions

Debt management systems and, in particular, the framework (or which units perform functions related to debt management), differ from country to country. They are shaped by historical precedent, the constitutional

division of responsibility between various tiers of government, the internal organization of the government itself, the importance of external debt in the overall economic management, the relative importance of particular types of credits within the overall debt structure, and the regulatory function of external debt management.

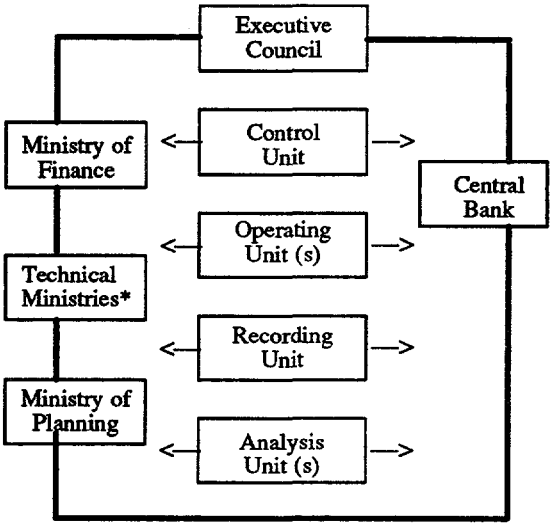
Debt management systems differ in the degree of control exercised by the authorities, the strictness of the regulatory environment, and the nature of the reporting system instituted for external debt operations. The reporting system may be mandatory or voluntary; it may require prior authorization for incurring external obligations or only *ex post* reporting. Debt management systems also differ in their treatment of private sector versus public sector loans and treatment of financial versus nonfinancial domestic institutions.

In general, the various functions of debt management are not performed by the same government agencies. In other words, there are many actors in the system. We may find several units (or individual government officials), mainly in the ministry of finance and central bank, performing some of the functions mentioned above and sometimes even overlapping or performing the same functions for different ministries. In such cases, the system is decentralized. When the functions of debt management are all being performed either by the central bank, or by the ministry of finance, or by an autonomous (or semi-autonomous) body that belongs to neither the central bank nor the ministry of finance, the system is said to be centralized.

Whether the system is centralized or decentralized, the necessary conditions for an effective debt management system exist when the various functions of debt management are being performed, in other words, when there is strategy, structure, staffing and means, information, analysis, control, and operations. But these conditions are not sufficient; the debt information management, analysis, and decisionmaking system must also be integrated into a clearly defined institutional environment. Each unit must be assigned functions to perform that do not duplicate efforts. Information, basic and aggregated, must be shared consistently among them. Obviously, if the different units are located in a single integrated body, this goal might be achieved easier than in a highly decentralized system.

There is no universally accepted textbook model for debt management units and their related functions.

Figure 6.4. Integrated Debt Management System



* including parastatals

Figure 6–4 presents a conceptual model in line with the basic functions of debt management discussed above. For the sake of simplicity, it is assumed that the system deals only with public and publicly guaranteed external debt. It is also assumed that a centralized debt management system exists, although in practice the units referred to below are often administratively separated. Figure 6–4 shows the different units needed within the debt management organization structure to deal with the functions mentioned earlier. Figure 6–4 does not imply a specific location of the different units of the structure. It only has the aim of highlighting them and their respective functions. Nevertheless, in order to ease understanding of the different information flow problems that need to be overcome, it is useful to assume that the whole debt management organization structure is a single integrated body.

The top unit is the Executive Council. This is the highest authority regarding external indebtedness. Its members should be at the most senior level: minister of finance, governor of the central bank, minister of planning, ministers of technical ministries concerned with external indebtedness, and eventually chief executive officers of parastatals that could have access to foreign resources. The Executive Council will exercise the Policy, Regulatory and Resourcing Function as far as

the general decisions, guidelines, and rules are concerned.

The Control/Coordinating Unit serves as a secretariat to the Executive Council. As its name indicates, the function performed by this unit is the Control/Coordinating Function. Its duties are the follow–up and surveillance of the outputs of **Strategy, Structure**, and **Staffing and Means**. It looks after the achievement of the defined strategy through the observation and application of rules and legal structure. It verifies that correct and sufficient staff and material means are put at the disposal of the different units, in accordance with the decisions of the Executive Council.

Operating Units. The Operating Function was segmented above into phases: negotiation, utilization of proceeds, and debt service. A similar division may be applied to the Operating Unit, but other alternatives are possible. There may be separate Operating/Negotiating, Operating/Utilization, and Operating/Servicing units or a single Operating/Utilization–Servicing Unit instead of the latter two. However, the negotiating unit should be distinct from the other two.

The Operating/Negotiating Unit will study the borrowing conditions for the country in different financial markets and different sources of financing. Given the global strategy, it will be able to negotiate the best terms for the country. It is possible to have sub–units specializing according to the type of borrowing: multilateral, bilateral, official, and commercial lending. Also, in a system with highly decentralized decisionmaking, there may be several units of this kind.

The Operating/Utilization–Servicing Unit follows up the different loans in order to trigger the disbursements in due time. It makes provisions for payments falling due and verifies that the amounts claimed by creditors are correct. This unit thus also performs a Controlling/Monitoring Function. To carry out this Controlling/Monitoring function efficiently, the unit has to coordinate closely with the Recording Unit. As in the case of the negotiating unit, a system with highly decentralized decisionmaking may have several of these units.

The **Recording Unit** obviously performs the Recording Function. It collects and records detailed information on a loan–by–loan basis, not necessarily from an accounting point of view (which can be rather inflexible for the management of estimated transactions) but from a statistical point of view. However, it is not contradictory to have within the Recording Unit an accounting and a statistical system side by side. The Recording Unit should have access to and record all information within a country, even in the case of a highly decentralized system. This unit, in close collaboration with the Operating/Negotiating Unit, also records loans not yet signed but in the pipeline, so that other units, for instance the analysis units, can use this information.

The **Analysis Units** typically are decentralized units and can be located in different official bodies, like the balance of payments or foreign departments in the central bank, as well as the budget or treasury in the ministry of finance. All these units use information from the Recording Unit and should channel all their analyses, in addition to their regular respective destinations, to the Control Unit. Although these units naturally perform the Analytical Function, all other parts of the debt management system must constantly review and analyze their products in order to continue to operate rationally.

Whether the Analytical Units are located in various institutions or in a single, integrated debt management body, the important point is that there be good communication and cooperation among the units. Adequate information flows will have to be maintained. Effective debt management thus also entails developing and maintaining smoothly functioning relationships between the units and agencies involved. The more plentiful the actors in the system, the more difficult this will be. Complexity increases the role of the control unit. The more decentralized and complex a system is, the more the need for control/coordination becomes acute, and sometimes becomes impossible without losing flexibility and becoming too rigid.

The location of the Analytical Units is a general institutional problem that affects many countries. Should particular functions be located in the ministry of finance or in the central bank (or even elsewhere)? For instance, in the case of the Operating/Negotiating function of commercial credits, should the ministry of finance or the central bank be in charge of negotiating public sector borrowing? And should that unit negotiate commercial credit only for the central government, leaving other levels of government and public sector companies to negotiate and manage their own foreign borrowing?

Questions will also arise as to the location of the Recording Unit, which is (perhaps) the only one that clearly must be centralized at one location. The present

paper cannot present any preconceived solution. Each country will have its own system, with units in both the ministry of finance and the central bank performing some or all of the functions. The important issue is that all functions are being performed and that all units cooperate and communicate effectively within an integrated and clearly defined institutional environment.

Debt Management and Computerization

The multifunctional nature of debt management, its dependence on consistent and timely data for accurate analysis, and the sheer magnitude of operations to be handled by the system have encouraged many countries to try to develop or acquire a computerized debt management information system as an aid to the Recording, Analytical, Controlling, and Operating functions. According to the World Bank, more than fifty developing countries have attempted to install computer systems for the recording of external debt data. To date, most of these efforts have not produced satisfactory results.

The main reason for this lack of success is an error in perception: a computerized operation is not the debt management system itself, but only an adjunct to the system. The computer is useful only for countries that already have the necessary elements of a good management system, in particular, Structure and Staffing, which result from the Regulatory and Resourcing functions. If these necessary elements for the system do not exist, a computer will not help. Automation cannot precede or be a substitute for the development of an effective management system.

In far too many countries, the data base for policymaking on debt issues is inadequate because the chief financial agencies of governments do not communicate effectively with each other. The central bank has insufficient knowledge of what the ministry of finance or the planning agency are doing; the ministry of finance is not fully aware of what the central bank or other key government departments are doing. In such countries, a computer is unlikely to be helpful. What is needed is a radical restructuring of the administrative, legal, and institutional arrangements for obtaining information. In other words, the recording function must be made possible.

In most cases where it has not already been done to support manual recording, the introduction of computerization institutionally implies the centralization of the recording function into one unit. This unit is often called the "debt office," but here it will be referred to as the Recording Unit.

To do its job, the Recording Unit must have appropriate legal power and effective data collection mechanism. If these legal and administrative elements are weak, debt data will be late, incomplete, or inaccurate and the computer system will produce poor results. (As most experts in this field know, a well-kept manual recording system is a precondition for computerization, since it testifies to the effectiveness of the legal, institutional, and administrative arrangements for recording debt data.)

Equally important is the question of trained staff. In many countries, the Recording Units are seriously understaffed, offer inadequate training or inadequate pay, or both. Trained staff who are poorly paid will not stay but will be attracted to better-paid jobs in the private sector. High staff turnover, which poses a serious threat to the success of computerization, has been one of the most common causes of failure.

It therefore must be stressed that active and sustained support from senior government officials is a key to success of the computerization. This support will manifest itself through the Resourcing function as applied to the Recording Unit: the assignment of competent individuals to staff the unit and to operate the computer system, attention to training (on computers as well as on the wider issues of debt management), and provision of adequate material resources such as office space, telephone lines, and office equipment.

As a final remark, it must be emphasized that good information in itself is not a sufficient condition to have an effective debt management system. Information is not an end in itself. Analysis and control must following recording and contribute to policymaking.

Debt Management and Technical Cooperation [4]

Immediate and Overall Objectives

As has already been said, UNCTAD's technical cooperation in the area of debt management has centered

4. Further information on technical cooperation may be obtained from: Chief, Joint Technical Co-operation Unit, UNCTAD, Palais des Nations, CH-1211 Geneve 10, Switzerland.

on the introduction of computerization through the installation and operation of DMFAS, the Debt Monitoring and Financial Analysis System. This computer system has been designed to assist debt offices (in the ministry of finance or in the central bank) in the recording, monitoring, and analysis of external debt and other financial flows. It has been set up both on microcomputers and in mainframe environments.

The immediate objective of these country assistance programs is to improve the recording and monitoring of external debt with a view to enhancing the country's ability to produce reports and statistics. Ultimately, this increased availability of information should contribute to better policymaking with regard to external indebtedness.

The overall objective of UNCTAD's Programme of Technical Co–operation is to assist developing countries in improving their external debt management, thereby increasing the efficient use of resources. More specifically, the Programme is designed to meet the following objectives:

a. Improve the capacity of national authorities to define and select appropriate external borrowing **Strategies**.

b. Assist national authorities in the development of appropriate **Structures** for more effectively managing external debt including legal, institutional, and administrative structure.

c. Assist the debt management units in ministries of finance and central banks to operate more efficiently through the strengthening of their technical capacity and, more generally, their **Staffing and Means** outputs.

d. Improve the capacity of national authorities in all operational functions of debt management, particularly in the functions that produce **Operations, Information, Analysis, and Control** of external debt.

e. Promote a better understanding among developing countries of all outputs required for effective debt management, i.e. **Strategy, Structure, Staffing and Means, Operations, Information, Analysis, and Control.**

Package of Services

While the DMFAS constitutes the core of UNCTAD's activities, it is only one element in the package of services being offered to countries according to their needs. The package of services may be described briefly as follows.

Debt management diagnosis is a global analysis along the lines of the preceding conceptual framework. Depending on the need, the various functions of debt management are analyzed and, where necessary, recommendations are made. The diagnosis looks at all the elements of the system: **Structure, Staffing, Strategy, Information, Analysis, Control, and Operations.** It evaluates comprehensiveness, transparency (as evidenced by information flows and cooperation among units), and other characteristics of the existing debt management system. Of immediate interest to computerization, the institutional, legal, and administrative arrangements for collecting debt data are reviewed to ensure that the recording function can be performed efficiently.

There are two types of **debt audit** that can be carried out: the normal audit procedures of the debt management unit and the reconciliation between borrowers and lenders.

The first type of audit is essential in setting up a centralized data recording system to support computerization. When the DMFAS is being installed, data must be collected, checked, and entered into the system through the use of data entry sheets. This is normally performed by national staff with guidelines from UNCTAD and, in some cases, with temporary assistance from a consultant.

In many cases, collecting and checking the data have been the major difficulties during the implementation because, prior to computerization, there was no central recording or no normal audit procedures. In these cases, the debt audit may necessitate the second type: reconciliation of borrower–supplied data with the lenders.

The **debt management information system** is the DMFAS. It is a standard system, which is being continuously improved upon and developed. To the extent possible, adaptations for one particular country are allowed for. UNCTAD maintains a continuing responsibility to provide the debt offices concerned with updated versions of the DMFAS, together with the required documentation, and to facilitate the efficient use of the system. Installation of the DMFAS includes, when required, the provision of equipment (microcomputers and printers).

Debt management training, which must be considered in a broad sense, includes training in the use of the computer system and seminars dealing with the wider issues of debt management. These seminars are organized by UNCTAD, which also participates in them. Training in the use of the DMFAS is provided by UNCTAD through seminars in Geneva or, when feasible, in a particular region. Normally, each seminar is attended by participants from several countries where the system is installed. Additional training is provided during missions to the countries. Furthermore, UNCTAD promotes exchange of experience among countries using the DMFAS through the arrangement of short visits of debt office staff members from one country to another.

With respect to wider issues of debt management, UNCTAD works with several institutions that provide training in debt management. Whenever possible, projects executed by UNCTAD and financed by UNDP facilitate participation in these seminars by officials of the countries concerned.

Although not a regular service, a **debt policy advisory service** is available. This advisory service focuses on the policy function of debt management. It has included activities to assist some countries in the technical preparation for Paris Club and London Club negotiations. Also, the DPS module of the DMFAS has been used to assist countries in the analysis of their net transfer requirements, i.e., the levels of capital flows required to finance an *ex ante* balance of payment gap. This analysis supports the formulation of a debt strategy.

Beyond this package of services in debt management, UNCTAD can also provide services of direct use in the formulation of economic policy related to external financial planning and management. For example, in response to a request from the government of a developing country, UNCTAD undertook to provide studies of the likely supply response of several important agricultural crops to a devaluation and of the suitability of the prevailing exchange rate regime.

UNCTAD installs the DMFAS and/or provides other elements from the package of services mainly through UNDP–financed country projects. Projects have been or are being carried out in the following countries:

Africa	Asia	Latin America and the Caribbean
Burundi	Malaysia	Argentina
Djibouti	Pakistan	Bolivia
Egypt	Philippines	Costa Rica
Ethiopia	Indonesia	El Salvador
Liberia		Guatemala
Madagascar		Guyana
Togo		Haiti
Uganda		Honduras
Zambia		Nicaragua
Zimbabwe		Peru
		Trinidad and Tobago

7 The Technical Assistance Program of the UNCTAD Pakistan's Experience

Sultan Mahmud and Shakir Hussain Zaidi
Economic Affairs Division

Mr. Cosio-Pacal: We are going to stop there, because I think that is enough to give you some incentives to go and see the full demonstration. I would like to give the floor for a few minutes to Mr. Baert, who will talk about his experience in Pakistan. Pakistan was the first country to get the new version of DMFAS, which is Version 4. Pakistan, Zambia, and Zimbabwe are the "guinea pigs" for this new version. I think you will hear that they have been happy guinea pigs.

Mr. Baert: I have been implementing the DMFAS system in many countries, and I would like to give you the experience of those who are implementing, rather than the point of view of those who think about policy. Our work in the countries has been quite difficult.

First, it has been very difficult to convince the different authorities in different institutions to get all the information, by whatever way, into the computer. But the problem extends beyond the computer to having an office where you can look at all the data, whether through the computer or in [hard-copy] files. One task which has been very difficult, and which took a long time in each of the countries (longer in some than in others), was to create a centralized filing system. Once the people who are working with the system begin to realize how it can help them, we can say that we have won. This is true not only for UNCTAD; I suppose it applies to others involved in technical assistance also.

For example, three weeks ago I was in one country where the debt office in which the computer was located found [through use of the system] that one payment had not been made for three or four months. This little circumstance gave the managerial people the will and wish to really continue; they had seen that a debt management system, or something that is centralized, could give them a lot of advantages in the future. Thank you.

Mr. Husain: I suggest that perhaps the questions could wait until we have the presentation from Pakistan, which is installing the UNCTAD system. After we have heard from Pakistan it would be a good opportunity to discuss both the concept and the application of the UNCTAD system. I would like the Pakistan delegation to make their presentation, and then we will have questions and answers.

Mr. Mahmud:[1] Thank you very much, Mr. Chairman. Picking up from where Mr. Baert left off, Pakistan has been maintaining all debt data and records manually. These included budgeting, disbursements, tracking, and debt service payments. All the operations are handled by qualified accountants from Accounts Service of Pakistan. However, weaknesses exist in the coordination of debt activities among different agencies and in the formulation of national economic and financial policies in the external debt area.

In view of the complexity of debt management and recent developments, it was decided to reorganize the whole system with the help of technical assistance from UNCTAD and advice from the World Bank, to benefit from their debt management experience in light of the recent advances in software available for data processing. The software package, which you have just seen, has been developed by the UNCTAD experts and is in the process of implementation. A number of reports have been generated for use at different levels, that is, by accountants, planners, and policymakers. These reports have been circulated to all these people. We are waiting for their comments.

This project to computerize the debt management system is likely to be completed by June 1989. The present status of the computerization project, as prepared by the UNCTAD Secretariat, is as follows. A registration of all loans and projects maintained in the economic affairs division was completed as of February 28, 1989, and is now kept as a computer data base. Repayment schedules for all foreign loans and credits have been

1. The prepared text of Mr. Mahmud's presentation is included in Volume 2.

loaded into the computer. Projection of debt servicing can now be effected through the computer data base. Budget estimates of all foreign loans and credits can be made with the computer, as can updates of the debt outstanding on foreign loans and credits. Computerization of aid utilization in respect of loans and credits is under way. Computerization of a technical assistance monitoring system is under consideration.

The Government of Pakistan has also requested that the World Bank study and advise on the external debt management system. A World Bank mission visited Pakistan and submitted an aide–memoire containing the following recommendations:

- Coordinate among different agencies such as the Economic Affairs Division, the Finance Division, and the State Bank of Pakistan.
- Computerize debt records using UNCTAD software.
- Establish a data coordinating unit.
- Establish a commercial borrowings unit.
- Data on disbursement aid should be associated with the debt management unit.

The Government of Pakistan has agreed in principle to these recommendations of the World Bank; they are under various stages of implementation. To centralize the total external debt of Pakistan, a debtor coordinating unit has been formed in the Economic Affairs Division. This unit will facilitate the computer generation of reports on the total external debt profile of Pakistan, using UNCTAD software. The government of Pakistan has also requested that UNCTAD enhance the DMFAS software for foreign resources management and technical assistance programs. The foreign resources management program is very much linked with the debt management system program.

We have been facing a problem in the Economic Affairs Division in Pakistan that I would like to spell out. This problem is in loading into the computer the repayment schedules for IBRD and ADB multi–currency loans. Adjustments for exchange fluctuation cannot be entered into the computer. For the present, we are maintaining IBRD and ADB loans in the computer in U.S. dollars. This is more or less near to the actual repayment schedule in the different currencies, but it is not the exact amount of repayment. There is a 5 to 10 percent variation, which is always on the higher side. We would welcome solutions for this problem.

In conclusion I would like to emphasize that if we collectively initiate more efforts at national, regional, and international levels to respond positively and boldly to the challenges posed by the complexity of debt management problems, and if we constructively apply the lessons that we have learned from the recent past, the future course of national development and international economic cooperation can be very bright and promising. We in Pakistan hope that our cooperation with the World Bank and UNCTAD will help to resolve debt management problems. Thank you very much, Mr. Chairman.

Mr. Husain: Are there any questions, comments, or observations on either the overall UNCTAD system or its application in Pakistan?

Questioner #1; I have a question for Mr. Cosio–Pascal. How do you deal with the syndicated aggregates when you put them in the system and when there is a change in capital debt or equity debt?

Mr. Cosio–Pascal: Since the question was asked in Spanish, let me try to answer in Spanish. First of all, let me explain that we don't have separate files for borrowers and providers of the funds. We just have what we call a client file. Through a series of codes we assign them a role, a specific role that they play for each contract. In the case of syndicated creditors, we have the agent bank, which, let us say, is given code number 20 as the main agent. Afterwards we have other codes for LIBOR, for the banks that receive commissions, and for banks that are simply participating in the contract. So, all of the participants in a syndicated loan are registered, along with their participations in terms of thousands of dollars, within the overall sum of the loan.

You asked what happens when there is a transfer of the debt under this contract from one of the participating banks. When the transfer is from one of these banks to another one within the same syndicate, it is recorded simply by changing the figures for the affected participants. In other words, increasing one set of figures and decreasing the other. In a different case we may have to add a new participant who comes in, the new owner, say, of these bonds. That would have to be a new entry with a corresponding amount of money. Also, creditors are not listed here down to the last centime or cent, because the amounts are in thousands of dollars. Usually the list of participants in a syndicated loan is quite lengthy, and even if the extent of participation were

expressed as a percentage, I think there would be the same degree of exactitude.

In the case of a loan repayable in multiple currencies, we use another system. Everything depends on how the loan is going to be paid, and the regulations that deal with that. So we divide the loan into separate loans in each currency. For example, if we have a loan in several currencies, and each disbursed amount is going to be repaid in that currency, we establish one loan per currency. Another situation occurs where there are different currencies, but we do not know what they are going to be paid in, as in the case of loans from the World Bank. As was pointed out by the delegate from Pakistan, we have the total loan in dollars. Then we try to work with this on the basis of different exchange rates. But it's a fairly complex process for everyone, including the bankers.

Questioner #1: If each of the participants has different currencies and different interest rates, how do you handle that?

Mr. Cosio–Pascal: We can cover that possibility with our system. I think this is done using percentages. Instead of working with loan amounts in thousands here, we work with percentages.

Questioner #1: But in either case, if there were several different rates, including LIBOR?

Mr. Cosio–Pascal: Well, this is a bit different. There are two things that might occur in this case. When we have two rates applying at the same time, here we also divide these into different loans. And if it is a syndicated loan, it has to be paid in different rates. We also divide this up into different loans. In other words we have to have a very exact registry of what has to be paid. Now, when I mentioned that participation is listed by units of a thousand, this is only when we have cases where interest rates are applied at the same time and everything is paid in the same currency. In other words, the payment is made to the agent bank, and the agent bank then decides in what currency this is going to be paid. If we are talking about paying to several banks at the same time, we establish different loans and different payment data for each one. You may have thought of yet another case, where there are different options for interest rates. Here we only register the rate that we think is most probably going to be used. The system can flag this rate, and list it as a rate that may be modified. But it's up to the user to carry out this change, using the machine. That is, the user changes the loan data to reflect the interest rate change and exchange rates.

Questioner #1: What about debt that is refinanced every three months? We have to define whether it's paid in three or six months, and in what currency, and at what rate.

Mr. Cosio–Pascal: That's no problem. Whenever we have this situation, all we do is identify the rate at which the debt has to be paid. I mean, there are certain things that no system can guess, but once you have the concrete information the system can work perfectly.

Questioner #1: Well, but you have to have a very highly revised and updated calendar. We are talking about thousands of lines that have to be modified, and if we are talking about doing this every three months, that's a lot of work. In the case of Paris Club [rescheduling], it is typically country by country. Can you also support this case, since these countries have lots of different lines and different rates? How is this handled? Do you open a subloan, or subcredit?

Mr. Cosio–Pascal: That's right. Currently the system registers and validates the different schedules or calendars for the Paris Club, modifying them one by one, really.

Questioner #1: Well, in that case, the [number of separate lines for different] amortization rates can double and triple. I don't know if a system can handle, say, 2,000 or 3,000 lines that are going to be doubled and tripled in trying to make provisions or predictions for repayment.

Mr. Cosio–Pascal: Let me give you an example. We're using the system for Egypt at this time, which has 4,500 loans that generate something like 30,000 different payment schedules. And it's working with no problems.

Questioner #1: We have about 15,000 lines ourselves for US$43 billion that's being restructured. So, any kind of capacity is almost insufficient.

Mr. Cosio–Pascal: Well, that's the question. It's all a matter of the computer's capacity. In UNCTAD's system, we should point out, it is using a ____ CPU, and you have to have something this weighty to handle the data. I know one instance where there was just a small HP [Hewlett Packard] computer being used, a minicomputer. The thing to do would be to use that HP to access a large mainframe: something with more capacity—or even accessing [a mainframe] using a 360K microcomputer. I think in Nicaragua there was a similar case. I don't remember exactly, but I could ask Jacques [Baert]. [To

Mr. Baert:] How many loans? I think 28,000 credit lines for Nicaragua. We found that the system could handle this using a machine that had 300K capacity.

Questioner #2: I would like to ask how you record and process the data on bonds.

Mr. Cosio–Pascal: We don't support recording of bond holdings. We haven't introduced the various methods for amortizing bonds because up until now the different debt structures didn't include bonds. So, we haven't done it yet. We haven't introduced a specific algorithm that would involve payment of bonds.

Questioner #2: Can you modify or enhance the system to deal with different bonds and bond issues.

Mr. Cosio–Pascal: In fact, this information is being entered, but not in the reports generated by the computer. We don't have a plan for the transfer of these different obligations, at least on a historical basis. We don't really see what purpose would be served by having all the historical records.

Questioner #3: As I look at the list in your paper, there is a country which involves the West African Bank; this is in fact the system for Togo. I think this system has been installed; what have been the results? There are seven countries in the West African Monetary Union. I am wondering whether, in addition to Togo, the six other countries can have this system applied to them.

Mr. Cosio–Pascal: Thank you for your question. Yes, indeed we do have a cooperative project with Togo. The debt management system was installed at the National Investment Company there. The part with which we have experience concerns in particular the public debt. It brought us a wealth of experience because it was a project in which the World Bank, the French [corporation] and UNCTAD were all jointly involved. The World Bank sent Mr. Fernando Archondo, an expert who spent two years on site. The French [corporation] procured the hardware for Togo; UNCTAD provided its debt management system.

We did encounter some problems, particularly with respect to training. We are in fact almost starting again from scratch to provide better information technology training for the people who will be responsible for the system on site in Togo. Furthermore, there were some difficulties regarding the memory capacity of the microcomputer which was made available to Togo. We've been able to solve that problem by procuring a new computer. This is a project we are currently reviewing. The main thing that has to be thought out again concerns the training component. Once again, this emphasizes the fact that training is of the utmost importance. Perhaps Mr. Bodin, who dealt specifically with the Togo project, might want to add something to what I've already said. No, he has nothing further to add. I don't know whether I've replied to your question, sir, or not?

Questioner #3: I have a third question, if I may. As I said we are seven countries who are involved in this Monetary Union. I understand that the system has already been applied to this one country, Togo. Can it be extended to the other remaining six countries?

Mr. Cosio–Pascal: Yes, it can be.

Questioner #4: In your presentation you mentioned the importance of having a single recording point for external debt data. However, in an answer you gave a while ago, you indicated that for multi–currency loans where the loan is repaid in these individual currencies, you keep your records in thousands of whatever unit of currency in which payment has been made. How would you reconcile a request for payment from a creditor in that sort of a situation? For the payment would come to you down to the last unit, or to the decimal place. How do you get around that sort of situation?

UNCTAD Respondent: I think there is a misunderstanding about the multi–currency loans. The records in which the system keeps the figure rounded to thousands do not apply to multi–currency loans; only those single loans which are syndicated loans and in which the different participants are to be repaid in the same currency. In addition, for these loans the payments are made to a single bank. The classical case of a syndicated loan is the only case where the shares are rounded to, say, thousands from the different participants. In the case of a multi–currency loan where the participants are to be repaid in different currencies, then the entire loan is recorded as sub–loans in each of which the debt outstanding is recorded to the cent. In this case, we have a really accurate figure. Have I answered your question?

[The Monday afternoon discussion of the UNCTAD and Pakistan Country Presentations ended at this point. The discussion in public session was resumed again the following morning (Tuesday, April 25), at the beginning of the day's sessions.]

Mr. Hunsberger: Our colleagues from UNCTAD were discussing some questions with our colleagues from

Pakistan. We interrupted for the photograph and never returned to the discussion. So, if Mr. Triki does not mind waiting for a few more minutes before we have the Tunisia Country Presentation, with your permission I would like us to spend five or ten more minutes on general questions having to do with the UNCTAD software as it is implemented in Pakistan. Mr. Baert or Mr. Cosio–Pascal, would either of you like to chair these questions for the next five or ten minutes just as the participants are coming back?

Would you like to just have questions or would you like to have a dialogue about the implementation of the UNCTAD system in Pakistan?

Mr. Cosio–Pascal: I would like Mr. Zaidi to explain perhaps a little bit about all the steps that were passed through to achieve implementation of the system.

Mr. Zaidi: In 1985, we in Pakistan realized that our debt management had become complex. As you know, we have a very good manual system in Pakistan and we have a printed book which states in writing what each and every section does. We have around 3,700 loans in Pakistan. About 1,500 schedules with French loans; the others are from consortium countries, financial institutions, and Islamic countries. During 1985, we started this UNCTAD system in Pakistan, and in the beginning the system was a lengthy one. The specification was made for each loan; about 3,700 loans were registered. Producing the projections of those loans took a very long time. But the latest version, which UNCTAD introduced in January 1989, is wonderful because it does not take a long time to run and can handle even the French loans, for which each loan has maybe 200 schedules. It takes at least half an hour to complete the projections for all the French loans through the year 2000. Projections through 2000 or 2001—twelve–year projections—are required for the IMF.

We have started some reports and we have prepared our data base completely. This project will be completed by June 1989.

The total debt outstanding of Pakistan as of June 30, 1988, was US$13 billion. Of this, 41 percent is from the consortium countries. Another 41 percent is from financial institutions including IBRD, ADB, IDA, IFC, and IFAD. The remainder is from the Islamic donor banks, the Islamic countries, and non–consortium countries. It is hoped that the whole [debt management] system in Pakistan will be incorporated within the UNCTAD system. We have prepared the budget for the 1989–90 fiscal year with both the manual process and the UNCTAD system. We found a little difference, which is due to the manual system, but this was a negligible difference. Next time, we will be preparing all our IMF reports and World Bank reports from the UNCTAD system. Thank you very much.

Mr. Cosio–Pascal: I would like to ask the delegation from Ethiopia to describe their situation, because they started working on the system in September of last year. It would be nice to have your impressions, Mr. Kifle.

Mr. Kifle: Thank you. Actually, there isn't much to talk about, because we are now only loading the theoretical data and our loans do not have the same structure as the loans of the Chileans and Pakistanis. Most of our loans are from international financial agencies, which are Ethiopia's biggest creditors. Next come the bilateral loans, which are from the CMEA (Council for Mutual Economic Assistance).

Our situation is fairly straightforward. We have about 600 different loans and not more than 1,000 amortization all together. We did not have any difficulty in loading our theoretical data. As of last March, we have about 384 loans loaded. As I told you, there are not many loans and the amortization schedules are not complicated. We could have completed this within a month or so, but we are not devoting the total time of the employees to this because we think the work is fairly straightforward. I am afraid I cannot comment much on this because we are still expecting the second mission. Things will start, I believe, after that. If ever we meet again, I hope I will able to give a detailed discussion on this.

From what I see at the outset, the first UNCTAD mission has tried to incorporate most of our requirements, which are very country–specific. This I believe was difficult at one point because we have a different fiscal year and a different calendar year. We have to incorporate two time horizons at least; one is a Gregorian calendar to report to the World Bank and for the consumption of our information by international communities. The other is our fiscal year, which is very complicated. We expect the UNCTAD people to incorporate all these things into their report, which I believe was difficult but well understood. I am sure that when we meet again, I will talk more on the advantages obtained from introducing the UNCTAD system into our debt reporting.

Let me say that I must give credit to my computer experts in Ethiopia. We have a fairly well–established debt reporting system, which accurately generated debt reports of an accounting nature. We use these reports to reconcile our debt stocks with the external agencies and to present to our government. Because of this, it was not difficult for us to take up UNCTAD's system and twist it around to our own use, to our way of doing things. And I hope, I will have to repeat again, we've certainly come out with a very good achievement. I hope we can meet again, and I can tell you the achievements that we have made.

Mr. Cosio–Pascal: I would like to highlight that the modesty of Mr. Kifle should not minimize their efforts in loading all their data, even if, as Mr. Kifle says, it was straightforward. The Ethiopians have been doing impressive work. I was very impressed in getting these printouts that you are now producing from the system for control purposes, which were brought to Geneva from Addis Ababa by Mr. Burle [sp?]. He was very proud of them, and we are too. We think that this project is heading in the right direction, and we are very happy to see this progress.

As you pointed out very well, your specific requirements for reports giving your fiscal year and specific calendar, and other requirements that are also linked to domestic needs, such as control on the budget, have led us to a list that was not foreseen at the beginning of the programming task. So we had to submit a budget revision to the UNDP, to be able to tackle all these new tasks that were really not known to us or the user until after the project started. We are awaiting a response from the Ethiopian authorities but not from the Ministry of Finance. I think it is the Ministry of Planning or Ministry of Foreign Affairs that now have to approve this revision of the budget to program the second mission and to continue ahead on the scheduled program.

Mr. Hunsberger: It seems that one of the pressing issues with UNCTAD, the Commonwealth Secretariat, and technical assistance in general, which I hope we will be dwelling on more is follow–up to these very nice missions that install systems. If I am not mistaken, a number of the early UNCTAD countries are not now using these systems actively, perhaps because there is no financing for continued follow–up assistance. I don't know if that is also the case in some of the Commonwealth Secretariat countries as well. It seems to me that the definition of when the project ends is when the money runs out. That does not seem to me a satisfactory definition of when a project is over.

What provision does UNCTAD have to continue to support, to continue to have technical missions and training, in those dozen or twenty countries where you have already installed the software? Is there any way you foresee supporting those countries, or is there no support left for them because there is no money left?

Mr. Cosio–Pascal: That is a very good question, and I thank you for putting it forward. This is one of the problems we are facing. We are trying right now to organize a kind of maintenance service with small budgets from different national IPFs (Indicative Programming Figures), which is the money allocated through UNDP to each country. So that, let's say, for neighbor countries—for instance in West Africa, one of which would be Ethiopia—we are putting together a program in order to have maintenance service for them. There would be one person resident in one of these capitals, or switching from one capital to another, with the same period of time to be available to each of them. We are studying this solution very hard because, as you said, the end of a project occurs when you run out of funds, which is ridiculous. We are studying that, and we want to do this thing.

That's one of the solutions. Another solution is to have bilateral donors who will put trust funds at our disposal to retrain people already using the system. That we have done; we had a Dutch fund for 1989 that now is exhausted, from which we used resources to bring people to Geneva for the seminars I was talking about yesterday. It was also used to undertake some issues in the field. So we have these two parallel tracks that we are trying to set up.

Mr. Hunsberger: May we get the opinion of our colleagues? Mr. Kalderen, on this question, in your recent study for the UNDP, you doubtless noticed that a lot of projects seem to have been virtually abandoned by technical assistance providers. I wonder if you have an opinion about the institutional methods that countries could use to ensure an ongoing or continuing presence of advisers after the initial money runs out. Do you have other observations that you would like to make at this time?

Mr. Kalderen: To my mind, anybody who provides services of the kind that have been described by UNCTAD and the Commonwealth Secretariat has an ongoing obligation to the client to maintain and provide

him with the latest in the market as time evolves. Its like suppliers of telephone exchanges. You set up the telephone system; you choose the supplier; and you should choose not the cheapest one, but the one who is going to give you continuous, reliable service over the years. This service should include providing you with all the new technical devices that come on the market. Basically this is how I regard the services of UNCTAD and the Commonwealth Secretariat. Therefore I am a bit disturbed, like you David, that this activity is sort of feeding on IPF amounts which are just sufficient to introduce the system and give some basic training to people who can do the running for the first few years. But as we know there is a terrible rate of replacement in these systems, and also very rapid technical development. So, it would seem to me that as you build up the number of project countries, unless you can get maintenance funds to increase in parallel, you would reach some sort of plateau when the annual budgetary funds are less replenished with trust funds and would be more or less sufficient to maintain twenty or thirty projects. This would include training new people, introducing new versions of the software with new modules to cope with the new technologies of the financial markets, etc. All this calls for either a retrenchment in the supply of new projects or an increase in funds sufficient to enable you to continue with maintenance, while supporting some software research and development. This is a budgetary question that we are going to address in our report, hopefully reaching an agreeable solution. Thank you.

Mr. Hunsberger: Mr. Kappagoda, did you want to make a comment on the ongoing funding?

Mr. Kappagoda: I was a little alarmed when you said that technical assistance agencies have left some projects abandoned. I am not sure whether this situation would arise in our case, because we do not operate on the basis of a budget for a particular country. It's a budget for a whole program. Most of our supportive and ongoing advisory work is carried out by staff members and there is a co–group in the Secretariat that provides this support. So the question of abandoning it when funds run out does not arise in our case.

Mr. Hunsberger: Would it be fair to say that you are still revisiting all of the countries that have your software on a regular basis?

Mr. Kappagoda: Yes, that is correct.

Mr. Hunsberger: That's not exactly the way it works for UNCTAD, though, at the present, is it? Or do you still get back to Liberia and to Togo?

Mr. Cosio–Pascal: Yes we do. When we have a mission in the region, we stop over in countries that already have the system. But we have to combine that with other missions; and it is not always very easy to do. But indeed we revisit the countries.

Mr. Hunsberger: Mr. Kalderen and Mr. Valantin, your report will touch on this? The structure of funding may be one of the underlying problems.

Mr. Stillson: It seems to me that this problem is perhaps a little bit wider than simply providing continuous assistance. It is perhaps a problem in program design as well. Surely the definition of a successful program is one which is sustainable within the country itself, not with continuous maintenance inputs from the original provider. Surely it is right that new software, new technical advances, could be put in by the international agencies. But it's a little bit worrying, I would have thought, if the definition of technical assistance turns into a continuous flow on the same subject. I would have preferred that countries be brought to the situation where the training can be done in–house, and that a system is put in place where countries can reproduce their own staff as they turn over, rather than have this be done by international agencies.

Mr. Hunsberger: Thank you. With that comment, I will note that tomorrow afternoon we have at 2:45 a panel on "Financing Technical Assistance." Our closing panel at 5:15 is on "How Should Technical Assistance be Provided in the Future?" So I hope we'll continue on these themes. It seems to me that we who provide technical assistance haven't yet found adequate solutions to this. And in too many cases where major investments have been made, there is not now a visible trace of those investments. Or at least there is not a satisfactory ongoing system, even if there is some visible trace. So I would like to defer the rest of this conversation, if I can, to tomorrow. Mr. Cosio–Pascal, do you want to make a comment?

Mr. Cosio–Pascal: Yes. Two small comments on Mr. Kalderen's interpretation and Mr. Stillson's—very short—just to thank Mr. Kalderen for his statement and to remind that one of the facts that triggered Mr. Kalderen's exercise all around the world was our request before the UNDP for funding of an individual project in order to

continue to develop the system on one side, and on the other side to have a more efficient country follow–up.

My second comment concerns the point Mr. Stillson raised about training. Indeed, if we can succeed in incorporating a training capability in the country, that will be not only success from the point of view of debt management but also, I think, it comes close to the definition of economic development. If you can have that capability generated within the country, then that means the country can fly by itself.

8 The Technical Assistance Program of the Commonwealth Secretariat

Nihal Kappagoda and Sanjivi Sundar
Commonwealth Secretariat

Mr. Kappagoda: On behalf of my colleagues and myself, I would like to thank the World Bank for having invited us to participate in the Second Debt Systems Conference. Having been at the first one in May 1985, one appreciates the progress that has been made both in the area of technical assistance geared to assisting countries in solving their debt management problems and in such respects as software development.

To those of you who are not familiar with the Commonwealth Secretariat, I would like to say briefly that we are an intergovernmental organization consisting of 48 countries. It has for many years provided a forum for consultative activities on access to capital markets and for dissemination of information relating to foreign borrowings by developing countries. Mr. Kalderen, in his days as Director–General of the Swedish Debt Office, participated in many of these deliberations.

As a result of concerns expressed by Commonwealth finance ministers to our Secretary–General around the time the debt crisis in its present dimensions broke out, he decided that a capability should be set up within the Commonwealth Secretariat to offer technical assistance to member countries who required help and support during the period they were coming to grips with the debt crisis that overtook many of them. Within the Secretariat, the Secretary–General decided that the Technical Assistance Group, which included my colleagues present here and me, should build up this capability, for the reason that we function very much as a consultancy firm, except that our services are offered as part of the technical assistance program of the Commonwealth Secretariat.

The program of assistance we offer falls under the general umbrella of balance of payments and financial management. We did this for somewhat deliberate reasons because not all the countries of the Commonwealth suffer from severe debt service problems. Many of them are small countries who only borrow from official sources and do not have severe debt service problems. They are on the whole trying to improve their capability for financial management rather than crisis management. So the program of assistance we put together really focused very much on improving their capabilities to manage their debt, in the context of improving their overall financial management. The program of advisory services offered by the Commonwealth Secretariat is described in the brochure that is [included in Volume 2]. The brochure also includes a short write–up on some recent developments on the software side and an update on the countries in which we are implementing projects under this program.

I will address some general issues relating to the implementation of debt recording and management system projects in our member countries. I will then hand over to my colleague Mr. Sundar, who will demonstrate the software we call the Commonwealth Secretariat Debt Recording and Management System (CS–DRMS). We will also address some of the specific issues that were raised by Mr. Valantin this morning in his presentation.

In recognition of the need for improving financial management in governments, we set about deliberately establishing a comprehensive range of services, which initially focused on an assessment of the legal and institutional framework for borrowers. The initial reports we normally prepare for a government provide such an assessment. These reports also include recommendations for centralizing the flow of data to one particular location, while recognizing that responsibility for monitoring the contracting of borrowings by different sectors of the economy rests with different agencies of the government. Also, recognizing the implementation problems that exist, we recommend that a working group be set up to overlook the implementation of these projects. The working group should include representatives of departments that have a role to play in either recording or managing government's external debt. These typically include the central bank, the finance ministry, the planning ministry (if distinct from the finance ministry), the accountant–general's office, and more rarely, the statistics department.

We also recognize the need to look at total public debt, not merely external debt. When the software is

demonstrated, you will see that it includes a module to assist the government in capturing the country's domestic debt as well. We also recognize that external resource flows include grants, and you will find facilities to capture information on grants and follow their utilization.

The version of the software that will be demonstrated to you is the version currently in the twenty–odd countries in which the software has been installed. Some features will be pointed out which have been improved in a new version, which will be available very shortly. This new version can be demonstrated to interested participants at a location close to the conference center. Any persons interested in looking at the new version should speak to me or another member of the Commonwealth Secretariat delegation.

There are basically three sets of issues one needs to address. [First,] one has to recognize initially that good debt management involves several activities at both the macro and micro levels. One has to assist the government in drawing up a debt policy consistent with its macroeconomic objectives. The government must also develop a strategy to ensure that borrowings are effected on the best possible terms and that the composition of the overall stock of borrowings is appropriate at all times. In other words, the debt manager needs to focus not only on the terms of new borrowings but also on managing the stock of debt to achieve and maintain an appropriate maturity structure, an appropriate interest rate profile, and an appropriate mix of currencies. This is a complex task; it involves a thorough understanding of the policies of the borrowers, of the donors or lenders, of the financial markets, and of the instruments that are currently used to lend money. The task is all the more difficult because the government is not the only borrower; there are likely to be several parastatals, the private sector, and, in some instances, state or provincial governments. Therefore, it becomes imperative that the institutional arrangements to monitor, regulate, and coordinate all the external borrowings of the country be set up so as to ensure that these borrowings are appropriate to the country's situation and consistent with its borrowing strategy.

[Second,] both the debt policy and the strategy need to be based on a good data base. Good data on borrowings cannot alone guarantee good debt management. The absence of good data, however, virtually guarantees that debt will be managed badly. The inability of countries to cope with the volume of external debt data has led them into information crises, which contribute directly and importantly to their problems in debt servicing. Therefore, building up a debt recording and management system project lays a foundation for good debt management. It is this aspect of debt management on which our projects tend to focus. Our technical assistance is geared to providing this support.

There are various components of our projects, once we get beyond the institutional stage. One needs to focus on the data collection issues and the problems that arise from them. We do not ourselves actively engage in the collection of data. Rather, we work with the government in pointing out the items of data that need to be captured from donor agreements, creditor statements, disbursement statements, and service payment statements. The task of actually collecting the data and transferring them to computer codes on data entry sheets rests with the agency implementing the project. We will, however, supervise this stage of the project by missions undertaken as often as necessary.

Once we get beyond the data collection stage, then clearly, one needs to train staff in the use of the software. [This training entails the third set of issues.] It involves a fairly intensive training program, generally of about five weeks duration, during which personnel working on the project are instructed in the various stages of entering data, retrieving data, processing loans, and producing aggregate reports [in formats] that have been incorporated in the software. They are also taught how to make ad hoc inquiries using the data base management system around which our software has been built. Thereafter, the task of entering data becomes the responsibility of the agency concerned. We can supervise this task during periodic visits.

Once the data entry is completed, another stage of the training is implemented. The staff who will actually be involved in the policy aspects are trained on how to use the data base to analyze the data and review the loan portfolio periodically.

There is one further aspect of training that I must mention; it imparts the knowledge of how to write reports that are tailored for the country's specific requirements. This training also should normally take place after the data base is completed, so staff involved in it have a live data base from which to work.

In some projects, to assist in the actual implementation stage we have had to assign resident advisors, perhaps six of them, on a full–time basis for periods ranging from 12 to 18 months. Their backgrounds have varied from computer specialists to economists fully versed in loan administration. There is no prototype resident advisor for our projects; it depends very much on the country's need. For instance, this morning Mr. Valantin mentioned a subregional project in the eastern Caribbean that the International Development Research Center (IDRC) is implementing. We have placed an advisor in the Eastern Caribbean Central Bank to coordinate that program, which has become a joint activity of the IDRC, our Technical Assistance Group, and the Central Bank.

Also this morning, there was mention of the need for networking among these projects. We have not as yet set up a user group to exchange views on problems and experiences on the use of the CS–DRMS software. Of course, many of the projects are being implemented according to the normal project cycle, so we are very closely in touch with them. There are frequent exchanges through telex and faxes [photo–facsimile transmission] on software issues that arise from time to time. We have used a number of staff members from projects that are more advanced in implementation to support our implementation projects in other countries at earlier stages of the project cycle. As a result, an exchange among staff members working on these projects has built up. Further, some of the advisors we have posted to country projects have been used on other short–term assignments as well, so that we have this small pool of trained persons active in advancing the program in the Commonwealth.

Also mentioned this morning was the need for coordination among agencies that provide technical assistance. I think there is a continuing need for this, although perhaps less so than when we last met in 1985, when I think a number of agencies that were providing support and assistance in this field tended to view each other with some degree of suspicion. I think the World Bank, by playing such a leading role in, or having a greater interest in, maintaining a global data base on debt will have a clear role to play in such a coordination activity. I would urge the World Bank to take this issue on board.

Mr. Valantin also spoke this morning about the non–Commonwealth dimension to our program. I would like to touch briefly on that because there have been only two cases where we have agreed to undertake projects outside the Commonwealth. One project is in Mozambique, which has been adopted as a Commonwealth country for technical assistance purposes. The other is a project in Thailand, which we have undertaken on the basis that our services will be fully funded. This is an avenue that other countries could explore, should they wish to avail themselves of the Commonwealth program. There are possibilities for working with other agencies, particularly those in the private sector, in implementing projects outside the Commonwealth, but at the present time they have to be dealt with on a case–by–case basis.

I think I will stop there and hand over the microphone to my colleague, Mr. Sundar.

Mr. Sundar: As the brochure [included in Volume 2] shows, our package of advisory services on debt management is comprehensive and covers all aspects of effective debt management in a country. In developing that package of services, we realized there was need for a tool to assist in recording and managing debt. Therefore, the CS–DRMS software was developed, first by a firm of software consultants in London, then subsequently in–house, as an integral tool in our package. The first production version of the system was introduced in Sri Lanka in 1985; that was Version 2. Since then the system has been continuously enhanced to meet user requirements, changes in creditor practices and procedures, and changes in the financial markets. The version now installed in about 20 countries is Version 4.3. As a matter of policy, whenever we introduce a new version, we install it or make it available to all the users, together with whatever training or facilitation is required to enable them to appreciate fully the changes made in the new version and to give them the capability to use it.

Currently, as Mr. Kappagoda said, a new version is under development. It has been developed and is in the process of being tested. This version, which has many more advanced features and more sophisticated management tools and report facilities, is available at a location close to the conference center, if anyone wants to see it in greater detail.

The CS–DRMS software has a security feature for entry; it can't be accessed without the user identification and the password. In the DOS version of the software, the security is fairly simple. We also have the software running in a XENIX version to provide for multi–user

access. That version has a more sophisticated security system to enable different users to access the software for different purposes.

The software has a module to deal with external debt and another module to deal with domestic debt. There was a reference earlier this morning to the possible need for integration of external and domestic debt. We, for some reason, found it necessary—we'll go into it later, if required—but at the moment, given the limitations of time, we are demonstrating only the external debt module.

The main menu, as you can see from Figure 8–1, is divided into three broad categories. The first category deals with the entry of data on each loan, the processing of data on each loan, and the amalgamation of loan–level data into an aggregate data base. On the first data entry screen for the first menu option, for instance, the data are codified that are commonly required for entering a loan into the system.

If you look at Option 4 on the Main Menu, which is Loan/Grant Participants, all the participants in a loan, whether they are creditors, borrowers, implementing agencies, or disbursing agencies, are included. Later, these codes can be used for both entering the information and retrieving records from the data base. Similarly, Option 5 is used to code currencies and their exchange rates vis–a–vis the local currency.

MAIN MENU

Loan/Grant Administration

1 Loan/Grant Particulars
2 Loan/Grant Enquiry
3 View/Query Summary Data
4 Loan/Grant Participants
5 Currency and Exchange Rates
6 Interest Rates
7 Codes and Profiles

Management Tools

11 Loan Testing
12 Sensitivity Testing
13 Debt Indicators
14 Debt Structuring
15 Comparing Loan Terms
16 Multi–Currency Options

General Operations

21 Reports
22 Grants and Aid Monitoring
23 Monthly Processing Run
24 Enquiry System
25 Exit

The software also has a facility to specify a base currency. All the aggregate loan data can be reported not only in the local currency or in the currency of the debt but also in a third, base, currency. This might be U.S. dollars; at some specific countries, I've used Australian dollars or SDR's [as the base currency].

With Option 6, interest rates can be codified, and the user can maintain as many interest rate files as he chooses. I mean, there can be files for LIBOR three–month and LIBOR six–month rates. Or should a bank indicate its own [variable rate index] for loans it has provided, there could be separate [index] files for say, Chase Manhattan or Barclay's, or whatever choice that the user wishes to make. I mean the system can have U.S. prime, LTPR, or whatever is the interest rate [index]. So these various things which are commonly used, exchange rates and interest rates, are all coded. That is what the first set of screens provides for.

Now let's look at the data that goes into the system in respect of each loan. These are the Loan/Grant Particulars. [1] We'll start with what is required to be entered into the system from each loan and the transactions that flow in respect of the loan, to give you an idea of what is captured and to what use this information is put. [The first data entry screen is titled LOAN/GRANT DETAILS 1.] Each loan has a unique Loan/Grant Key, which is made up of seven numbers. The first four represent the year in which the loan was contracted; the last three represent the chronological order in which the loan was contracted. This unique Loan/Grant key enables one to store and retrieve data in respect of that loan with facility.

The next field shows whether it is a loan or a grant because this system was intended essentially to help in recording and monitoring all financial flows, whether they are by way of grants or loans. Then there is the IBRD number, which may be assigned by either the borrower or IBRD. It can be used to retrieve information.

Next is the title of the loan. Then there is a field to indicate whether the loan is part of a parallel or

1. Sample data entry screens for CS–DRMS can be found in the information provided by the speakers and included in Volume 2.

co–financing arrangement, so that if a particular code is used to indicate all loans that form part of a co– financing or a parallel–financed package, this field can be used to retrieve information on the package. Next is the country reference, which is the file number that a borrower might wish to assign. Then there is a field to indicate whether it is a multi–currency loan. If it has any multi–currency features, this field is used because it brings up the fields needed to deal with various multi–currency situations.

The next field is the name of the creditor. Suppose IDA has been previously entered as the coded value for a long–form description, using the Loan/Grant Participants option. Then, when 'IDA' is entered here, the system will display the full name as well.

The Country field is used if this is a bilateral loan; the country code would be entered and the name of the country would appear. Since IDA loans are multilateral, the value 'XX' is entered for Country.

The Creditor/Donor Category is the category used by the World Bank's Debtor Reporting System. This code indicates whether it is multilateral, bilateral or commercial. The Creditor/Donor Reference, which is the next field, captures the donor's or creditor's file number. The Disbursement Agency field is used if the disbursement agency is different from the creditor.

The next field specifies the Participant code for the Borrower. Then there are four fields to list Executing or Implementing Agencies, so the debt manager will know who is responsible for implementing [the objectives of] the loan. The Guarantee Status, which is the next field, indicates whether it is a government borrowing, a corporation borrowing with a government guarantee, a private sector borrowing with a government guarantee, or a non–guaranteed borrowing.

The Test Loan option is a facility to enter a loan without that loan becoming part of an aggregate report reflecting the total data base. For example, a debt manager who wants to assess the impact of new borrowings can put in a loan to test the impact of that borrowing, without that loan affecting the live data base.

The Selection Class enables the debt manager to classify a group of loans or a set of loans with a selection class, which allows that entire class to be accessed together. For instance, if all loans from a particular bilateral that are before a cut–off point are marked with a selection class, a re–scheduling arrangement worked out with that creditor can be applied to that entire class.

The LOAN/GRANT DETAILS 2 screen again starts with the Loan/Grant Key because we're still dealing with data for a specific loan or grant. Then comes the Agreement Date, which is followed by a field to indicate whether the loan has become effective or whether conditions preceding effectiveness are still to be fulfilled. The Agreement Type is the World Bank's classification of agreements or instruments. Then there is the Effective Date, which could be different from the Agreement Date, as when there are conditions to be fulfilled. Next is the Start Date for computing and paying the commitment fee. This can differ from both the Agreement Date and the Effective Date, since in many cases commitment fees become payable even before the loan becomes effective.

The field for Loan/Grant Currency is next, followed by the Original Amount of the loan or grant. The Revised Amount is calculated by the system depending on any cancellations or enhancements that are subsequently entered. The Disbursement Type shows whether [funds are released as] reimbursements or as direct disbursements. For the Terminal Date for Disbursement, there is a field for the Original Date and, in case the terminal date has had to be revised, as often happens, a Revised Date.

Next are fields for the Reimbursable Cost: one for the Total amount and another for the total reimbursable in Local Currency, which is useful because many creditors stipulate the percentage of the loan that can be reimbursed in either foreign or local currency.

At the bottom of the screen are two important fields for the Main Use of Funds and the Economic Sector. The former specifies whether the funds are being used for a project, a program, or technical assistance. The Economic Sector is the sector in which the funds are being applied. These two fields play a very great role in subsequent analysis of the total debt, as they provide the manager with a facility to classify loans in terms of either Use of Funds or Sector and analyze changes among these categories.

In the LOAN/GRANT DETAILS 3 screen, there is a field to indicate whether the loan has been on–lent to one of the other agencies in the country, and if on–lent, the percentage on–lent. Other fields on this screen are

- **Accelerated Payment**—whether there are provisions for accelerated repayment or prepayment

- **Procurement Source** restrictions—whether the funds can be used for untied procurement or are tied to the creditor source or a particular group of countries
- **Budget Financed**—whether or not the repayment or the servicing of that loan has to be financed by the country's budget
- **Insured**—whether the loan is insured by, for example, an export credit agency
- **Aid Group/Form**—whether the loan is part of an aid group or an aid consortium
- A field to indicate whether liability data have been cross–checked with the creditor
- Fields to specify the types of conditions to be met before the loan or grant becomes effective, and whether these conditions have been fulfilled.

The last set of data fields for an individual loan or grant, which are contained on the LOAN/GRANT DETAILS 4 screen, provides a breakdown of the loan into various subprojects. These fields can be used to break out the amounts specified for categories such as technical assistance, training, civil works, equipment purchases, or whatever. The screen contains six fields to show the break–down. Finally, there is an Additional Notes column, which enables the user to maintain whatever additional notations may be desired for this loan or grant.

These four data entry screens describe the data that goes into the system for each loan. Some of these fields are compulsory; others are optional. These data items were developed by looking at what various users needed to monitor and manage their debt effectively and at the kind of data required for subsequent analysis to support active debt management. There are about sixty pieces of information in these four screens that must be collected from loan agreements or from various transaction flows.

You may have noticed that so far there have been no fields or other provision for entering any information in regard to servicing the debt, such as the interest rate or the repayment terms. In the CS–DRMS, these terms of the loan are entered by way of forecasting rules. It is possible in this system to introduce rules for disbursements, for principal payments, for interest payments, etc. For instance, one can forecast disbursements on an equal basis, a discounted basis, a percentage basis, or a disaggregated basis. So forecasts of disbursements need to be entered as a rule.

Similarly, there are facilities to enter the various principal repayment rules. The rule can be for equal principal repayments, as many loans are structured to provide. There can be an annuity rule; USAID loans, for instance, carry an annuity rule. There can be forecasting rules for disaggregated or percentage–based principal repayments.

There are also rules to forecast interest payments. The rule can assume a fixed rate; this may be a steady rate which holds for a fixed period, like the World Bank's cost of qualified borrowing, or a commercial loan where a particular LIBOR rate remains steady for three months or six months. Then there can be an amount–based interest rate, such as some loans specify. The forecasting rule can also be for a variable interest rate, such as an interest rate based on the U.S. prime rate or LTPR, which therefore changes whenever the index rate changes. There is a compounding facility essentially for domestic borrowing for growth bonds and the like. The rule can also be for a service fee, such as those charged on loans from the soft windows of the World Bank or some of the regional banks. So the various possible interest payments can be applied to a loan by entering the relevant interest rule. There are provisions to enter the various other charges that may apply to a loan: the commitment fee; the sinking fund contribution, in cases where the borrower is maintaining a sinking fund; agency fees; legal fees; etc. Forecasting rules can also be used to apply penalty fees for delayed payment of principal or interest.

These are the various possible repayment terms that are applied on a loan by way of forecasting rules. We'll just show a typical screen for entering an interest rule. Here again, we are talking about a particular loan, and therefore the Loan Key field appears. The system can handle up to twelve tranches for a single loan; each tranche can have a different repayment rule, so there is a field to indicate the tranche to which this rule applies. Then there is the Rule Type, which shows what interest rule is relevant for this loan, such as a service fee rule. Other fields to define the rule include:

- **First transaction date** is the first date on which interest has to be paid.

- **Frequency** indicates whether payments are made twice a year, thrice a year, or four times a year, then the system automatically picks up the next relevant dat
- **Start date** is the date from which the calculation of interest commences
- **Period for steady interest** is the number of days for which the interest rate remains valid, for example, whether the rate remains steady for 90 days or 180 days
- **Base interest rate** is a code for the base rate, such as LIBOR six–month, Chase Manhattan's base rate, or the World Bank's cost of qualified borrowing. Once a base rate code is entered, the system picks up the relevant interest rate from the interest rate file and uses it to compute the interest.
- **Margin**, for floating interest rates, is the margin over the base rate.
- **Cap Rate**, for floating interest rates, is the maximum rate, if any.
- **Floor Rate**, for floating interest rates, is the minimum rate, if any.
- **Days in interest year** is the number of interest days on which the interest is calculated, whether it is 360 days in a year, as most commercial bank agreements provide for, or 365 days in a year.
- **Basis** indicates whether interest is calculated on a daily, annual, or other basis.

Once the Loan/Grant Particulars are entered and the appropriate rules are applied, the actual transactions can be entered as they take place. Whatever the nature of these transactions may be—if they are actual disbursements, then the disbursements would need to be entered. If they are principal repayments or interest repayments, these need to be entered.

The system provides for various kinds of multi–currency options. One case is the nonpooled loans, which are the loans that were provided by the World Bank and disbursed in different currencies and have to be paid back in those currencies. These nonpooled loans are disappearing, but many countries still have some left. The system enables the user to enter the actual currency in which the repayment was made and the amount of the currency. It then calculates for the user the exchange rate gain or loss that has occurred. The new CS–DRMS version has a feature to enter the re–evaluation factor that the World Bank and the regional banks apply to both the principal and the interest; it then forecasts the service payments on that debt using the re–evaluation factors.

As to multi–currency options that might be needed for a commercial loan, the system enables a user to transfer a portion of one loan from the loan currency to another currency and hold it in that currency for a number of interest periods. For the time during which this part of the loan amount is held in the second currency, the system calculates interest in that currency using the interest rate relevant for that currency. At the end of the period, the amount is converted back into the loan currency and the system indicates what the exchange rate gain or loss has been, compared with the original amortization schedule.

We have examined the Loan/Grant Particulars and the forecasting rules, and we have discussed the need to enter actual transactions. The system also has a facility to view the transactions on each loan up to any given date. All the data, as held in both the loan currency and the local currency, can be used to produce aggregate reports in the base currency, as I mentioned earlier. After data on the loans are entered, they are processed—amalgamated into the data base—and the system can use them in various reports. There are about 100 standard reports built into the system. There are reports on individual loans and aggregate reports. The system produces the reports that the World Bank requires: Form 1 and Form 2. It provides the report that the IMF normally uses for Article IV consultations. It provides a whole lot of reports that a debt manager may require to look at the data base. Reports are available with breakdowns by creditors, by borrowers, by currencies, by fixed and floating rate interest type. There are reports for different floating currencies, for currency composition, for maturity composition, and for the debt indicators, which if entered exogenously, are worked out using the debt service obligations computed by the system.

In addition to these standard report options, CS–DRMS has a powerful report writing facility, which enables users to design and produce their own reports. We provide training in use of the report writing facility.

The system has several management tools to assist in the analysis of debt and in other aspects of debt management. There is a facility to test the impact of new borrowings on future debt service; this is the loan testing facility. The user can analyze the impact on future debt service of exchange rate variations, interest rate variations, or a combination of both. There is a facility to

enter exogenous economic data and produce various indicators useful in monitoring debt.

There are facilities to restructure debt or reschedule debt. These facilities can simulate the kinds of debt reorganization typical of Paris Club or London Club reschedulings. It is possible to take the payments due within a consolidation period, both principal and interest, and reschedule them as may be agreed to in the Paris Club. Separate rescheduling terms for arrears can be accommodated, as can provision for down payments. It can write off part of the debt and reschedule the remainder, as the French do. It can also reproduce the British approach, which is to reschedule debt with concessional interest, or the American approach. The system can handle all three kinds of rescheduling agreed upon at the recent Toronto Summit. As I mentioned earlier, through use of appropriate Selection Classes, the debt manager can apply a particular rescheduling rule to a whole class of loans, such as those from a particular creditor.

The CS–DRMS also allows the debt manager to compare loan terms for calculating the grant element or the effective rate of interest on a loan. For instance, the system calculates the grant element of an IDA loan from the agreement terms.

The new version, which will be released soon, has considerably reduced the processing time required by the various analytical and management tools. In the current production version, if the user wants to compute the effect of interest rate variations, he or she must enter the applicable future interest rates, say for 1990, 1991, etc. In the new version, the user can specify a scenario to be developed, for example a five percent increase in a variable interest rate base or a ten percent depreciation of the local currency vis–a–vis another currency over a period of five years. This scenario can be saved for further use.

Finally, the system has a powerful query facility, which enables the user to access the data in the system directly, even if there isn't a report written for that purpose. For instance, one could retrieve and print out the loan title and the loan amounts for all US$ loans.

This is the basic structure of the system. This morning, Mr. Valantin indicated what, in his group's view, were the essential requirements of a good debt management system. The CS–DRMS provides for data entry and for validation and audit of data. It can forecast all the debt service payments that will fall due over the next five years, ten years, or whatever period the user specifies. It provides a wide range of standard reports aimed at meeting different user needs. It has a query facility and the capability to produce ad hoc reports. The training we provide in the use of the system includes maintenance, back–up, and operations. CS–DRMS provides management tools and analytical tools; it has facilities for rescheduling or restructuring debt. It can deal with currency/interest rate swaps and other such transactions.

Mr. Valantin referred to a module for on–lending. Several of our user countries are using this software to monitor on–lending. In fact, instead of having different creditors, they are showing their own government as the creditor and the various parastatals or other agencies as the borrowers. Papua New Guinea is one of our client countries. After capturing on–lending data in this data base, they realized that nearly 32 million kina were owed, in arrears due to the government, from their various borrowers. We helped them to reschedule these loans, a very different kind of rescheduling. It wasn't a Paris Club, but it was a "Port Moresby Club" rescheduling. As a result, they have been able to recover about 17–18 million kina and are very actively using this capability to monitor on–lending.

CS–DRMS has the capability to customize reports. However, at present users cannot maintain or develop their own data structures or data processing facilities. Although such capabilities are easily stated, we feel that there is a great problem involved in allowing users to maintain their own data structure and processing arrangements, because maintenance of such arrangements is a major concern. We in the Secretariat maintain the software in all these locations, and we provide a hot–line support system. We know the version each client has, the kind of machines they are using, the kind of peripheral facilities they have. Whenever they run into software or hardware problems, we endeavor to address their problems as quickly as possible. These queries are logged; the solutions found are logged. The advice we give is logged, and we follow up to see that the system is up and going again.

The system does support portfolio management. It doesn't at the moment hold any nonquantitative data on the policies of government or the legal conditions pertaining to the loan, etc. But you might be interested to learn that one of our users has asked us to develop a whole

aid–management system, which would include a program to hold some of these nonquantitative data. We are currently working on that.

Thank you ladies, and gentlemen. If there are any questions, we'll be happy to answer.

Mr. Kappagoda: Mr. Chairman, I just want to make a couple of supplementary remarks. One issue I overlooked mentioning was the rigor regarding the capture of data that is introduced by the introduction of a computerized debt data system. One of the problems we have faced in our projects is the lack of precision in capturing dates related to actual transactions and, as all of you are aware, this directly affects forecast levels of commitment fees and interest payments. In many instances, we have had to suggest changes to established practices in both the treasury offices and the accountant– general's offices. In many cases, transactions dates appear to be recorded as the date the documents are received. Or, in the case of disbursements, when withdrawal applications are submitted to the creditor concerned.

There have also been problems associated with the lack of ready access to loan agreements and, in particular, amendments to loan agreements affecting enhancements, cancellations, and in some instances, extensions of terminal dates for disbursements, or changes in the scope of projects.

I'm not sure whether I stressed earlier in my comments the institutional aspects, which are really paramount. As I indicated, we do cover these aspects in the initial assessment we make and in the reports we submit to governments. But in this area one really has to rely ultimately on the government's ability and willingness to implement. One can suggest a process by which data could be centralized in one location, but really one has no means of ensuring it. And in some instances, second–best solutions have been adopted to meet the circumstances of the case.

My final comment really relates to the management aspects and the use of a completed data base for purposes of analysis. There have been instances where we have worked with governments to help them with rescheduling, to help them refinance their loan portfolios or do a proper analysis of their debt. The economists in the group really look forward to the time when many of these projects reach the stage of data entry completion, because that really provides us with the meaty part of these projects. Up to that time, it's a back–breaking exercise.

DISCUSSION SESSION

Questioner #1: In respect of these World Bank pooled loans, since at any given point of time we are aware of neither the currencies likely to be disbursed nor the currencies likely to be recalled, how do we formulate these forecasting rules to arrive at debt outstanding at any particular point of time?

Mr. Sundar: As I understand it, the currencies in which a loan was disbursed and recalled are relevant now only for the nonpooled loans. Such nonpooled loans already stand disbursed. As far as the pooled loans are concerned, the currency of disbursement or recall is no longer relevant because the actual debt service is really dependent on the re–evaluation factor that the Bank applies.

Questioner #1: That is my point also. If the amortization table was given in the loan agreement, we cannot go on that basis because the actual can be altogether different from the amortized amount.

Mr. Sundar: Yes, it could be the re–evaluation factor that . . . .

Questioner #1: So, how do we forecast this re–evaluation factor?

Mr. Sundar: The World Bank indicates the re–evaluation factor for each loan periodically. That would be, accurately, only relevant for the next payment due. But it can be an indication of what the future trends might be. But it could certainly alter. Maybe the Bank would be able to explain better how the system works.

Questioner #1: I am bringing out this point because sometimes it is very difficult for us to formulate our budgetary requirements towards debt servicing.

Mr. Sundar: Because, given that the re–evaluation factor in respect of the bank loans, whether it is the World Bank, or the ADB, changes in respect of each loan. It is not the same for all loans given by the bank but varies from loan to loan. And given also the fact that it will change for every repayment date, it is difficult for any borrower to project his entire future debt service on that

loan using that re–evaluation factor. It has to be continuously updated.

Mr. Husain: This is a problem, and the World Bank is trying to adopt a system which would give some stability and some predictability. This was done primarily to help the borrowers diversify the exchange rate risk. Now, there are always trade–offs involved. If you try to minimize the exchange rate risk to the borrower by diversifying your currency portfolio, then you introduce an element of unpredictability or instability in the projections. It is a choice, whether you think the instability or unpredictability is a more dominant factor than the diversification benefits you get from the currency pool. So I think that is a very difficult matter. If you see our World Debt Tables, we have carried out an analysis of the book value and the market value. Before 1985 [while the U.S. dollar was strong], most of the countries benefited from the currency pool calculations. Taking the nominal value as US$100, the actual repayments were of the order of US$84 or US$85. So you were saving US$15.

Since the adverse movement of the [dollar] exchange rate after 1985, the situation has reversed. Now people are talking more about post–1985 events, because of the depreciation of the U.S. dollar, and not about what was happening before that. But our Board has just considered a board paper, which does not try to eliminate this completely but tries to provide some element of stability and predictability.

Any other questions?

Questioner #2: I'd like to ask a question about experience in recording transactions, particularly disbursements. In some countries to which we have gone, this tends to be a difficult matter, particularly with disbursements that are made in kind, where there is no cash going through the central bank. Some countries simply wait for the creditor's statement, sometimes even waiting for the bill to come before they know that the disbursement has taken place. In your institutional discussions, what has been your experience, and what is your view of the best way to do it?

Mr. Kappagoda: This relates to situations where there are direct payments made to suppliers of equipment, on services by the creditors. But clearly, in such situations, one normally comes through the central bank, one has to wait for creditor's statements. In the case of equipment, one could, as an alternative, try to capture it at the time the import comes in. But our general advice is really to wait for the creditor's statement because that is the only definitive statement of the disbursement. Even if one uses the customs entry, it will have to be updated at the time the creditor's statement of disbursement is received.

Questioner #2: You have not tried to work with, say, executing or implementing agencies, to submit report forms on disbursements for active loans or something of this sort? You can wait a long time for a creditor statement for some bilaterals, or some supplier's credits.

Mr. Kappagoda: This is why I said that one could, until the creditor's statement comes, rely on a statement at the time of importation. And this would come from the implementing agency; that would be the only source. But it will need to be checked with the creditor's statement and updated. It is a problem. The multilateral institutions do send statements more frequently than bilaterals do. Certainly, one who is capturing grant information will find it even less frequent; you are lucky if you get an annual statement.

Questioner #3 (from Mexico): I don't know whether this is appropriate, but you talked about the re–evaluation of different currencies vis–a–vis the dollar. The World Bank sends us the so–called pooling currency, the currency pool, and it is having a tremendous impact. In 1987 it was almost US$4 billion worth of liability. I'd like to know how you calculate this re–evaluation factor for the currency pool, if you don't mind.

Mr. Husain: I think it is a very complex subject. We get into this discussion in every session, so you are not the only one who has concerns; we have concerns also. What I was trying to explain before is that we should look at the long–term picture. You should not consider just your additional liabilities in a single year, such as 1987. Instead, try to construct the profile of liabilities over a longer period of time. If in 1984 and 1985 you gained more than what you were paying to the World Bank, but in 1987 you were paying more than what you received, you should try to aggregate these years together and look at the larger picture, rather than one single year. In a single year, there are factors we are not able to predict.

For example, we do make mistakes in our expectation of what the yen–dollar exchange rate is going to be, so we might have borrowed more in yen than was required. When we borrow more in yen, we have to repay in yen. Meanwhile the yen has appreciated, therefore, with respect to the amount in U.S. dollars, we have to pay more for the yen. It all depends on the composition of the

Bank's pool, whether the borrowing is more in the appreciating currency or the depreciating currency. If you are borrowing more in the depreciating currency, you, the borrowing country, are better off. But if you borrow more in the appreciating currency, then you have a different set of problems.

We realize this; you are not the only one. In our annual meetings, in meetings with the delegations, in our seminars, and at conferences, this question is raised. Our management and our Board are aware of it. As I said, we have just considered a new procedure, which I think we will discuss with the borrowing countries as soon as the operating procedures are in place.

Questioner #4: I want to know how you process the French loans, as there may be 200 disbursements for one loan, with a payment schedule for each disbursement and with different interest rates.

Mr. Sundar: Earlier this morning, there was a reference to standardization of definitions so that everyone can use the defined terms or concepts in the same way. It will be a great help to borrowers if some of the creditors decide to streamline and standardize their procedures. And, if it's appropriate to do so while in Paris, I would make a special appeal to the French to take a look at this. One of our other client governments, Jamaica, has a major problem with the American cash–credit arrangement, where again this problem is very pertinent.

Our CS–DRMS system is able to deal with only 12 tranches, but for each one of those tranches, a separate repayment rule can be applied. If the tranches in a loan exceeds 12, the loan has to be entered in the system as additional loans of no more than 12 tranches each. We are now developing a capability to deal with French loans and subloans of one loan. I'm still not sure whether the feature that we are developing will be capable of dealing with, say, an American cash–credit arrangement where each loan could have as many as 400 or 500 different shipments, with each shipment having a separate set of repayment terms. But to the user, the Parallel/Co–financing facility of CS–DRMS will be helpful in producing a report which shows that all these loans are in fact part of one loan agreement. That, I guess, is the best we've been able to do so far.

Questioner #5: I have with me a printout we have produced in my country, which I would like to compare with your Report No. 100, page 35 [of "Advisory Services on External Debt Management," included in Volume 2]. Both reports (actually I have mine, which you don't have) are a sort of statement intended to indicate the status of an individual loan as of a certain time. If I want to produce a similar report, but aggregated on a country basis, can your system do so? I am asking because I can't do that on my own report.

Also, after the loan has been disbursed, the historical disbursements will be reflected in the statement of account submitted by the lender; it will not be of any use for me. So I don't need all that detail. I only need one single figure, for example, indicating disbursements, repayments, and the balance of debt outstanding. Is it possible to produce that type of report with CS–DRMS?

Mr. Sundar: Yes, it is possible. The particular report you mentioned is a detailed report on a single loan. But you can produce aggregate reports, which, for instance, pertain to a borrower, a creditor, or a currency. The report tells you, loan by loan, the loan amount, how much has been disbursed, how much has been repaid, and the disbursed and outstanding debt. There is also a report which gives the percentage utilization on a loan. You can have a payments–due report, which tells you by currency and by individual loan what payments are due in the next month, next quarter, or next year, including the payment dates. So there are various kinds of aggregate reports that the system produces. We could, if you are interested, show the aggregate reports that are now standard in the system. As I mentioned, in addition to these standard reports, which are built into the system, the user can design and produce ad hoc reports. I hope that answers your question.

Mr. Kappagoda: There's one more thing. We had put up on the screen a short report, which gave the transactions to date and summarized the commitments, the disbursements, principals repaid, interest paid, the loan amount, and the debt outstanding. I think that report contained what you needed in the single– loan case. It's not listed with the sample reports; it was on the screen.

Questioner #5: I think your report No. 200 has the same type of thing but summarizes everything by central governments, public corporations, and other things. What I am interested in is a report on, for example, all loans from IDA, on which are listed all loans contracted to date in sequential order with details on loan commitments, undisbursed balance, disbursements, repayment, exchange difference, and balance of debt outstanding.

Mr. Sundar: The brochure contains only a few examples of the reports that the system can produce. It surely is not

an exhaustive listing of the reports that are available. But we have a reports manual here, which shows all the reports that are now part of the system and what each report contains. If you would be interested in looking at it, we would be very happy to lead you through it.

Mr. Stillson #6: When you work with your countries, do you encourage them after they have learned the system to make specialized reports? One thing we have suggested in some cases is for the debt management unit, or debt monitoring unit, to go around and visit users—ministry of finance, ministry of planning, different divisions in the central bank, maybe research groups as well—sit down with them, and say, "What table do you really need and how frequently do you need it?" and "What is the periodicity of the data that you need?", then design specialized tables just for particular users.

Since the computer system is very flexible, these reports can be produced quickly, essentially by pressing a button. Doesn't this help sell the system to the various users, rather than relying primarily on the standardized reports?

***Mr.* Kappagoda**: Yes, we encourage them to do that after the data base has been completed. At that stage, we also try to take them through a report-writing course. However, we find that, until the data base is completed and the debt unit is able to demonstrate that they can deliver the goods, really you can't get people to focus on what reports they want. It's not only the users within government; we also find that the IMF and the World Bank generate a need for special reports, because your staff reports and economic reports invariably are slightly different in each of the countries depending on which staff member visits.

Mr. Stillson: It can vary within the same country, as mission chiefs change!

9 Technical Assistance from the Commonwealth Secretariat Jamaica's Experience

Michele Robinson and Vincent Churnside,
External Debt Management Support Department,
Bank of Jamaica [1]

Overview of Jamaica's External Debt Situation

The need for technical assistance in the area of external debt management became pressing in the 1980's, consequent on a rapid accumulation of external debt and a heavy debt service burden. Jamaica's external debt, which amounted to US$154.0 million in 1970 or 15.8 percent of GDP, grew to US$1,866.8 million or 85.0 percent of GDP by the end of 1980. By 1985, the debt again doubled to US$3,587.0 million, representing 160.7 percent of GDP. On an accrual basis, debt service obligations as a percentage of exports of goods and services in 1985 were 58.0 percent. This compared to a debt service ratio of 24.0 percent in 1980 and 2.6 percent in 1970.

Funding for Jamaica's debt servicing comes from foreign exchange earned primarily from exports of bauxite and alumina and from tourism proceeds. In the first half of the 1980's both these sources of exchange were particularly vulnerable to adverse world economic developments. As a consequence, there were reduced foreign exchange earnings, out of which increasing levels of indebtedness were to be serviced and import payments made. The brake on economic growth imposed by the debt and the negative implications for economic and social welfare were impetus for the authorities to seek measures for immediate debt relief in the short term and, in the long run, the effective management of the country's total external debt. It was at this juncture, in 1985, that the Government of Jamaica sought technical assistance on debt management systems from the Commonwealth Secretariat.

The request to the Commonwealth Secretariat by the authorities articulated in broad terms the need to develop appropriate structures for effectively managing the external debt, including legal, institutional, administrative, and technical aspects. Effective debt management would improve the capabilities to formulate appropriate external borrowing policies and strategies. It also would strengthen the technical capacity of the Bank of Jamaica to monitor the external debt and debt service obligations. On the basis of this request, the Technical Assistance Group (TAG) of the Commonwealth Fund for Technical Co–operation (CFTC) undertook a review of Jamaica's debt management requirements.

Technical Assistance: Pre–Commonwealth Secretariat

The wide span of objectives sought from the technical assistance requested from the Commonwealth Secretariat reflects the effort to improve on earlier experiences with technical assistance, which had more narrowly focused goals and were of very limited success.

Several attempts had been made to expand the coverage and improve the accuracy of the debt data collected by the Bank of Jamaica through the use of computerized systems. The objective then, as with the request to the Commonwealth Secretariat, was to develop a software package to record data adequately and provide reports from which sufficient information could be extracted to lay the basis for debt strategy formulation. Moreover, the need to resort to rescheduling exercises with bilateral creditors, under the aegis of the Paris Club in 1984 and 1985, made it virtually mandatory that projections on debt and debt–servicing into the medium term be available and reliable. In earlier attempts at developing a debt recording system, technical assistance was sought from experts on computer software and systems development. Companies marketing computer hardware and software and private consultants versed in electronic data processing skills were contracted to provide their services.

In these attempts, a debt recording program to handle the data base had to be written from scratch for the computer. This involved lengthy systems work that entailed analyzing the existing debt data base and

determining the requirements for expanded coverage. A number of factors affected these exercises. First, for no category of debt in Jamaica was data complete. Second, the available data were dispersed among various government agencies:

- In the case of direct government borrowing, data were maintained between the Ministry of Finance and the Accountant General.
- Data on parastatal borrowing, even with government guarantee, were not fully captured by either the Ministry of Finance or the Accountant General but were available only within the parastatals themselves.

The exercise had limited results for the following reasons:

- Loan details and other debt characteristics were inadequately captured and incomplete. As a result, the debt programs were frequently adjusted to incorporate additional loan details, data on exchange rates and interest rates, or other data relevant to the provision of useful debt information.
- The continual revisions and modifications pointed to the limitations of fielding experts in only one area of expertise: data processing. The lack of technical expertise in economics, banking and finance, and debt management severely impaired the development of a workable debt recording system.

Technical Assistance: Commonwealth Secretariat

A review of Jamaica's debt management requirements was undertaken by the TAG in October–November 1985. Discussions took place with officials of the Bank of Jamaica, the Ministry of Finance, the Accountant General, and other government agencies involved in contracting foreign loans. The outcome of these consultations was a recommendation to set up a comprehensive debt recording and management system. Technical assistance provided by the Commonwealth Secretariat included advisory services on:

- Legal and institutional arrangements for organizing the flow of information on the contracting and utilization of loans, on debt service payments, and for regulating new borrowing
- Data collection and compilation of a debt inventory, using the institutional arrangements formulated by TAG's advisory services.

The Secretariat took responsibility for installation of the software, training, and long–term maintenance and support. The software to be installed was the Commonwealth Secretariat's Debt Recording and Management System (CS–DRMS).

Institutional Arrangements

Influencing the institutional arrangements were, first, the categories of borrowers that needed to be covered by CS–DRMS in Jamaica. These included:

- Borrowings by the Central Government and its agencies
- Borrowings by the Bank of Jamaica
- Borrowings by the private sector.

Also influencing the institutional arrangements were the elements of data required on each loan. These included:

- Basic loan details and repayment/rescheduling terms
- Projected disbursement profiles and data on actual disbursements
- Data on actual debt service payments covering principal repayments, interest payments, commitment fees, service and other charges.

The primary objective of these arrangements was to ensure well coordinated, centralized data gathering, the result of which would be a comprehensive external debt data base.

On the recommendations of the Commonwealth Secretariat and with the concurrence of the Government of Jamaica, the CS–DRMS was housed at the Bank of Jamaica. One of the factors influencing this decision was the fact that the Bank of Jamaica had the most comprehensive data base at the time. In addition, the Bank had responsibility for managing the country's foreign exchange and for implementing the adjustment programs agreed upon with the IMF.

Difficulties have been encountered in implementing and adhering to prescribed institutional arrangements, mainly for the following reasons:

- Enlisting the full cooperation of borrower agencies has proved problematic.
- There was failure to agree on a set of guidelines for providing consultations on the contracting of new debts and regularizing the flow of information.

Given these constraints, the full potential of CS–DRMS has not been exploited in managing the country's total debt portfolio. In particular, it has not been possible to utilize the system in terms of decisionmaking in areas such as loan evaluation. In future programs of technical assistance, it may be more useful for effective debt management to establish a proper institutional framework before installing the system.

In the absence of a formalized set of arrangements, information on new borrowings is received by the Bank on an ad hoc basis. This does not permit a systematic and comprehensive evaluation of new borrowings. As a result, strategies and actions cannot be properly assessed. The potential benefits of CS–DRMS have not yet been realized in terms of:

- Sensivitity analysis
- Determining the grant element and effective rate of interest on loans
- Testing the implications of different volumes of new borrowing based on different assumptions regarding currencies and repayment terms
- Evaluating different proposals for financing or rescheduling loans.

Data Collection and Compilation

In respect of data collection and the compilation of a debt inventory, the Commonwealth Secretariat provided technical assistance not only through periodic consultations from visiting missions but through the placement of a resident advisor. Critical to the decision to secure a resident advisor was the number of loans for which details had to be recorded and the complexity of the agreements. At the time, it was known that over 1,200 loans were in existence. The terms of reference for the resident advisor consisted of the following:

- Supervising the filling–in of data entry sheets and the entering of data into the computer
- Installing the software
- Training staff on various aspects of the CS–DRMS.

Another important element affecting the collection of data was the time frame within which this aspect of the program was expected to be completed. Following discussions between the Secretariat and officials of the various Jamaican agencies, and on the basis of the number of existing loans, the timetable for data collection on the data entry sheets was set for March 1986 to July 1986, a period of five months. This timetable had to be extended a number of times; ultimately, the data collection exercise was 18 months in duration.

The categories of borrowing which were to be captured by CS–DRMS included public and publicly guaranteed private debts, as well as short–term debt or trade finance. However, in view of the large volume of government, Bank of Jamaica, and parastatal borrowings (1,200 loans), the system had to become operational using data collected on these categories of borrowing covering only medium–term and long–term debt before a similar exercise was conducted in respect of private sector debts and short–term credits.

The compilation of the debt inventory and data collection proved to be the most difficult part of the exercise, except in the case of loans contracted by the Bank of Jamaica. However, of the total inventory of over 1,200 loans, Bank of Jamaica loans accounted for just under 10 percent. Problem areas included:

- Establishing the number of loans in existence
- Securing the actual loan contracts. Often the generosity of creditors was relied on, as difficulties arose in locating original copies of loan agreements at respective borrower agencies.
- Obtaining regular and full information on disbursements and repayment schedules.

In the absence of any mandatory regulations that made it obligatory on the part of borrowers to pass on loan advices to the Bank, for the most part the debt office had to make its own efforts to obtain specific information in establishing the number of loans in existence.

The resident advisor was particularly useful in tackling the problems of data collection/compilation with which the department was confronted on a day–to–day basis. Procedures to identify and trace existing loan agreements were developed and put in place on the advisor's advice. In addition, the advisor recommended practicable solutions to the treatment of various categories of loans for which there were insufficient data.

Because of the various elements of data which were required for each loan and the complexity of the loan agreements, it was necessary to transcribe the data onto data entry sheets. This exercise was carried out by a small, specialist, core of staff who received training from the resident advisor. It is noteworthy that, for the most part, staff involved in data entry work consisted of recent

high school graduates, none of whom had received tertiary–level education. Moreover, they had had no previous job experience and had never been exposed to loan documents. Nonetheless, the training was sufficient to enable this cadre of staff to complete the data entry exercise successfully.

CS–DRMS Hardware and Software

The main computer hardware configuration recommended by the Commonwealth Secretariat and used by the Bank of Jamaica is as follows:

- Two IBM PC–ATs with 512 Kb of main memory and 40 Mb of hard disk storage capacity
- Two visible display units (CRT's)
- One tape streamer unit
- One 132–character printer.

This configuration has been satisfactory to date and should continue to meet our data processing needs over the short term.

The CS–DRMS software has been designed to record debt and assist in the management of the debt. Specifically, it can do the following:

1.. Loan Administration

- Maintain a complete inventory of all loans and grants and basic details of the agreement
- Forecast debt service payments
- Identify loans which are in arrears and calculate penalty payments
- Respond to specific queries regarding the data base
- Provide standard reports.

2. Management Tools

- Provide information and reports on any group of loans
- Carry out sensitivity analysis
- Evaluate different loan offers
- Evaluate different proposals for refinancing and rescheduling loans
- Use the output from CS–DRMS with exogenous economic data to project critical debt indicators.

The software system provided by the Commonwealth Secretariat has proven to be "user–friendly" in terms of screen layout. This has been evidenced by the ability of a wide cross–section of staff members with different levels of computer literacy to use the system easily to obtain reports or carry out queries of various types. Even though a number of screens have to be completed in the keying–in exercise, the layout of the screens has greatly facilitated this task.

The current arrangements with the Commonwealth Secretariat do not allow CS–DRMS to interface with the other data processing systems within the Bank of Jamaica. As a consquence, where data have to be entered into the Bank's main data processing facility, such data must be keyed in from hardcopy reports generated from CS–DRMS. This has reduced the efficiency with which data can be transmitted into the Bank's overall data base system.

Because the CS–DRMS is a statistical rather than an accounting package, in some instances there have been limitations in the accuracy of the output reports. For example, in the case of Japanese yen and Italian lira loans, for which currencies are recorded in thousands, it is difficult to verify payment requests against the Bank's records. In addition, the reports that are generated do not display cents; this level of precision can only be obtained by using the query system. While it is possible to extract the information, the time period is lengthy.

Although a wide range of reports is provided with the system, these reports have not fully satisfied our operational needs. However, the report–writing capabilities of the system do allow for most of the required reports to be written. Consultations with the Secretariat to prepare other reports for incorporation into the system have been initiated.

On a monthly basis, the debt unit carries out a processing run for all loans. The processing run allows the system to carry out cross–checks to warn of inconsistencies and insufficient information. Our experience, however, has been that successful completion of the run is a lengthy process. Often, it has involved repeated adjustments and runs of some individual loans before the monthly run is successful. In addition, the processing time itself is quite lengthy; the run takes two to three days for completion.

The data base security system allows users to access the system by entering a password. Within the

physical security that exists, this system has remained satisfactory.

Consultations

Consultations with the Commonwealth Secretariat under their technical assistance program in relation to the formulation of borrowing policies and strategies and, in particular, in the negotiation of loans and loan agreements have contributed significantly.

In 1984 and 1985, the severity of the foreign exchange constraints facing Jamaica compelled the authorities to request debt relief from its official bilateral creditors through the Paris Club. On both these occasions, in the absence of local expertise, private overseas consultants were employed to prepare the documentation relating to rescheduling exercises. Not only did the Bank of Jamaica incur significant cost in doing this but also there was no opportunity for the technical expertise relating to these activities to be developed within the Bank.

Further requests for debt relief were submitted to the Paris Club in 1987 and more recently in 1988. However, unlike the earlier rescheduling exercises, the involvement of in–house personnel was sought along with the inputs from the Commonwealth Secretariat. The experience gained through this collaboration and the ongoing training provided by the resident advisor have proven invaluable. In 1988, the entire Paris Club rescheduling exercise was carried out by the Bank's line staff. This attests to the value of the contribution of the technical assistance provided by the Secretariat.

Through the Secretariat, training has been conducted at several levels involving different categories of staff. The first level involved the training of staff to fill in the worksheets and data entry sheets for compiling information on the debt inventory. It included practice in entering actual loan data into the computer from data entry sheets.

The second level of training involved two staff members of the Bank's Debt Unit (at the middle management level) who went through a five–week training program in London. Using the then–completed data entry sheets, the training included:

- Data collection and the use of data entry sheets
- Data entry
- Use of various routines in software, and the production of reports using actual data
- Use of the data base management system INFORMIX and report writing
- Housekeeping functions necessary for the operation of the software.

The third level involved the training of a small group of individuals, primarily those with training in economics, in using the CS–DRMS for policy analysis, through the various management tools incorporated in the system.

Although the training of staff has ultimately been successful, the duration of the training program was far lengthier than anticipated. In some instances, training had to be repeated. These problems were associated with the training exercises conducted at the Bank of Jamaica and arose out of difficulties that are perhaps inherent in conducting on–the–job training. The difficulties included:

- Loss of staff. The reassignment of staff to other duties and staff transfers had an adverse impact on the program.
- Staff resistance to changes. The operation of a manual system that continued to move in parallel to CS–DRMS made it difficult for some members of staff to develop the confidence essential to move from the manual system to the computerized system.
- Job prioritization. Frequently, other more pressing assignments took precedence over work involving the CS–DRMS. This had the dual effect of delaying the time in which a switch–over to the CS–DRMS could be effected and entrenching the reliance of staff on the manual system.
- Choice of staff for data entry work. Our experience suggests that the monotony of completing data entry sheets was best withstood by clerical–level staff, in particular those who had no previous job experience. A more useful approach for both data entry staff and their supervisors may be to alternate these activities with tasks requiring more creativity and less repetition, thereby optimizing the training time.

An important aspect of the technical assistance provided by the Commonwealth Secretariat has been its long–term support. Noteworthy has been the facility to obtain improvements to the software at periodic

intervals. To date, since the start of the project in 1986, three updated versions of CS–DRMS have been received from the Secretariat. In addition, their amendability to requests for amendments to the system has been of much assistance.

Summary

In reviewing the technical assistance provided by the Commonwealth Secretariat, we have examined the following:

1. The technical assistance prior to the Commonwealth Secretariat Arrangements. It was noted that these earlier efforts did not realize an operational debt management system or effect a transfer of technical skills and expertise in a computerized debt management system.
2. The experience with technical assistance provided by the Secretariat in the areas of:
   - Institutional arrangement
   - Data collection/compilation
   - Hardware/software
   - Consultations
   - Training
   - Long–term support.

It appears that the institutional arrangements constitute the most critical element to exploiting the full potential of debt management systems provided through technical assistance. Based on our experience, we suggest that the guidelines for institutional arrangements be agreed upon and implemented prior to the installation of such systems. In our view, this would contribute a great deal to exploiting fully the capabilities provided by such systems.

DISCUSSION SESSION

Mr. Husain: It was an excellent presentation. Although I do not suggest that other delegations must follow this format, I found it very useful for the simple reason that it was very frank and also very informative in pointing out what the issues were, what the difficulties were, how they were resolved, what the limitations of the present system are, and what can be done in both technical assistance and training to build indigenous capability. I think this is the kind of discussion we should try to have from the country delegations. I hope that other country delegations would also try to focus their discussion on these kinds of issues, which are very lively and very useful.

I think we have a few minutes after this excellent presentation for discussion on the Jamaica case before we meet for cocktails. Any questions or comments?

Mr. Cosio–Pascal: I have to congratulate the Jamaican delegation for the excellent presentation, very interesting indeed. In particular, when you mentioned the kind of persons you have used to load data, if I understood well, for some of them it was their first job. I wonder whether they were just hired to load data and then you released them, or are you still keeping them? How did you work out this arrangement? This is an area in which we have found difficulties very often. And it's a very important one. If you can enlighten us on that, I will be grateful.

Ms. Robinson: Thank you. What happened in our situation with the data entry staff was that a decision was made to take on temporary staff for the most part, and temporary staff along with permanent staff at the clerical level. With the volume of data entry work that was required, we thought that we would need temporary, clerical–level staff for a period. Then we would reduce the quantity of staff and retain our permanent staff to carry on the rest of the work. A lot of staff transfers took place during that time. What has actually happened is that those temporary staff have become permanent staff; their training has been upgraded. Having completed the data entry work and having received the experience and become familiar with the loan agreements themselves during the exercise, they have been able, in instances, to be promoted or to be directed to jobs in other areas of the debt unit.

Mr. Valantin: I would be interested in any comments on the part of the Commonwealth Secretariat related to the particular limitations, the technical problems that you mentioned—interfacing, accuracy, and so on. I wondered if someone from the Commonwealth Secretariat would like to comment on this.

Respondent for the Commonwealth Secretariat: Our system can actually interface with various other software

packages such as LOTUS, for example. The problem about interfacing with the Bank's [Bank of Jamaica's] system is that the system, as I understand it, is on a mainframe machine. The problem is not about the software, but much more about the communication between micros and mainframes. The software can unload the data into standard formats. So once that's done, it's just the question of getting the software to load it up to mainframe systems.

With respect to the question about decimal places, the system actually holds data to something like 7 or 8 decimal places. The reports, however, are only produced with values rounded to the nearest unit. This is mainly because of the amount of information that we try to put onto one report. We could easily write reports that print data values to two decimal places. This is not a problem; as I said, so far we've only done it to units so that we can fit more columns of information on a single page. If countries enter their data to two decimal places, then they can certainly print it out to two decimal places.

Mr. Sundar: Let me just expand a bit on this. In one of the countries there was a request that this package, which is essentially a statistical package, be amended to meet accounting requirements. We had hoped that that country would assist us in developing this into an accounting package that would meet the requirements of the Accountants–General, but that did not happen. It is now happening in another of our client countries, and we hope to amend this package to meet accounting requirements. When that happens, that facility would become available to all our clients.

Respondent from Commonwealth Secretariat: It is true that the main limitation of our system is this batch processing that we do once a month, which involves processing all the lines in a data base to bring them up to date with the latest actual transactions that have been entered. We are putting a lot of effort into making this process quicker, if you like, but on the other hand, the point about it is that it is done once a month, once every two or three months, or however often a country wants to do it. Once it is done, then that information is held on disk. It is written to disk, which means that all the way through the next month, they can get access to that information within a couple of seconds or a couple of minutes or however complicated the inquiry is.

10 Country Presentation by Tunisia

Abdelhamid Triki [1]

Recourse to borrowing abroad is one of the ways to complete the financing of the economy and to support its opening to an increasingly interdependent international environment. When used well, such borrowing constitutes a powerful stimulus to development policy. If inadequately controlled and poorly managed, it inevitably leads to dangerous slippages, which slow the ongoing development effort.

This being so, Tunisia's Ministry of Planning, through the various development plans, has always taken great care to control external borrowing, both as regards its level and its relative weight in the economy and as regards its allocation among the various sectors of activity. The preservation of external balances has effectively constituted the major constraint on the Tunisian economy since the beginning of the planning era in Tunisia.

In order to carry out this task properly, the Ministry of Planning began work several years ago to implement a computerized system for controlling and projecting the debt. The text which follows reviews the various steps of implementing the system, with particular stress on the difficulties experienced and the efforts made to overcome them. It provides a brief description of the present system and sheds light on future developments of the external debt management system, so as to adapt it to recent changes at the international level that reflect the greater scope of the indebtedness problem and the appearance of new financial instruments and new mechanisms for reorganizing the debt.

Stages in Implementing a Computerized Debt Management System

The desire to implement a computerized debt management system, and in particular a system for debt projection in Tunisia, is not of recent vintage. Indeed, serious reflection on the issue began in 1976–77.

At the time, two problems were identified:

1. The problem of using automated data processing (informatics), since this tool was not developed to the extent it is at present and implementing it was a very costly operation.
2. The problem of debt data, in that it was necessary to reconstitute a historical file on the debt since only the debts currently being disbursed were identified with any degree of precision.

In order to overcome these two problems, we considered the possibility of obtaining a file on our debt from the World Bank and, if possible, obtaining a copy of the programs used by the Bank. Accordingly, a mission comprising myself and another Tunisian official visited the World Bank for three weeks in July 1978. The mission was devoted to a detailed review of the logic of the Bank's system, since technical problems had prevented transfer of programs from the Bank. This review was of great assistance to us in designing our present system. We were also able to obtain a (paper) file of all the loans granted to Tunisia through 1976 (Master File).

After this mission, we began the computerization work by using the computer at the Meteorological Institute and calling on a computer technician from the Institute of Quantitative Economics (a unit under the Ministry of Planning). This first computerization effort was unsuccessful despite the high costs incurred. (Computer time was billed to us.) The computer technician, the user, and the computer itself were not located in the same building. This meant it was very often necessary to move from place to place, engendering enormous losses of time and, above all, preventing regular and easy contact between the user and the computer technician.

In addition, the data that were entered were not reliable. We noted that some loans had been skipped, while some were reported twice. In other cases, there were discrepancies between the various statistical sources used.

1. Director of Financial Projections, Ministry of Planning and Finance, Tunisia.

Consequently, the results obtained were far from representative of the actual situation. We therefore decided to:

1. Temporarily abandon the computer work and first conduct some manual efforts
2. Subsequently resume the computerization once the manual work had been completed, but this time using microcomputers at the Ministry of Planning and computer technicians recruited for the Ministry.

The manual work began in 1981 by conducting a survey of all enterprises and agencies that had received external loans. A detailed questionnaire was sent to each, requesting data on all loans contracted and used. This enabled us to reconstitute an exhaustive file of all loans, indicating their characteristics and the relevant transactions. For the first time, we could draw up an itemized statement of the overall external debt by loan, by country, by currency of repayment, etc. Previously, only drawings had been identified on a loan–by–loan basis. For the other debt aggregates (outstanding balance, debt service, etc.), only overall information was available, except for the central government, for which we had a detailed statement.

We then carried out a loan–by–loan projection to a 1986 horizon. To repeat, this was the first detailed projection of debt service. The projections prepared previously had been made on the basis of average terms. The results of these projection efforts were used first in drafting the Sixth Development Plan, for the period 1982–1986. They were then used, more importantly, as a reference for implementing the present computerized system. It bears noting that the manual work was continued even after the introduction of the computerized system.

In 1983, we went back to the computerization work on the basis of the manual files and after buying our own hardware. In effect, we created a Computer Unit within the Ministry of Planning, which was given external debt as its first major application.

This phase was both crucial and more difficult. World economic developments, marked in particular by exchange rate fluctuations, changes in interest rates, and the repercussions of both on the balance of payments and the external debt, amply demonstrated the limitations of the manual work and the need to have a computerized system. Such a system makes it possible to evaluate the impact of these movements rapidly and, especially, to assess the country's future capacity to resort to borrowing and thereby continue its development effort.

It is especially important to stress that estimating the amount of debt service to be paid over the medium term is a great responsibility. Any error in one direction or the other poses the risk either of the country losing investment opportunities or of the country embarking on excessive borrowing that exceeds its actual repayment capacity.

This enhanced awareness of the debt problem, in conjunction with the stages we had been through—in particular the failure of the first computerization effort—gave us incentive to put forward every effort to make the implementation successful this time. Implementing a computerized system for controlling and projecting the debt became for us an imperative and also a challenge. It was necessary to have a system that was operational by 1985, before work began on the Seventh Plan (1986–1991).

Indeed, we performed an initial projection in 1985 for the 1991 horizon using the new system. We also used the system in 1986 to make certain projections and perform various aggregations in the course of negotiating different programs with the IMF and the World Bank within the framework of the structural adjustment program. These included monthly, quarterly, and half–yearly projections of debt service, separately identifying the guaranteed debt, on–lending debt, direct debt, and other forms of debt, the maturity structure of the debt, etc.

Presentation of the System

Objectives of the system

Our purpose in implementing the computerized system was to achieve three fundamental objectives.

First, there should be automatic management of loans. This consists in creating a loan file and updating it regularly by adding new loans once they are signed, modifying the terms of loans which are already in existence, and entering actual data on drawings, interest payments, and amortization of the debt principal.

Second, the system should make it possible to carry out certain retrospective studies on the debt, affording the possibility of performing a wide range of different groupings of the various debt aggregates, for

example, by country of origin, by category of lender, by recipient sector and entity, and by currency of repayment, or even to perform certain qualitative analyses, such as average debt terms, structure of the debt, etc.

Finally, the system must produce short-term, medium-term and long-term debt projections and perform various types of analyses on these projections. In particular, it should produce monthly projections for purposes of short-term analysis and assessments of the country's borrowing capacity for use within the context of preparing development plans.

Characteristics of the system

The system has been developed by Tunisian officials, so far without support from foreign experts. It is characterized by great flexibility, in that it is simple to use and does not require any particular premises. We have created a data base into which loans and loan-related transactions may be entered using a conversational display that guides the user through a system of menus.

The approach we adopted for implementing the system is pragmatic and evolutionary. It consists in using programs that are simple at the start but which subsequently evolve in light of the results obtained and the needs that emerge as the computerization work progresses. Our present system can be further improved by incorporating other aspects of debt management.

This evolutionary approach also characterized the hardware and software used. The first implementation was on an Apple II computer using dBASE II software as the development language. This system, however, had two constraints: the hardware (processing time, memory limitations, etc.) and the software (file management). This prompted us to change subsequently to IBM microcomputers and to a data base developed first under [Ashton-Tate's] dBASE III+ and then under FOXbase, both of which offer enormous possibilities for development and [more] recent technology (80286 and 80386 microprocessors).

Future Developments of the System

Despite the system's results and performance, it is our opinion—given the delays experienced with respect to data availability—that future development cannot be handled through isolated action on the part of our Ministry. Instead, it will require common and concerted efforts on the part of all the departments involved in the management of external loans.

The Ministry of Planning, owing to its functions (the preparation of development plans and economic budgets) and its responsibilities in drawing up macroeconomic balances and preserving these balances, plays an important role in defining the country's borrrowing strategy and determining tolerable limits of indebtedness. In this capacity, the Ministry of Planning also publishes data on the current and future situation of debt aggregates and debt parameters.

The Ministry of Planning, through the Directorate-General of International Cooperation, also plays an active role in preparing and negotiating loans as well as in initiating and monitoring disbursements from these loans.

Other departments are also involved in the management of external loans, in particular the Ministry of Finance (management of resources, on-lending, loan guarantees, etc.) and the Central bank (management of foreign exchange, external payments, etc.). Each of these departments has recently set up its own computer unit in order to carry out work addressing its particular concerns.

The Ministry of Planning and the Ministry of Finance have just recently been combined under a single ministry. But the three units have always had very close ties, including exchange of information, comparison of results (when drawing up the national budget or determining the balance of payments), and exchange of views on the suitability of resorting to external sources of finance.

However, the existence of these three units with different systems, using different hardware and software, does pose a few problems. In particular, the only way to exchange data at present is by manual methods; there are no well-defined channels for circulating information among the beneficiary organizations. This has translated into enormous delays and a multitude of questionnaires being addressed to enterprises and asking them for the same information.

This situation is not conducive to the development of debt management systems. Accordingly, it was decided a few months ago to create a framework for the common management of the external debt that makes it possible, while maintaining the three present units, to ensure harmonization of the various systems, coordination of the data gathering efforts, and a common decision-making process regarding the problems posed

by indebtedness. The ultimate objective of this action consists in creating a central debt management unit with a tie to the various departments concerned.

Here again, the approach we have adopted is to achieve the designated objective in stages. Thus, it has been decided to create a debt management committee comprising representatives of the three existing units, which is empowered to call upon all persons and skills that might contribute to the proper functioning of the system (in particular the major users of external loans, research organizations, universities, etc.).

This committee must first define a clear methodology for joint work. Its initial role is to ensure a harmonization of systems and of the files used, establish automated channels for data exchange, identify the problems posed, reflect on these problems, and propose solutions for them. The proposals and recommendations of this committee will be reviewed by a ministerial commission (basically the Minister of Planning and Finance and the Governor of the Central Bank) to take the necessary decisions.

It is through moving forward with the work of this Committee that we will be able to have a more accurate idea of the working method and the contribution of each department and even of the delineation of responsibility for each party involved. It is already possible to state that the recent merger of the Ministry of Planning and Finance and the political will to ensure greater control over the indebtedness problem, expressed at the highest level in the statement of the President of the Republic, constitute even more favorable conditions for a successful outcome of this joint work and for the establishment, in an initial phase, of a central debt unit and, perhaps in a later phase, the creation of an autonomous agency for management of the debt.

DISCUSSION SESSION

Mr. Hunsberger: A very impressive presentation. One observation that comes to my mind as I hear Mr. Triki speak is similar to the one yesterday after Mr. Jorge Alamo spoke for Chile. Mr. Triki, would you tell us how many years you have been with the Ministry of Planning?

Mr. Triki: I've been with the Planning Ministry for some 14 or 15 years. It was around 1975 that I became aware that we had many loans. I first dealt with balance of payments, financial operations, and financial and monetary balances. As early as 1975 or 1976, I became aware of the fact that we couldn't continue our work on debt without having some computerized management of the debt situation: payments, projections, and so on.

Mr. Hunsberger: In several stages—for about, would you say, 10 years?

Mr. Triki: Yes. As I indicated earlier, I first was at the World Bank for a three-week initiation, if you will, so as to see exactly how you function at the World Bank, to understand the logic underpinning the system. I delved into the whole question of the design of systems. I worked with the computer experts, those who write the software. After the data were entered, we would get the output; if I received output that struck me as being rather odd or dubious, I would get back in touch with the computer experts. I would tell them what I thought the problems might be, in respect of what I needed, and what I wasn't getting. Although I am not an expert myself, obviously.

Mr. Dowsett: Let me make just one comment that came out of that presentation. Earlier on, we were told that Tunisia did ask the World Bank about the data, and so on. I would just like to make the observation that many countries do come to us asking to see the World Bank data when they are in the process of trying to collect all their data together. We are always happy to provide this information to countries, so they can verify their own records.

Mr. Hunsberger: Mr. Triki, why did you choose not to involve any outside consultants or technical assistance, and did this project entirely with your own internal staff?

Mr. Triki: Well it wasn't really a decision per se. We began in stages; we began working with simple software, initially. It wasn't a conscious decision. We have no objection in principle to using foreign expertise, but for now we found that we have been able to carry forward our work with our own nationals. In fact, this work began very early on, back in 1975–76. We began thinking about the computerization of the system and information processing, which is the more difficult aspect, as far as debt management is concerned—at least in our view. However, the other people around this table may not

agree. Now we have a great deal of software developed. But that's not really the problem in debt management. The crux of the issue is the organization of the data. You have to have reliable data coming in. It has to be exhaustive. And it has to be coming in on a regular basis, and be acted upon on a timely basis, as well.

Mr. Kalderen: Something came up yesterday when Jamaica made its presentation, which I have come across also in many countries, and which also appears relevant in Tunisia. Namely, why is it that the loan agreements, once you started computerizing, were not to be found? People of the debt office had to scurry around the administration and finally give up and go to the lenders, and so on.

My second question is, how do you make sure now that loan agreements are stored in the right place, are copied to the people who should have them, and are generally available within the limits of official secrecy acts, etc.? Are there some systems for this particular purpose that other countries could copy? What is the "state of the art" in this regard? Thank you.

Mr. Triki: The answer to your first question, sir, is very simple. We jumped on the bandwagon in 1975 or 1976. At that time we already had been borrowing on the external markets for some 15 years. There was some experience in the Ministry of Economy, the Ministry of Finance; the expertise were there, although it wasn't organized. We had all the loans that had been signed, up until 1975, for example.

Now as to your second question regarding *new* loan agreements. As I said, in the Planning Ministry we have a special Department of International Cooperation. This Department plays a very important role because anybody seeking external financing has to apply to the Planning Ministry. So we have initial information regarding these loans, particularly loans for international cooperation. Then there are other loans which are contracted by companies. We have an *ex post* investigation which is conducted by the Central Bank and the Planning Ministry, for the balance of payments situation. We will get in touch with the companies for all the data regarding their loan agreements.

Mr. Kalderen: Are the loan agreements signed by the Central Bank as well as by the enterprises?

Mr. Triki: For different firms and enterprises we don't actually get the loan agreement. But we send out a detailed questionnaire seeking all the information and data we require. These enterprises or firms fill out these forms, which are drawn up either by the Central Bank or the Planning Ministry.

As far as the Central Bank is concerned, the loan agreements that are not guaranteed by the State, are still given guarantee of transfer by the Central Bank. So the Central Bank does get a copy of the loan agreement for those loans contracted by companies.

Unidentified Questioner #1: I am wondering whether your computer system works in French or in Arabic?

Mr. Triki: We don't work in Arabic.

Mr. Tsegaye: Regarding the question Mr. Kalderan raised, let me first of all look at the structure of a country's external indebtedness, and then try to shed light on this, by referring to the experience of Ethiopia.

Of our external indebtedness, the first part is Central government borrowing, the second is parastatal borrowing, and the third is nonguaranteed private debt. Once we have identified these three, let me go back to the experience of Ethiopia and describe how we collect data on each.

Mr. Hunsberger: Because of the agenda that we are working this morning, could I ask that we limit ourselves to specific questions on Tunisia. We can give some time for you to catch up if you like, on the experience of Ethiopia tomorrow. We have an unassigned time in the agenda. Perhaps it would be more convenient to give you a full chance to explain the situation in Ethiopia. Would that be all right? Or do you have a specific question?

Mr. Tsegaye: It is all right, but I'm not promising it will take a lot more time.

Mr. Hunsberger: Are there specific questions to Mr. Triki regarding the Tunisian situation before we move ahead to the Indonesian delegation? I'm sorry, I didn't mean to cut you off, but I think we'll balance or juggle the agenda a bit. I appreciate the indulgence of the Indonesian delegation in allowing me to slide the agenda a bit this morning to accommodate the changed circumstances.

11 Country Presentation by Participants from Indonesia [1]

T. Sitorus, S. Gondodiyoto,
R. Soegoro, and F.X. Sugiyono

Introduction

Since the New Order started in 1967, Indonesia has developed its economy through Five–Year Development Plans (Repelita) and has obtained the necessary funds from domestic as well as foreign sources of finance. The domestic funds were mostly received from the oil and gas sector, which highly supported the realization and implementation of Indonesia's development plans. The foreign funds needed were mostly extended in the form of concessional loans by several countries, within the framework of the Inter–Governmental Group on Indonesia. Other forms of borrowing, including commercial borrowing, are only used to supplement whenever the concessional borrowings are insufficient.

Basically, financial assistance serves two main purposes. First, it supplemented domestic funds to bring about the accelerated development which was recently needed. Second, it was hoped that the external resources would act as a catalyst to the internal investment by generating additional domestic savings which would further raise the rate of economic growth. As the economy developed, it would also have additional impact on international trade. The foreign exchange received would grow to meet foreign obligations. This would also gradually lessen the country's dependence on foreign capital. After reaching self–sustained growth, the country would be able to do without external resources altogether.

External Debt Policy and Strategy

The Government of Indonesia (GOI) has consistently followed the policy of using external borrowings as a supplement to domestic resources for financing development, while taking full account of its capacity to repay those borrowings. The GOI has carefully limited external borrowings to prudent levels, with an emphasis on concessional and semi–concessional flows. This policy is evident in the Government's efforts to reduce the debt service burden.

In general, a few of Indonesia's debt management strategies can be underlined, as follows:

- For all the Government borrowings needed or received from the various creditors, an evaluation has been made by the relevant institutions in order to secure proper implementation.
- Indonesia always seeks mostly soft–term loans, as seen primarily in maturity and interest clauses that are immediately linked with and have a direct impact on the implementation and realization of Indonesia's development projects as well as its Government's Program.
- In looking for the most suitable project or program, the strategy is to be selective in choosing the project and program, yet conform with the loan's terms and conditions as offered by the lender. Considerable weight is given to ongoing projects. Only when pre–evaluation has proven the need are new projects considered
- Indonesia also uses the strategy of prepaying its debts to reduce repayment and guarantee lower interest payments, as well as an extension of the loan's maturity.
- As with most countries, Indonesia has the debt strategy of paying its interest and principal according to the loan's schedule.

Another principal policy is that, for all borrowings in international financial markets by the Government, the Government agencies or other public sector entities involved should receive the prior approval of and be coordinated by the Ministry of Finance. In addition, export credits in foreign currencies shall be utilized to finance only approved priority–development projects, as set out in an annual list prepared by the Government.

With respect to commercial external borrowings, the GOI set up the following strategy, which may change from time to time.

- Planning and Requirements. The GOI defines the purpose, amount, and timing of the borrowing and

1. Edited version of the written draft distributed for the conference.

the main terms and conditions, as well as the composition of the management group.

- Market Accessibility. The GOI considers the market reception and studies the main points of lenders' credit policy.
- Market Capacity. The GOI considers the most favorable types of capital market to meet funding requirements. The condition and ability of the capital market to meet Indonesia's needs are also taken into account.
- Borrowing Objectives. Simple and easy draw–down procedures are preferable. The GOI also favors the untied use of funds for general purposes.

External Debt Management

Indonesia's development is in the first instance being planned and stipulated by Bappenas, the National Planning Board. Bappenas determines the needs for the respective projects and programs of the Government and also closely monitors the foreign borrowings for them. On the other hand, the Ministry of Finance is the institution that acts for and on behalf of the Government as the official borrower. The Ministry of Finance records for the Government the flow of funds received and spent from both domestic and foreign sources. The Bank of Indonesia, as the Government's banker, executes the role of officially implementing and monitoring the foreign borrowings received and making payments according to the official debt schedules.

The Bank of Indonesia has utilized certain basic principles in managing the GOI external debts. Debt administration is based on the documents received at each of the implementation stages. Each loan is recorded in the original currency of the loan agreement and is followed thoroughly, so that its progress can be monitored easily. Legal repayment obligations are generally determined by the lenders in accordance with the loan agreement. However, domestic data are used to compare and check the accuracy of the lender's figures. The repayment is carried out in accordance with internal procedures agreed upon by the Bank of Indonesia and the Ministry of Finance. When payment is realized, the Bank charges the Treasury account.

The Bank's duty has been done successfully, although sometimes there are difficulties as the growing number of loans increases the volume of the job. Besides, the structure of the loans has become more and more complicated.

To overcome these problems, in 1985 the Board of the Bank of Indonesia decided to proceed with computerization of debt management, which until then had been conducted manually. The system retained was the Debt Analysis and Management System (DAMS), developed by the financial advisers of the GOI. These financial advisers consisted of Lazard Freres et Cie, Shearson Lehman Hutton, Inc., and S.G. Warburg & Co., Ltd.

In 1980, the Ministry of Finance started to develop a system to computerize external debt data with a data base for loan disbursements and debt service for specific public loans. However, this system was not a complete one. For this reason, in 1988 the Ministry of Finance began installing the Debt Management and Financial Analysis System (DMFAS), offered by UNCTAD and financed by UNDP. This project is still under way. A study of the existing systems and the information requirements is estimated to be completed in 1990.

Features of the DAMS System

The DAMS system is a computer system for both debt management and analysis. This package allows the Bank to monitor each aspect of the debt stock on a loan–by–loan basis, namely, by recording each loan's actual disbursements and repayments. It also has facilities for the automatic calculation of future contractual repayments, and it monitors any discrepancies between actual and contractual repayments.

Many features were adapted to take into account the existing system of organization of loan documentation, disbursement information, repayments, etc. These features enable the Bank, using the raw data recorded for each loan, to generate information for both economic planning and accounting. Essential features of DAMS include:

- A unified and comprehensive data base containing detailed information on all aspects of each obligation undertaken
- The ability to retrieve rapidly information on any aspects of the stock of debt recorded in the data base. Similarly, the ability to update the data base quickly to reflect, on a current basis, the effects of new drawings, repayments of principal installments, and interest or other payments

- The ability to record lenders' reference number, thus facilitating reconciliation with lenders' records of principal repayments and interest payments
- A facility for displaying impending debt service obligations, which can be used to check payment schedules
- A facility for recording a comprehensive data base of historical and projected interest and exchange rates
- A facility for automatically calculating debt statistics, such as future debt service payments or aggregate debt outstanding, as of any particular date
- A facility to evaluate the effect of new financing schemes on existing debt obligations, as well as a mechanism for composing alternative prospective financing strategies under varying interest and exchange rate scenarios
- Strict procedural rules and internal controls to ensure that inconsistent data are not accepted by the computer system
- Procedures to ensure the prevention of loss of information and the maintenance of confidentiality.

The system also permits the computerization of additional information to assist the decisionmaking process by showing the potential stock and flow effects of alternative financing strategies.

The Supporting Hardware

DAMS was designed to operate on hardware manufactured by Digital Equipment Corporation (DEC). The Bank purchased a VAX 11–750 superminicomputer, which originally incorporated 3 MB of memory, but has been upgraded to 8 MB. The system also includes two disk drives with a total capacity over 900 MB and one tape drive. Also in the configuration are 13 terminals and 4 printers. All of these peripherals are located in the International Department at the Kabon Sirih office in Jakarta.

Loan Reporting System

To optimize the DAMS system, its reporting outputs have been designed to comply with the demands of many different bodies or institutions. Among the many kinds of reports are loan reports, payments reports, loan position reports, and debt service projections. Each type is described below.

A **loan report** describes all the essential information concerning one loan. It is a printed version of the loan record contained in the data base. Each loan report includes:

- The loan description file, containing the main parameters of the loan (such as creditor, use of funds, date of signature, principal payment dates, and margins and commissions)
- The payment date file, which records all contractual payment dates, whether for principal, interest, or fees and commissions
- The cutover date file, which gives the date and details of any change in the rate of interest applicable to the loan
- The disbursement schedule, containing all disbursements whether actual, assumed, or estimated
- The contractual repayment schedule, giving details of contractual payments which are either generated by the system or entered by hand
- The actual repayment schedule, a record of actual repayments as they are made.

A **payment report** shows the payments due over any period of time, whether a matter of days, months, or years. It can be produced for a single loan, a series of loans, or the whole debt portfolio.

The **loan position report** shows the stock position at any chosen date for a single loan, series of loans, or the whole debt portfolio.

A **debt service projections report** can be produced to show the effects on debt service of assuming current or projected currency rates, current or projected interest rates, or any combination of them.

Analysis is the most important use for the data reporting system. So the system is designed to conduct sensitivity analysis for testing the effects on future debt service of various assumptions about rates of exchange, rates of interest, and rates of disbursement. In addition, analyses can be made to examine the effect on the portfolio of introducing new money streams or of carrying out refinancing exercises. This information will be extremely useful for negotiating new borrowings or refinancing, to evaluate immediately the effect on debt service of various alternative scenarios.

Problems Encountered

Problems have been encountered in the following areas:

- **Software.** DAMS is a package program, so there will be difficulties in generating other designated loan reports that are not among the standard outputs.
- **Organization.** No real debt office exists, either in the Ministry of Finance or in the Central Bank. There are debt management units, which function as debt offices, but they do not have enough delegated power to handle their jobs and to impose penalties or sanctions for delinquency.
- **Flow of Documents.** Supporting documents are required to enable the administration unit to get complete input data. In many cases this unit receives the documents late or never receives them. However, actions have been taken to improve the flow of these documents. This situation might be caused by low coordination and unclear division of work among units, which leads to inefficiency.
- **Loan agreement.** DAMS has been designed to calculate every loan automatically, based on its terms and conditions. But there are still difficulties in handling loans with uncertain items, namely the currency pooling system and floating rate loans.

Features of DMFAS

A workplan has been set up for DMFAS, starting in April 1989.

- **April to October, 1989.** Identify institutions and systems involved in external debt management. Study existing information flows and procedures. Identify technical modifications required of DMFAS to meet the needs of the following institutions/potential users: Directorate General of Budget; Directorate General of Monetary Affairs; Board of Technical Analysis, Credit and BOP; and the Agency of Export Facilities and Financial Data Processing. All these are within the Ministry of Finance.
- **July 1989 to February 1990.** Recommendations on administrative, institutional and technical structures to accommodate both the needs of the users and ensure maximum efficiency of DMFAS.
- **April 1989 to June 1990.** Training for users in loan–level data entry. Load loan–by–loan data to master file. EDP staff trained in the design and modification of DMFAS.
- **June 1990.** DMFAS installation, after modifications to meet needs of the Indonesian system and procedures.

DISCUSSION SESSION

Mr. Sanyoto: Thank you very much Mr. Chairman, and if you have questions for me and my friends, we would be pleased to answer.

Mr. Husain: I have a question about Indonesia. I think the flow of information is not properly coordinated, as you say, because the same information is being fed into the Ministry of Finance system and into the DAMS system of the Bank of Indonesia. When the World Bank visited last year, we suggested a single central data base that could be fed from different sources that have primary responsibility to collect the data. For example, the Bank of Indonesia should feed into this central system the information on private and commercial bank borrowings, which is its primary responsibility. The Ministry of Finance should try to feed into the same system the debt information on the government's borrowing. And then these two sets of data could be merged. Are you planning to have duplicate sets of books for DAMS and DMFAS, or are you trying to integrate the two primary sources of data?

Mr. Sanyoto: You're right, the problem is not with the duplication of the document itself. What we are trying to work on now is the linkage between the debt data we have in the Ministry of Finance and the data in the Bank of Indonesia. As you may know, many loans have been made directly by the Bank of Indonesia. Besides the government, as I mentioned just now, public borrowing is also done by the Ministry of Finance. That is why we want to link the data in the two agencies, and perhaps also

the data in the third one – Bappenas, because it has the major role in macroeconomic policies.

That is why Mr. Cosio–Pascal's team is now trying to do this. They are looking at the existing system in the Ministry of Finance and at what has been recorded in DAMS in the Bank of Indonesia. That is what we are doing at this time.

Mr. Cosio–Pascal: Thank you very much. I thank the Indonesian delegation for the very good presentation they have just made. I would like to make some comments on this project, which is very important for us [at UNCTAD]. There are, let us say, three new ingredients, which experience has pushed us to add to the new projects we are now undertaking. The first of these is to have a permanent Chief Technical Advisor, or CTA, in Jakarta for the whole duration of the project. Second, the CTA's initial task is to analyze the administrative environment completely, using the framework we presented yesterday in the paper called "Effective Debt Management."

As a third ingredient, we are heavily involving staff from the country in programming the new system features required to meet their specific needs. We are really taking them in as part of the project development team. This is a new experience, to see whether this provides sufficient training to keep the effort alive, without any further external input, once the current project is "finished" because we run out of funds.

So these are the three new ingredients we are trying to implement with the Indonesian project. Also, I have to say that the CTA for the Indonesia project happens, by chance, to have been very involved in installing the DAMS in the Bank of Indonesia, before coming to work for UNCTAD. We didn't know that until after this person was hired, but it couldn't have worked out better. Thank you very much.

Mr. Valantin: I would like to know if the DAMS system, which is now installed in the Central Bank, is now considered to be operational? And, as a more general question for everyone else in this room, how many countries have in fact made their systems operational and stopped using a manual backup?

Respondent for Indonesia: Actually, the DAMS system is already running, and we in the Bank of Indonesia produce two kinds of reports [from it] on a quarterly basis. One, which is called the "managerial report," consists of a summary report on the standing of the debt itself [stock of debt outstanding] and the projected annual debt service payments. The second is a detailed report, consisting of loan–by–loan data by currency and by creditor country. We also report on the contractual basis of the currency, and we produce an economic sectors report.

So, to my mind, the DAMS system right now faces no problems in the operation itself. We hope that, with the DMFAS, we can link the two systems to produce very good and very nice reports for the Government of Indonesia. Thank you.

Mr. Valantin: Just to follow up on the DMFAS activity. Has Indonesia now decided whether or not it's going to use DMFAS for operational purposes, or are you still thinking about using it as a model for developing other software locally? This is one of the things that was mentioned to me when I was there last.

Respondent for Indonesia: Thank you. What you described reflects the developing computerization process in Indonesia. To give you an idea [of this process, I will describe] what we are going to do with DMFAS within our whole system. To talk about computerization in Indonesia, we have to recall the situation in the early 1950's. At that time, IBM already had representives in Indonesia. But in the grouping [shared] system approach, we started from 1972 with a UNIVAC 1100 subsystem. In 1981 or 1982, we replaced the UNIVAC 1100 with an IBM 4341. At present, the configuration in the Ministry of Finance consists of one IBM 3090 system with 150 megabytes of memory, one system, an IBM 4161, and three IBM 4341 systems. There were about 20 to 30 midrange systems, i.e., IBM 36 systems, which are now being replaced by RS 400 systems. And usually we computerize our operational offices like tax offices, customs offices, and treasury offices using Compaq 386 machines, part of them using the XENIX operating system and some using the CP/M operating system, but now being replaced by XENIX operating systems. I think several thousand microcomputers are already installed there. Now we are moving to the smallest minicomputer, that is, the MICROVAX 2000.

So, I think we do have good experience in computerization, especially in the government budget or allotment system, the accounting system for government expenditures, the taxpayer master file, and tax audit selections.

But we don't have any idea about the debt monitoring system. As part of the government accounting system, we computerized the allotment process, which

includes the external debt components. This gives something like the estimated disbursement for each fiscal year, since the amount of expenditure reflects the disbursement. But this is a partial approach to debt administration. There is not a debt monitoring system but debt administration.

Meanwhile, in 1985, I met Mr. Kenneth Ruffing, who now I think has moved to Washington, D.C. We talked about the possibility of installing the DMFAS. So here we are, we have the DMFAS system. But the DMFAS system will not be adopted in Indonesia as just a black box. I believe we do have to know what is the core [software] inside, so that we can adapt it to the rest of our system. The debt monitoring system is part of the whole system. I think that is what we are trying to do. So let me put the DMFAS as a subsystem under the whole system, especially in producing reports for either the management or operational supervisory staff.

Mr. Husain: Any other questions or comments?

Mr. Hunsberger: I just wanted to comment that the amount of computing power you just described would be more than most major banks and the insurance companies in New York have. It certainly exceeds what we have in the World Bank. So I compliment you for your being state of the art.

Mr. Cosio-Pascal: You just took out of my mouth what I was going to say. Because we are really lagging behind at UNCTAD in Geneva. I want to make just a small comment on what Mr. Sanyoto has stated. UNCTAD cannot prevent a country from modifying the package as they receive it from us. Nevertheless, we recommend that they not modify the core. Because, if they do so, they will not be able to install all the future enhancements to the system that we are planning to send on a regular basis to all countries. What we try to recommend is that they develop modules around this core so they can still take advantage of future improvements and enhancements. Nevertheless, it is up to them, finally, to decide whether they want to follow our recommendation or not.

Mr. Husain: In the past, I believe there wasn't any capability [in the Indonesia system] to make projections of future debt service payments. The balance of payments section in the research department had its own downloaded data on a PC [microcomputer], trying to make the projections. Has that now been taken care of?

Respondent for Indonesia: I think that is still the case. The DAMS system also has the capability to project debt service payments – maybe five or ten years ahead.

Mr. Husain: So your balance of payments section in the research department is now using the DAMS ouput?

Respondent for Indonesia: Because we have been undergoing an internal reorganization of the international department, to date our figures are still [used only as] back-up figures. Not just by the balance of payments section [but also] to be sent here [to the World Bank?]. We are planning that perhaps this coming June they will use our [DAMS] figures.

Mr. Valantin: I wonder if the second part of my question, the question of whether any countries have actually stopped using a manual system or a subsystem and replaced it with the computer-based system, could be discussed perhaps during one of our working groups or panel discussions.

12 The Work of the International Monetary Fund (IMF) in Debt Management [1]

Richard Stillson, IMF

Mr. Husain: It is my pleasure to introduce the speaker for this session, Richard Stillson, who is the Chief of the International Banking and External Debt Division within the Bureau of Statistics at the International Monetary Fund. Mr. Stillson has been working very closely on debt management issues; today he will talk about the work of the IMF in debt management.

Mr. Stillson: Thank you. The IMF is a little bit of a newcomer in meetings of this sort. The IMF has had a very longstanding interest in the external debt problems of developing countries in particular, although not only developing countries. But it has only very recently developed a great interest in technical assistance in this area. Previously, the main involvement of the Fund in external debt problems had been in conjunction with financial programs, for example, where there was a standby arrangement or an Extended Fund Facility Arrangement, in which there were debt ceilings as quantitative performance criteria within these programs. These sorts of ceilings would generally constrain the amount of new external debt that could be contracted, usually under a certain maturity limit, and possibly with some other constraints.

As the debt crisis became more and more apparent, the type of ceilings began to change and also to play a more prominent and more important role in the financial programs of various countries. One of the major changes occurred when IMF negotiations began to address constraints of disbursements and to project the balance of payments when debt servicing was one of the more important elements within these projections. It then became fairly apparent that several countries really had very little capability of keeping to some of these quantitative performance criteria, because they either didn't know or couldn't control their disbursements or had a very hard time projecting their debt service payments. So, like the World Bank, UNCTAD, the Commonwealth Secretariat, and almost every other international agency, as well as almost every country in the early 80's, the IMF's attention turned more seriously to problems of external debt management and, from my point of view, external debt monitoring.

The first attempts from the IMF to help out in the problems of external debt management came from our Central Banking Department. This predominantly involved the placement of long-term technical assistance in the country. The primary concern was with broader aspects of external debt management and external debt policy. I think these individuals did help out in many of these areas in quite a few countries. But it also became apparent that there were more specific problems, which these people could not, or didn't have time to, deal with in great detail. These were problems of what we call "monitoring."

One aspect of external debt management, the computerization of external debt data, has a prominent place in the organizational diagrams of UNCTAD, the World Bank, and the Commonwealth Secretariat, and we feel it plays quite an important role. However, this central aspect of external debt monitoring, which has been talked about here, and which I think has been the concern of international organizations, is really neither the IMF's comparative strong point nor something to which we feel we can make a large additional contribution. It is being done rather well by the various other international organizations.

Indeed one wonders whether it is almost done too well. Because there still are problems, in spite of good computer systems that really do work and that have been put in place. There are countries where the external debt data still are not good. And where they are not timely. And where you can't get the kind of detail, or feel that it is sufficiently accurate, for the purposes of monitoring and policy discussions that frequently occur on our missions.

So, we felt that perhaps our contribution could be slightly different, and the IMF should concentrate on those areas which, although clearly recognized by the UNCTAD, the Commonwealth Secretariat, and the World Bank as very important, probably receive less of their time, attention, and money than might be necessary

in some cases. Essentially, these are the areas of data gathering, data checking, and data dissemination.

One might consider an external debt monitoring system as having three parts: You have to gather data. You have to process the data. And then you have to disseminate it in some useful way. The middle part, the processing part, has been what we've talked the most about. This generally involves computerization. There has been far less discussion around this table about the data gathering aspects. What sort of system is necessary? What sort of interagency cooperation is necessary? What sort of legal basis is necessary? What sort of penalties are necessary to ensure that data are gathered completely and in a timely way? There has been much more discussion about the data dissemination part—the tables, essentially. But even in this aspect, I think there has always been some relation between the data dissemination and the computerization.

I suppose computerization is actually easier to talk about than some of these other issues. The effect of computerization is extraordinarily dramatic. It also lends itself very well to the kinds of projects that international organizations organize. A more difficult aspect is maintaining the system in such a way that you do have timely and accurate data over a long time period—not just with the dead inventory, which has to start out each of these projects, but in a sustainable way. The IMF has become involved in these areas in some discussions, particularly in our structural adjustment programs, which are held jointly with the World Bank, and in what we now call our enhanced structural adjustment programs (ESAPs), also held jointly with the World Bank. We have actually started to build into some of these programs improvements in the debt monitoring system.

As I said, the improvements we tend to discuss are not so much the computerization aspects—the assumption being that there's a lot of help that countries can receive in computerization—but rather these organizational, administrative, legal, and almost political aspects. After all, gathering debt data completely depends on interagency cooperation in, I think, every country. It requires an agreement among all the major players—not only the central bank, the ministry of planning, and the ministry of finance, which have been discussed here, but also the major *executing* agencies of external debt: the ministries of transportation, of power, of communications, of roads and public works. We also feel it is important to extend this agreement to private sector debt, both with and without guarantee. As was mentioned right at the beginning of the conference, this part of external debt tends to be very important, even though it may not quite so immediately affect the government budget.

We have developed a couple of minor tools, minor compared with the work that's been done by the Commonwealth Secretariat, the UNCTAD, and the World Bank. But still, they may be useful in some cases for data checking. In the few countries where we have broached these ideas, we find that it is very important to have different ways to cross-check the accuracy of data. The computer, of course, will accept any data, so long as the data are organized in the way the computer expects. The computer doesn't know whether the data reflect the real economic conditions of the country; nor does it care. This is a question for the analysts. And the analysts may have a hard time answering it as well, unless there are ways to cross-check the data.

There are two types of cross-checks we have suggested. I am sure there are many more that others can suggest, but there are two obvious ones. One can be done within each country. It is to cross-check the information gathered within the country from the debtors with the information you get from the creditors. Now that's very useful. Obviously, if they don't agree, then there's something wrong with one or the other, and one must follow this up. However, the sources of information from some of the creditors don't come in a very timely way. Therefore, there's a limitation to this kind of cross-checking of information.

There's another type of information cross-check that one can obtain for various aspects of the debt. That cross-check is between the national sources—both the debtor sources and creditor sources—and what we've been calling the international sources. There are three main international sources that we have looked at for external debt data. The largest one is run by the World Bank, by Mr. Husain: the Debtor Reporting System (DRS). But of course, this is really a reflection of the national source data. Countries send the data to the World Bank, where it is put together in various ways to produce the *World Debt Tables*. But still, it can be a useful cross-check in some cases, because the World Bank does not slavishly reproduce numbers. It looks at them, it makes some judgements and, in some cases, makes estimations to complete the *World Debt Tables*. So even checking with the DRS is useful. But probably more

useful is checking with creditor sources. And the main creditor source of international debt data is run by the OECD, here in Paris. It is called the CRS, the Creditor Reporting System.

There is a project going on right now to try to reconcile aspects of the CRS and DRS data. It's actually an old project, but it is being revived by the Compilers' Working Group, the group called the International Working Group for External Debt Statistics. They are going to have a meeting in June, I think, in which some of this will be discussed. But one can reorganize the CRS and the DRS data to match various aggregates that are produced within the country. And to the extent that one can work the methodologies correctly, and make methodologically correct matches, one can see whether the numbers are the same, or similar enough to be acceptable.

The third source of international debt data, which is run by the IMF, indeed by my division, is called the International Banking Statistics. These statistics are gathered primarily from banks in creditor countries, although I am very pleased to say that Chile will be the first major debtor country to contribute to these statistics. We hope that additional debtor countries will be contributing as well. We have asked Mexico, as another likely example, and we will be asking other countries to contribute.

These International Banking Statistics are quite detailed; they give asset and liability positions from the point of view of both sides of the transactions. So we have our own cross–checking problems and our own projects to ensure that our data are as consistent as we can make them. We have a big project with the Bank for International Settlements to do this. The banking data actually look fairly good. Perhaps one might expect that. The data from the BIS system can be aggregated by the country from which the liabilities arise, for example, from the debtor countries. Indeed, we have been able to perform this aggregation. So we can make comparisons for the banking aspect of debt, which can be checked with local sources and with the DRS. The data can also be checked against the CRS, although that's more difficult.

What we are trying to do, then, is encourage countries to look at these alternative sources of data, to check their accuracy, and to try to improve their own data gathering activities. Of course, the new computer systems that are being spread around the world make this much easier because one can write tables much more easily and aggregate the data in ways that facilitate this cross–checking.

Within the financial programs that we negotiate, as I said, more and more of these aspects of data monitoring are being mentioned, sometimes specifically as performance criteria. For many countries we are also giving a limited form of technical assistance: not setting up huge computer programs but still taking a look at the data gathering system and the data dissemination systems. We try to help countries organize their administrative requirements to produce the data they need for their own policy efforts.

I thought I would just describe a bit of what we've been doing, since the IMF is a newcomer to this activity. If there are any questions, I would be glad to answer them.

DISCUSSION SESSION

Mr. Husain: Are there any questions or comments?

Unidentified Questioner #1: I would like to raise a question relating to data checking, looked at in two ways. First, if the question is whether a loan is registered or not, I can check with the World Bank or the IMF to see if that loan is missing [from their records]. But when the question concerns accuracy, cross–checking with either source will probably not help because, first of all, we report to you in the currencies of the contract or loan agreement and secondly, we report to you for statistical purposes. On the basis of our reported data, you make your own estimation and your own conversion into U.S. dollars, then present the results to us. I don't think it will be of any good [to us in discovering inaccuracies in the original data.]

Having said that, I think the activities to be undertaken and the parties to be involved in the process of cross–checking should be as follows. First there is the debt office, which registers new loans and records disbursements and *all* payments. Especially in respect of recording new loans and disbursements, I think the debt office should get from the creditors, on a periodical basis—for example, a semi–annual or a monthly basis—confirmation of the accuracy of transactions. This

is one activity. Another activity involves the technical ministries or parastatals within the country, which can confirm to the debt office whether those disbursements are accurate with respect to the valid date, the date of disbursement, the currency of disbursement, and the amount disbursed during a certain period. I think these are the steps we should follow to make sure that debt transactions are accurate and correct. We have to verify in this way primarily for accounting purposes, and then the statistical function follows. That is my suggestion.

Mr. Stillson: I absolutely agree. We found there are more difficult and less difficult problems in obtaining accurate and timely data. Some of the most difficult problems, for instance, concern disbursements for goods which are paid for abroad, as part of bilateral loans for example, and that are paid for with suppliers' credits for which no notification comes through the central bank. In many countries, this tends to be a large proportion of disbursements. For this case, one needs a debtor reporting system within the country that operates well and to which the executing agencies are required to report. Then, when you do get creditor notification—which I agree should come more promptly and be more complete than it frequently is—you check it against what the debtors have reported. And when there is a discrepancy, you follow it up. One of the things that our checking between international and national sources can do is to make the follow-up a little quicker. And perhaps one can identify problems a little faster. I would never suggest that any country accept the creditor information as the final word.

My understanding of the presentation by Tunisia is that there was quite an elaborate system of data gathering and checking. I know they do this in Chile and in some of the other countries. But I agree with your comments completely.

Mr. Valantin: I am aware of at least one case in which an IMF resident advisor proved extremely useful in the implementation of a debt management project, in this case with UNCTAD. If your people are as interested in data collection as you have just indicated, I wonder if there are any plans to coordinate or seek advisors who can perhaps fulfill several roles at the same time?

Mr. Stillson: When one asks, "Are there plans to . . .?"; in our bureaucratic system it is difficult to know what is a plan and what is not. As I mentioned, debt monitoring problems are becoming more important in financial programs. The attention of resident representatives and the ability of missions to spend time on these issues generally depend upon the perceived importance of these issues. So, in the sense that these issues are being perceived as more and more important, one might say, "Yes, there will be more and more attention paid to this." Resident representatives will be required to spend some time particularly when there is another international organization, like UNCTAD or the Commonwealth Secretariat, implementing a computer system. It also applies when a country is establishing its own system, and these issues are built into the [IMF-guided] program. But it would probably be directed mostly at countries where there is a program, a financial program, and where these concerns are addressed as part of it.

Unidentified Questioner #2: Mr. Stillson, I wonder if you could clarify a couple of issues. Are any other departments in the IMF beginning to offer technical assistance to countries in the area of debt monitoring and management? Clearly this is a new initiative on the part of your department. I wonder whether you are intending to offer this service through staff resources or through hiring of consultants. During a recent visit to Washington, when I called on the Central Banking Department, I found that there has been a reduction in the number of requests that department has received for advisory services. I am enquiring why, because we come across these people less and less in the course of our mission travel. I thought the IMF was cutting back on their program for some reason; I was told this was not the case but that they were in fact receiving fewer requests. Are these new initiatives partly a response to that, or is this a genuine need you found?

Mr. Stillson: I talked to Linda Koenig, who is the Deputy Director at the Central Banking Department, before I left. She said that indeed there were fewer people from the Central Banking Department placed in countries and who were primarily concerned with external debt. She wasn't sure why. She did not indicate to me that there was a deliberate policy to cut back this program. But the Central Banking Department's program is rather more broad than what we are trying to do in the Bureau of Statistics—and has more implications for dealing with policies within central banks. So if there is a cutback, it may have something to do with some of the less technical aspects of external debt management and external debt policy. But I am not aware of what that is.

For our own program, of course we have very limited resources, but there is an interest within our operational departments and also within the Bureau of

Statistics to become more active, if countries feel that this is helpful. Also, an agreement is being put together between the UNDP and the IMF to make the IMF an executing agency of the UNDP. This will give us much more flexibility in providing assistance, longer term assistance particularly, in external debt monitoring as well as in other statistical areas. So that aspect of the program may increase. I am sure that the aspect of the program related to the financial programs, as I described before, particularly SAPs and ESAPs, is very likely to increase.

Mr. Cosio-Pascal: I would like to refer to the project that Mr. Valantin brought up a few minutes ago, which was in Egypt. In this project, we [from UNCTAD] had very good cooperation with IMF, in the sense that the resident advisor on external debt at the Central Bank of Egypt performed as CTA [Country Technical Advisor] for the project. Our experience from this cooperative effort was that it is indeed very fruitful, and we should continue to explore such possibilities.

Nevertheless, I think we also learned from this experience that we need very clear terms of reference at the beginning of the effort, to know what role is to be played by each participant, including the agency or agencies supplying the software and the CTA. In the Egypt case, this person was extremely useful, and he was very dynamic with a lot of imagination and a lot of initiative. But he was a systems analyst, not an economist. So, at one point we found ourselves confronted with the fact of two DMFAS versions: one in Egypt and the other [under UNCTAD control for maintenance and enhancement]. It was quite a problem for a particular time, but we solved it; it has been overcome. But that is why I'm pointing out the importance of having very clear terms of reference at the very beginning. Even so, it was a very good experience, indeed.

We had a similar experience with the World Bank in Togo, with Mr. Fernando Archondo, who was also very cooperative. But Fernando is an economist, so he took the system as a tool, and did not modify it. We have already had these two experiences, with these two institutions, in cooperating on implementing the [DMFAS] package in the field. And I want to emphasize that they were extremely useful.

Unidentified Questioner #3: For the last six months, IMF has been asking for twelve-year projections from Pakistan. Now we have prepared the projection for twelve years, but they have asked that due to some change or new agreement, we have to change the twelve-year projections.

My second point is that only fully disbursed loans and those for which estimates of the disbursements are possible can be included in the projections. But due to the fresh loans that will be contracted in, say, five or six years, these projections will not be accurate, or cannot be done. So I would like to ask whether this twelve-year projection will be fruitful for IMF's statistics or not.

Mr. Stillson: I think it is more important to ask whether it will be fruitful for your policy, not so much for the IMF statistics. There is an interest in the Fund in longer-term projections. This has grown out of an awareness and a worry that some of the attempts to relieve immediate debt servicing problems, particularly for instance through the Paris Club, have led to greater severity of payments problems in the longer term. This has sometimes not been sufficiently recognized, because projections have only been carried out for five years. Probably not coincidentally because five years is the grace period of many Paris Club loans. One does not see the implications for a longer time period in some of these techniques. So there is indeed an interest in attempting to carry out projections over a longer time period. I was not aware of the twelve-year period; I'm aware that ten-year projections have been made for various countries. Of course, when one is [making these longer-term projections], there is always the danger of becoming a bit irrelevant, if loans that are likely to be contracted during that period are not included. Therefore, I suppose this is an attempt to forecast, predict, or guess maybe, what is likely to happen.

But I thought this was one of the major advantages of the new computer systems. As far as I know, the Commonwealth Secretariat, the UNCTAD, and the World Bank systems each has the ability to perform various kinds of simulations. I guess you simply put into the computer the forward period for which it should simulate, and it does the arithmetic. Such arithmetic I think has to be done very carefully, because you have to be able to interpret the results. But my guess is that a major advantage of some of these systems is that they can take into account the structure of the current data base in making projections, even over quite a long period, of the implications of various debt reduction techniques: of various Paris Club rescheduling terms, of London Club rescheduling terms, and of projected contracting [of new

borrowings] in the future. I would have thought that was one of the more useful aspects of these systems.

Mr. Husain: I think the only problem is that the number of unknown variables which come into the projection becomes too large. You have to project what the exchange rates in the various currencies are going to be, what the interet rate movements would be in five or six years, what your new profile of the loans contracts would be—whether they would be concessional or non-concessional, market-based, multilateral or bilateral. Therefore, if you go wrong on one of these things, your projections are just totally out of whack. I remember that we carried out projections for one country, I think it was Cote d'Ivoire, where we assumed at one point 350 CFA to a dollar. By the end of the first year, the actual rate was already 500 CFA, so all the projections had gone out of whack. I think that is the problem in making long-term projections.

The World Bank was doing long-term projections even before the Fund became involved. One has to be very clear about a crucial distinction. As far as the existing pipeline [i.e., debt and debt service obligations deriving from the existing debt stock] is concerned, the systems from UNCTAD, the Commonwealth Secretariat, and the World Bank can carry out those projections pretty straightfowardly. However, when you introduce the element of new borrowing, there are all kinds of permutations and combinations. You can have a very complicated matrix. Depending on what particular cell of that matrix you choose, you can have different projections.

Mr. Stillson: People say that the roles of the Fund and the Bank are switching! Would you have imagined having this discussion, where the Fund representative is talking about longer-term projections and the Bank representative is warning of the difficulties of these things? I think it is marvelous!

I think we should change our terminology, because I absolutely agree with you that these are not projections. Whether or not these things have any relationship to what will happen in the future is very problematic. Almost certainly, seen as projections they will be wrong. They are simulations. They are policy exercises, and their value lies simply in pointing out the implications of doing a particular thing on the basis of the assumptions built into them. But surely they are not projections.

Unidentified Questioner #4: If I could just add something. As Mr. Husain was saying, these indeed do not really tell you what is going to happen, because if you simulate or project (whatever you choose to call it) exchange rates, it is only a guess. You do not know what is actually going to happen. However, such "projections" do at least give you an idea, give you some criterion, some way of doing sensitivity analysis on your debt profile. You can see, with the mix of loans that exists now and with new loans added, having some new mix of currencies, how susceptible a country is to various movements in exchange rates in different currencies. This is a way of evaluating the loan portfolio and saying, "Do I have a reasonable currency mix?"

13 The World Bank's Technical Assistance in Debt Management
Part I. The Debt and International Finance Division

David Hunsberger and Hugh Dowsett
World Bank

Mr. Husain: The next item on our agenda is a discussion on the World Bank's technical assistance in debt management. There are three parts of this. The first is an overview by David Hunsberger, followed by Hugh Dowsett's presentation of the computerized debt system which we have developed in-house. Then, after the lunch break, Sanjivi Rajasingham will tell us about the Financial Advisory Services that the World Bank is offering. After all, it is our conference, so we have allowed the IMF one presentation and we will have three!

Mr. Hunsberger: Before I begin, I would like to honor one promise I made before the conference began. I said that those providers of systems in the private sector, and of course the multilateral agencies as well, that wanted to offer demonstrations of their software would be allowed to make an announcement of where and when they will offer their demonstrations. Those of you interested in seeing any of these software demonstrations can make your own private appointments with these people. I have had one request so far; the representative from SINFO-Q, Mr. Juan Jose Illingworth, has offered to demonstrate a software package he is installing for the Government of Ecuador. He asked that anyone who is interested in seeing a demonstration on his lap-top portable computer please see him to make arrangements.

I have also agreed to distribute informative material for any provider of software who would bring brochures or descriptions. That offer still stands, and Mr. Illingworth's description will be on the table this afternoon.

I will talk just for a few minutes in general terms on what the Debt and International Finance Division of the World Bank is doing. Then I will turn the session over to Hugh Dowsett, who will present some of the work he has been doing in software.

We are active in several areas, and many of you have worked with us personally in the technical assistance our Division provides. We have a Technical Assistance Unit in the Debt Division, which tries to respond to the interests of member countries in the design of projects. Some of these projects are quite specifically in the computerization area, but we are also very much involved in helping to reorganize debt offices, design training programs, and define new institutional settings for those governments that ask our advice in these areas.

The first area in which we like to get involved and are often asked to become involved is in performing *diagnostic studies*, usually in cooperation with our colleagues on the operational side of the Bank. For this work, we often go on mission to the requesting country for one to three weeks. During this time, we assess what we view as the entire debt management environment. Then we will write an aide-memoire or write recommendations to the government and to our colleagues in the operational side of the World Bank, recommending what we think would be useful improvements. Depending on the interests of the government, these recommendations may be as ambitious as a restructuring of the debt office. Or it may be limited to helping the country's debt management staff select reasonable consultants or put together terms of reference for the installation of proper software. The scope of the recommendations is worked out on an individual basis with each country.

When we are asked to get involved in designing an entire project and perhaps helping our operational colleagues prepare a loan that has in it a technical assistance component, we are more deeply involved in *project design*. In this area of technical assistance, we try to see whether the debt office in the member country is at an adequate level in the hierarchy, whether the staffing and training in that office seems adequate to do the job as we understand it. If the situation indicates a need for outside consultants or an outside service by a multilateral or bilateral organization, we offer assistance in providing terms of reference and, in particular, the technical specifications. Quite often, financing agencies of the bilateral donors have very limited experience in what a debt management computer system should look like.

Their specifications are often very vague, in our opinion. Because of our interest in this area, because of our own work on computer systems, and following conferences like this, we are able to provide several pages of technical specifications for what we consider to be minimally acceptable performance standards for a system. [Volume 2] includes two documents that describe these specifications for computerizing a debt office and the terms of reference we recommend as a model for retaining outside consultants.

Once these projects are under way, with or without World Bank financing, we offer *monitoring and supervision.* We will make field trips—conduct missions—to see if the computer system is being implemented properly and to provide guidance in the course of these projects.

In the last year, we have increased our activities in the area of *training*. Previously, we offered ad hoc training on demand; as countries came to Washington for one reason or another, we would offer to spend a few days with visiting representatives, describing the World Bank's Debtor Reporting System, describing our activities in data collection, and advising countries on an individual basis on what actions we felt would be appropriate for debt managers to discuss with their government.

In fact it was under this kind of arrangement, more than ten years ago, that Mr. Triki and his colleagues came to Washington from Tunisia. With Hugh Dowsett, Malvina Pollock, and others of my colleagues who have been in the Bank for a number of years, they discussed what the World Bank had been doing. If I'm not mistaken, it was from these initial ideas that the current systems in the Ministry of Planning evolved.

Many others of you around the table have come to Washington and spoken with us individually. What we found, though, was that these individual visits were not efficient. We were not able to offer all the resources we felt appropriate in the time available. So, in the last year, as many of you are aware, we decided to organize a series of courses that would allow us to bring an adequate number of resources, lecturers, and speakers from the Fund and other organizations. We have had groups of 20 to 30 country delegates coming to Washington for three weeks to discuss issues in debt management, to learn in a more organized and formal way about the World Bank's currency pooling system and the latest developments in software and in institutional ideas. This series of courses has been well received, and we plan to continue them. Table 13–1 summarizes the courses we have done recently and some of our plans for 1989. The 1989 program is still a little vague; we are still looking into the budget for next year, to see what the resources and demands will be.

There are two more areas of our technical assistance work I want to mention. *Conferences* such as this are one area where we believe the World Bank has a special role to play. Because of our unique relationship on debt reporting with our member countries, the Debt Division often has many contacts and much information not widely available to other providers of technical assistance, such as UNCTAD or the Commonwealth Secretariat. We take advantage of this special role to contact and work with individual countries and to call conferences of this kind from time to time, when we think they would be useful. We are always open to suggestions in that area.

The final area of our technical assistance is the one my colleague Hugh Dowsett will now demonstrate. We have been experimenting with a debt management software package of our own internal design. Having for many years stayed out of the software business altogether, we decided it would be of value for these training seminars to have a package we could use to show how data went in, what data validation would look like, etc. In the course of building this training aid, the question has naturally arisen whether this package has any future beyond our own internal use for training. I must say to you that this is still very actively under discussion. At this moment, the Bank has no plan to push this software package out as an independent, stand–alone system. But neither have we entirely ruled out making future versions of this package available to some countries, under some limited conditions.

Here I will conclude my remarks. I have asked Mr. Husain if he would care to spend just a minute or two discussing the future direction of technical assistance by the Bank. Then we will proceed with Mr. Dowsett's demonstration. Mr. Husain, do you have any comments you would like to make about the future?

Mr. Husain: I think the demands on technical assistance activities in the Bank are extending in various directions. This afternoon, you will hear from my colleague Mr. Rajasingham, on his work with heavily indebted countries that are coming to the Bank for help with financial engineering techniques. There are more

Table 13.1. IECDI Courses and Seminars for Training in Debt Management

Recent Courses and Seminars	
June 1986	External Debt Management Seminar: Nairobi (for officials of Eastern and Southern African countries). Duration: one week.
February 1987	External Debt Management Seminar: Banjul (for officials of West African anglophone countries). Duration: one week.
May 1988	Training Course on External Debt Monitoring: Wasington (for officials of anglophone countries). Duration: three weeks.
October 1988	Training Course on External Debt Monitoring: Washington (for officials of francophone countries). Duration: three weeks.
November 1988	Training Course on External Debt Monitoring: Washington (for officials of anglophone countries). Duration: three weeks.
March 1989	Seminar for Managers of External Debt Accounts and Statistics: Abidjan (for officials of African countries—conducted in English and French jointly with the African Development Bank). Duration: one week.
Courses Scheduled for 1989	
July 1989	Training Course on External Debt Monitoring: Dakar (for officials of African francophone countries—to be conducted jointly with the African Development Bank). Duration: three weeks.
October 1989	Training Course on External Debt Monitoring: Accra (for officials of African anglophone countries—to be conducted jointly with the African Development Bank). Duration: three weeks.
Courses and Seminars Presently Planned for 1990	
March 1990	Seminar for Managers of External Debt in Latin American countries. Duration: one week.
May 1990	Training Course on External Debt Monitoring (to be held in Washington, similar in content to the Washington-based courses in 1988). Duration: three weeks.

sophisticated countries, Chile being one and Malaysia another, that have approached the Bank for aid in currency liability management, using hedging techniques such as swaps and options. So the Bank is trying to diversify its technical assistance away from the usual, strictly commercial, way of doing things.

At the same time, within my own division, I am considering whether there is a better way of delivering technical assistance to our member countries. That is the question I raised yesterday in my opening remarks, because I believe there may be more efficient ways of doing things. I look forward to the exchanges among us during this conference, as one of the sources for such wisdom. Another source is the Kalderen–Valantin report to the UNDP, which will offer suggestions on how technical assistance in debt management can be improved or strengthened. So at this time, we pause to reflect on what we have done and how we can improve. We must take into account both the various constraints on the Bank's resources after its recent reorganization and the tremendous demands on our services from the member countries. We are at a stage of reassessment within the Division about the role of technical assistance. We are willing to be guided by what you can offer, in terms of your own thoughts and suggestions, as well as the recommendations to be made by the UNDP study.

Mr. Dowsett: I shall in a moment give a demonstration of the software I have been developing. I would like to emphasize that it is a presentation of software. My work in the Technical Assistance Unit of the Debt and International Finance Division involves not only the computer side; as David has said, we work also on the institutional and other aspects of debt management. What I hope this demonstration of software will do, if nothing else, is illustrate for you some of the possibilities for what can be done with software. We have seen different presentations; I think everyone can learn a little from each other. I would hope that perhaps together, various organizations working in this area can work to produce better and better products.

As the documentation in Volume 2 mentions, the system is not totally complete. Most of the functions are working; I need about two more months to complete version one. The philosophy behind the design is threefold. First, the system should be easy to use. It should provide facilities for users who need not know a great deal about a computer to use it. Second, the system should emphasize data quality; there should be strict data

editing throughout. The third requirement is flexibility. Users should be able to ask questions of the system, to which it should respond in different ways according to the context. With those introductory remarks, I will move to the back here and begin the demonstration.

Mr. Hunsberger: I wish to call your attention to the documentation included [in Volume 2], which has been put together to describe the system in very brief terms, as it now stands. One of the system features on which Hugh has worked very hard is to have the documentation be contained on line. More so than is usual, he is putting explanatory information directly into the computer; when you press one of the keys on the keyboard you can bring up the page of documentation that refers to a particular field or function. So the need for a separate user's manual will be much diminished. Reference codes, as you will see shortly, and lists of debtors and creditors are also available on line, so there is minimal need for external documentation, which can quickly get out of date.

[The remainder of Mr. Dowsett's presentation was a display of the system's functions and capabilities. The same material is covered in the system overview, which is included in Volume 2.]

DISCUSSION SESSION

Mr. Dowsett: I want to say a few words about the way I handle simulations. [Drawing at the flip chart:] Here is the active loan data base. Associated with it are an active exchange rate file and an active variable interest rate file, which gives base rates for whatever variable rates you are using: LIBOR six-month, LIBOR twelve-month, etc. When you go into simulation mode, the system will show you what simulation files are available to you for your main data base. So each user could, if he wished, have a loan simulation data base. It will also ask you for your simulation exchange rate and your simulation variable interest rate files. You don't have to be simulating all three. You could be using the active data base with simulated exchange rates. You have to be using a simulated loan data base if you are going to simulate the variable interest rates, because interest rate changes will affect the data in the master file.

Of course, one does not want to destroy in any way the integrity of the main data base. So what I do is to build a subset. When I create a simulation data base, the system creates a new file. When I use it, the two sets are joined. The system will take everything in the simulation file, plus everything in the master file that is not already included. Let us say I have a loan 1234, defined in the masterfile. I can define loan 1234 for simulation purposes by using the copy facility to replicate it from the master to the simulation file. Loan 1234 in the simulation file will take precedence over 1234 in the master, so I can change its terms to see what the impact would be. I do not believe in having anything in the master data base that is not actual.

In other words, to see the impact of pipeline loans or possible borrowing in the future, I would create a simulation base. Similarly, I can create simulation files for exchange rates and variable interest rates. The system does not allow me to put future data into the actual exchange rate and variable interest rate file. Instead I create simulated bases for the future. One could argue that the system should not allow historical data to go into the simulated base if it exists already in the actual file. If I come back in a month's time, the system would still use the number in the simulation file. So the simulation does have this restriction: I cannot go back in history; I cannot say what would have happened had exchange rates not moved as they did but in some other way. Placing that constraint was a decision I took unilaterally. I am sorry if you don't agree with it, but I thought there was no real purpose in going back.

In all the reports, such as the stocks and flows report I showed, if aggregations are specified the system would have produced totals and subtotals. There were ten columns shown on that report. One change I am planning in the system—and this is partially in response to Robert Valantin's comments yesterday—is to allow a feature where the user can select the columns. These will be for amounts rescheduled, various types of balances, various types of payments, etc. The user will be able to customize reports on a column basis. The system already has flexibility on periods, and so on.

In a normal run, where I am looking only at my actual data base, the system only uses actual exchange rates and variable interest rates. I can manipulate these as

I want by asking for different reports. I can have all my loans in French francs, but I could ask for a report in deutsche marks, in local currency, or in U.S. dollars. It would, however, only use the historical exchange rate to do the calculations. If I am in simulation mode and I'm using a simulation exchange rate file, I may want to do the same sort of conversions at future exchange rates. You may recall from the transaction update screen that there are three possible amounts to enter: the actual currency of transaction, the local currency equivalent, and the loan denomination currency. As we saw, if the actual transaction is in the denomination currency, the system only asks for that one. I could always use the default exchange rate for the conversion to local currency. I can also go back and modify the local currency later, when the statement comes from the central bank, saying how much was actually paid. If I ask for a report in French francs, the system looks first at the denomination currency. If a loan is denominated in French francs, the system picks up the recorded amount to use in the report. If it is not, the system looks at the actual transaction amount. If that is in French francs, the system uses it. If neither recorded amount is French francs, then the system takes the local currency amount and converts it to French francs, using whatever exchange rate is applicable to the date of that transaction.

I want to address two more points brought up by Mr. Valantin yesterday. One is networking. Although networking is not supported at the moment, this system is designed and written so that probably two days' work would be needed to implement it. The second point concerns expert systems. I worked on expert systems about 20 years ago; they were not called that then but were exactly the same thing using the same languages. My question is, do the users really know what questions they want to ask of an expert system? The expert system can answer the questions, but unless you ask the right questions, is it going to give a meaningful reply? I think this goes back to my beginning comments, which were, "This is just software. We should be looking much more at what answers users should be getting out of computer systems, what they should be using it for." What sort of things can help in analyzing debt, the structure of debt, and how can this analysis be used to make meaningful policy decisions? Thank you.

Mr. Hunsberger: I have one or two comments to add. Hugh tried to compress into his one hour about five hours of material. We apologize for the rush of highly compressed information. Naturally you can "decompress" and go back over those areas that interest you in more detail at your leisure. The system review [in Volume 2] describes the features you have just seen. I know Hugh is embarrassed sometimes when I talk about his productivity in developing this system, but this represents about one and a quarter years of effort on Hugh's part, plus three months of a consultant helping with the rescheduling portion. From 1982 to 1984, I worked with a team of consultants in a South American country. I would say that Hugh has put out in this one-and-a-quarter years what, under normal circumstances, would be 15 man-years of work. Forgive me Hugh, if I sing your praises in this regard.

The future of this system is under much discussion right now: For what purposes should this system be used, and how should development proceed? I will reiterate what Mr. Husain said: in large measure, what happens to this system depends on people like yourselves. If you have interest in it in some way, if you feel the World Bank should make it available in some way, this may be possible. At the moment, the policy questions surrounding the system have not been addressed. We don't know what terms and conditions might apply, what kind of users might get it. Unless Mr. Husain wants to make additional comments, I would like to turn the session over to questions.

Mr. Alamo: I apologize if I didn't understand correctly, but when you make payment simulations with amortization of interest, have you incorporated into the data memory the schedule for amortization of interest? Or do you calculate it every time with the payment?

Mr. Dowsett: When you initially enter the loan, the schedule of interest payments is calculated and saved. Each time you enter a transaction that affects the interest payments due, the loan is not recalculated at that point but is flagged as needing recalculation. This applies to both fixed rate and variable rate loans. In the case of a variable rate loan, I also need to recalculate if changes have been made to the base rates. Does that answer your question?

Mr. Alamo: In the case of interest, yes. I am not sure whether it is a different calculation for payment of principal. For example, how do you deal with the case where principal is paid quarterly, while interest is paid on a half-year basis? We have loans of that kind. How do you deal with such situations, where the schedule for principal payments differs from that for interest?

Mr. Dowsett: Normally, it is the other way round [interest is paid more frequently than amortization], but that is probably incidental [to your question]. You may have four interest payments per year and two principal. But it doesn't matter because on my screen I do ask for frequency of payment. These do not have to be the same. If they are the same, the system will generate initially the same payment dates for principal and interest. If the frequency is different, the adjustments will be made. Also, you may at a subsequent time change those schedules, if they are not exactly the way the credit agreement is written. So the answer to your question is that the system is highly flexible. It will generate payments as far as possible on dates. But it calculates interest on a daily basis; whatever dates have been specified become the basis it will use for the calculation of interest due.

Unidentified Questioner #1: Just to clarify one point, during the simulation you said that all the conditions of the country with whom you are going to renegotiate are given, including the interest rate. Does your system support various interest rates? Each creditor country has a different interest rate, and even for one country there may be several. For example, in the U.S. I think there are four agencies that have different interest rates. So my first question is, "Do you include these different interest rates in your simulation?" Second, how do you select the credit, because not all the credit which comes under one country within the Paris Club will have been renegotiated, or rescheduled. For example, there might be a cut–off date for a loan agreement, perhaps all the loan agreements prior to January 1 of a given year. How do you deal with that sort of thing?

Mr. Dowsett: Both these cases are covered. I did it during the demonstration, but because of the time constraint I did not explain it. To answer your first question on interest rates, the user creates the linkage between a group of parent loans and the children. The user defines the children, and their definition includes the interest rate applied to them. For the case of the U.S., you could have four different creditors, each of whom has different terms. You define the children accordingly and make the linkage between the appropriate parent group for a given creditor and the child loans. The selection panel to define a parent group is very similar to the one used for reporting; you can specify any combination of data elements. You can select all loans from the Export–Import Bank and from USAID as one group, or they could form two separate groups. You could add or delete individual loans from that defined list.

There is a report available that gives the list of loans included in that group. You can verify this list against the list of loans that should be included. If there is a loan that has been selected and shouldn't have been, you can take it out of the group, or you can add other loans. You can also specify a cut–off date as one of the selection criteria; normally it would be. Perhaps I should have put it in just to be complete, because it is always a part of the agreement. But all of this can be done through the selection panels.

The system runs on an IBM or equivalent microcomputer. It requires at least 640 kilobytes of [random access] memory. A minimum of 20 megabytes of disk storage is needed to have any meaningful amount of data on the system. Twenty megabytes would cover about 500 loans. The cost of disk storage is fairly minimal now.

I prefer to run the system on a machine with an Intel 80286 processor. I think this [demonstration machine] is an Intel 8086, and I notice the difference in speed. I have also installed the system on an 80386 machine. The only software requirement is that the operating system be DOS version 3.3 or higher, because I use a large number of reference files, temporary files, and so on. Earlier versions of DOS than 3.3 do not allow more than twenty files to be open. Although I developed it on DOS 3.1, I was forever opening and closing files, which slowed it down. But that is a minimum configuration for the system.

Mr. Cosio–Pascal: Well, I have a more interesting question. Your last comments indicate that, for the moment at least, your system does not run on a mainframe computer. Do you have any intentions to go into that later on? I also have a marginal comment, too, which I would like to make. I was quite astonished to hear about parents and children in this context. I mean, as far as I know, what you call a "parent loan" is just a reorganized loan, and the "children" are reorganizing loans. We have the right terms, why use this colloquial jargon?

Mr. Dowsett: Let me answer the second question first. I, too, have previously used the terms 'rescheduled loan' and 'rescheduling loan'. However, the terms sound similar to the ear, and it is very easy to be unsure which we are talking about. I also had a problem when I tried to translate it into French and found no direct

correspondence. We started talking in the Bank about "mothers" and "babies" [for rescheduled and rescheduling loans]. My wife is insistent on equality, and she thought this was not appropriate terminology. So I use 'parent' and 'child'; I apologize if you don't like the terminology but I hope you understand. For purposes of clarity I will retain it.

To respond to your question about a mainframe version, this is indeed not a mainframe version. It is written in CLIPPER, which is a compilable version of Ashton–Tate's Dbase software. I estimate that between three and six months of my time would be needed to convert it into a mainframe version.

Unidentified Questioner #2: I wonder what you do with prepayments here. Suppose I have an amortization table for a loan and then I shift to another table. We have this problem, for example, in reporting to the World Bank to identify that a transaction is not a principal repayment but rather a deduction of what we owe by means of swaps or of other sorts of prepayment. How could this be identified in your system?

Mr. Dowsett: I have given some thought to swaps. I have not come up with a definitive answer, although I have a number of possible approaches. When you talked of prepayments, reduction in capital was my first reaction. I did mention that briefly before; it causes no problem at all. In the case of swaps, one possible treatment is through transfers. I mentioned that I was putting in a facility to transfer on a maturity–by–maturity basis, and I think I will be using this mechanism for many types of swaps.

Questioner from the Commonwealth Secretariat: Mr. Chairman, I want to seek a clarification. I may need to choose my words rather carefully. Some of your own colleagues might recall that at the time the Commonwealth Secretariat began working on this program of advisory services, we consulted extensively with staff of your division. One of the points made to us at that time was that the World Bank had no intention of providing technical assistance to countries in setting up national debt management systems. I think Hugh himself is aware that in the early stages of our own development, we had extensive technical discussions with him on our own software development. Since then, our own software has come on the market, UNCTAD has its own program, and various private sector agencies have developed their own systems. During that time, the Bank's role was very much a neutral one of being an umpire and taking no fixed positions on any one of these packages. I was wondering if you could tell us why there has been a change in this and why the Bank decided to develop its own software at this stage, when many countries have adopted one of the other systems or developed their own national systems. I am not making this comment on the basis that there isn't enough work for everyone. I was wondering why there was this shift.

Mr. Husain: There has been no decision whether we will give out this system in the same way as the Commonwealth Secretariat or UNCTAD are doing. One ground rule is that, wherever an existing system installed by UNCTAD or the Commonwealth Secretariat is in place, we are not going to become involved. This started as a demonstration system for our training courses. Then we found that, when we made these demonstrations to debt office managers or their systems people, we had a lot of demand. They came to us and asked if this system could be installed in their countries. As an institution that is providing technical assistance, we couldn't say, "No, sorry, we cannot do this." So, for testing purposes, just on a limited basis, we have responded to one or two countries.

We have many requests, but there hasn't been any policy decision. The policy decision will be made after careful consideration of all the implications. We do not have the resources; we only have one person who is responsible for developing this particular system. We don't have back–up facilities; we don't have people who can provide follow–up services. Without those kinds of services, it would be difficult for us to take a plunge in this field. For now, Hugh has been making presentations at training seminars and conferences, for demonstration purposes in technical assistance, and there are countries who have approached us. As I said, in countries where there is an existing system, we do not feel that we should try to go in or even talk about this particular system, because that system which is in existence will take care of their requirements and problems. But we have 150 developing countries. I do not think that even if UNCTAD and the Commonwealth Secretariat stretch their resources, they can take care of all 150 countries. The delegation from Poland is here; Poland, for example, may take care of this system on their own, without requiring any follow–up services from the World Bank. They may say, "This is what we want to use for our management purposes." That's about it.

We are still trying to determine what our policies should be. I do not think there is any certainty about the

future of this demonstration system. There has been no deliberate change in the prior policy. It was developed as a training tool, as a demonstration system. It has caught the fancy of some of the people from our member countries, and we are under pressure from those countries. That is the honest truth about this system.

Mr. Cosio-Pascal: I apologize for coming back at this time; I will be very short. A further question to Hugh. Do you have an idea already of what software you are going to develop for the mainframe? Another question is about translation. As you know our system runs in Spanish, English, and French, so if you want some back-stopping for your translation, we are at your disposal!

Mr. Dowsett: Enrique, I take that as a great compliment. I was talking to your colleague this morning about how we could cooperate on a much more general basis in the future. We shouldn't be fighting over software. I wasn't trying to develop a highly sophisticated system that would be causing any competition. I was just looking for a demonstration tool. But I think we all have things to learn from each other. I am very interested in the work that you and the Commonwealth Secretariat have done. I think there are features I saw in the demonstrations yesterday that gave me ideas for what I would like to add to my software. I perhaps flatter myself in hoping that there may be things in mine that could interest you. Above all, I think we need a cooperative effort. We are all in this business not to provide the software but to help in countries' debt management.

Quite recently I had a visitor from a country who asked about software for an area where the Commonwealth Secretariat was very active, so I said, "Why don't you talk to them?" I have done the same thing with UNCTAD. There have been many cases where people have spoken to us about software and we refer them to you. I think we should look much more to broader issues, the issues touched on in this conference—not points like "what software are we going to put in?" but, for whatever software is in there, "how can we work together to support debt management in this country?" Even if my software goes into some countries, I don't see that that precludes our working in countries where you have been active, giving you support and, as you say, backstopping, and vice versa. I very much appreciate the offer of the language conversion, because I have just been going through that. I've tried to extract everything I can into separate files to make the conversion easier, but it is a nightmare.

Mr. Kalderen: It would be of interest to this conference, Mr. Chairman, if you were to expound on the reasons why countries would like to have your software instead of the packages already available. Are there any major differences to which they are immediately attracted, or are there experiences which have been withheld from this conference so far about the packages we have talked about up to now?

Mr. Husain: I imagine the attraction is in the eye of the beholder! That's all I can say. They find that this is a more flexible tool—I mean this is really a tool for their own purposes—and they want to use it. That's about it. There's nothing much to add to that. They may find features in this particular package which may be attractive to them. I do not know. We have really discouraged people from asking for installation of the package. Still, at every seminar I get requests from at least three to four countries that would like the package installed.

Mr. Dowsett: If I could interject a comment here, first of all, we have perhaps the advantage of giving the seminars. People who have never seen a system, see this first. They have nothing to compare it against, and even a dandelion looks beautiful when you've never seen a rose. Second, my original feeling about this software was that many countries want to get started with a computer system, but are not yet ready to dedicate themselves to the sort of involvement they would receive from UNCTAD, the Commonwealth Secretariat, and others. Initially I was thinking of having a very simple system that was easy to use, just to get people used to feeding in the information. If they subsequently wanted to upgrade to one of the other systems, then the data could always be transferred. It would serve as a training tool, not just in our own training seminars but also within the country. I have tried to make it easy to use, I have given on-screen help, to get people used to using computers, to get them collecting the information and arranging to have everything within the computer system. What they do subsequently in terms of using a system was an open question. I think a lot of it has been approached in that way.

Mr. Valantin: I would just like to make a small observation. Very much in the same way that you can't go back and change your historical exchange rates, it is not possible, or it is very rare, that a country or an institution will go backwards. Even if you started out trying to build something very simple, you have actually succeeded, from what I can see, in building a rather sophisticated

tool. If a country comes to you and says, "We would like to use it for experimental purposes, let us put in a few loans," once they've got a few loans, they will put in a few more loans. Then it will become operational. In our experience, very rarely will countries say, "Now we have done all of that; let us throw it out and do something else." So I think you will find yourself on a steady upward path, whether or not that was your intention, which of course brings on all the demands for financial resources, technical backup, support documentation and the whole story that Commonwealth Secretariat and UNCTAD can tell you all about. Even if you don't make a deliberate decision to promote your system, just the fact that it is available, or made available, and countries are starting to use it is going to take you very quickly down the path of ongoing technical assistance. I don't really think there is a way of going back unless one makes a deliberate policy decision at this point. As you said, this is something you are contemplating.

Realistically, as these things start to be used, people will make them operational in one sense or another. If in fact your system can provide all of the functionality which most people need, or which a group of people will need, then they are going to use it. It seems very simple and clear to me. What that means in terms of how you support this system, how you are going to finance it, I think that is something you are going to have to consider quite soon.

Unidentified Questioner #3: After Mr. Dowsett's last comments, which I appreciate, I have only one comment. You remember that in elementry economics we were taught that you need a well–informed market to allow the consumer to make a good choice and to have perfect competition.

Mr. Husain: In every seminar, every single training session we have organized, we have always had demonstrations from both UNCTAD and the Commonwealth Secretariat. We have not held one single course when we did not invite you to Washington. You personally have been coming, Sundar has been coming, and Nihal has been coming. I do not foreclose the possibility that in future seminars we will continue to give you equal time, equal opportunity. But there are major issues here for me. I don't have the resources in my division. The entire cost–recovery orientation in the Bank after its recent reorganization gives me no leverage to provide back–up support service, consultancy, and missions or visits for this kind of work. So I have the particular constraints of my own little unit. Even so, we are also under pressure from our operational units. We are supervising the debt management components of about 40 technical assistance projects. They say to us, "Our member country would benefit a great deal if you provide this tool and finance it under the technical assistance project we are doing." I cannot tell them this is not the correct policy, for the policy has to be an inter–Complex policy agreed to by both the Operations Complex and PPR. It has to be decided by David Hopper and Moeen Qureshi; I cannot really make those decisions.

14 The World Bank's Technical Assistance in Debt Management
Part II. Financial Advisory Services

Sanjivi Rajasingham, World Bank

Mr. Husain: At some point, I think we should discuss around this table the question of domestic debt and external debt linkages, because it has implications for the design of debt management systems and projects. Whether these are going to be UNDP or Commonwealth Secretariat projects, or World Bank projects, we should start asking, "What is it that stops us from having an integrated debt management system for the country?" Are there any bureaucratic hurdles? Is the flow of information not going to be congruent? Whatever the pertinent issues may be, they should be raised and addressed. Perhaps the examples from individual countries will be useful. At some point if we have some free time, I think this is something we should discuss further.

I would now like to introduce Mr. Rajasingham, who works in what will soon be called "Cofinancing and Financial Advisory Services", a department within the Operations Complex of the World Bank. He is going to tell us about the services this department can provide to the developing countries.

Mr. Rajasingham: Thank you, Ishrat. The topic on which I am going to talk is somewhat tangential to the discussions that have gone on so far at this conference. Also, given that I am the first speaker after lunch, it may be that some of you want to take a snooze instead, but I shall go on anyway.

Specifically I am going to talk about the role of the World Bank's Debt Management and Financial Advisory Services (DFS) in providing technical assistance for debt management. Since there is no one from the Treasurer's Group of the World Bank here, I will also speak very briefly about the work done by that group in technical assistance for debt management.

Everyone here recognizes, and I don't need to dwell on it, that debt management is a very important part of economic development. It is a key component of our continuing dialogue with our member countries. We always have a keen interest, as was apparent this morning and yesterday, in helping countries develop procedures for sound debt management. This last role is where DFS comes into the picture. We are a very small group. Our director is Mr. David Bock, who reports directly to Mr. Qureshi, the Senior Vice President, Operations. We have a staff of about twenty. We do not have any further structural divisions within the department. Staff are assigned tasks as they come up, on the basis of the qualifications of staff members, their expertise, and their availability for the job on hand.

There is going to be a further merging of DFS with the unit in the Bank responsible for cofinancing. Then it will go by the name that Mr. Husain mentioned; it will be called the 'Cofinancing and Financial Services Advisory Department'. I'll come back to that later, in the context of cofinancing. The merged department will have two main functions: one is the advisory work on debt; the other is cofinancing. With regard to the advisory work, generally speaking we are available to provide technical advice on debt management matters to all our borrowing countries. As a matter of practice, however, given the small size of the department and the urgency of the work in those countries known as the Heavily Indebted Countries, our work thus far has really been concentrated in that group. These countries are also known as the Baker group, and now, the Brady group. In the Heavily Indebted Countries, the department plays a key role in helping to restructure, reschedule, and plan for their private commercial debt. That is really where the expertise of the department lies.

There is another group in the Bank, the Economics Advisory Services Department, which is more concerned with the Paris Club. They make presentations to the Paris Club on country economic situations. They attend the meetings held here in Paris once or twice a month on the countries that are rescheduling their debt through the Paris Club.

Our group is mostly concerned with the ramifications of countries in rescheduling and trying to restructure their private commercial debt. In this context of course, we get involved in debt–equity conversion programs, defeasance operations, such as what was

proposed for Mexico about a year ago, and other so–called mini–operations that increasingly are included in restructuring agreements. This is even more so since the announcement made by Treasury Secretary Brady of the United States on March 10. We are getting involved in looking at the feasibility, the costs, and the benefits of techniques to reduce the level of debt for countries that have an overwhelming burden of debt.

The scope of the department in providing these services is quite broad. First of all, I should mention that our work is not done in isolation. We are primarily providing support to the Country Departments in the Operations Complex of the Bank. We work with them; we work for them; we support them in their dialogues with the countries concerned. Everything we do is tied in with the advice provided by the Country Departments themselves in their ongoing economic dialogue with the countries.

In providing this advice, our first job is to look at the country's debt: how it is structured, who are their creditors. The department maintains an extensive database of private restructuring agreements, private lending agreements, and the exposures of various private commercial creditors. It also keeps track of the different objectives and priorities of these commercial creditors, which vary for a variety of reasons. Some have large exposures and therefore are more sensitive to taking losses than those with less exposure. Creditors in different countries operate in different tax and regulatory environments and therefore have different incentives for disposing, or restructuring, or otherwise dealing with their sovereign debt. Finally, as I mentioned before, we have the objective to anchor all our advice in the overall country economic and macroeconomic situation. We want to ensure that whatever advice we provide is coordinated closely with the Country Department's own view on what is best for the country in question.

As many of you know, each of these countries comes from time to time to the advisory committee seeking restructuring of its debt. In addition to providing advice in the context of debt restructuring agreements, we also provide policy advice to central banks, ministries of finance, and other governmental bodies in the countries themselves on other issues related to debt. Again, this advice is provided in close coordination and through the Country Departments in the Bank.

In providing this advice, we also coordinate with other bodies. We have, for instance, close advisory relationships to IFC [the International Finance Corporation] in some cases and other investment advisory services. The scope of the advisory services varies. In some countries, we have helped the governments and the ministries of finance set up debt–equity conversion programs. In this regard, our advice is related to looking at the macroeconomic costs of providing facilities for debt–equity conversions. What are the risks that have to be taken into account? How should such a program be structured? We try to give them some indication of the policy measures that have to be taken and generally give them a kind of template, under which they can then define their own objectives in setting out a debt equity program. We have provided technical advice in this way to Jamaica, Mexico, Nigeria, and the Philippines, to name a few.

Apart from debt–equity conversion, more recently we are getting increasingly involved in the issue of debt reduction. For many years debt–equity conversion was thought of as a form of debt reduction. But now people are increasingly recognizing that by itself it is not enough to reduce the indebtedness problem of many countries. At the behest of various countries, we are trying to define possible roles for the Bank in providing help for debt reduction. In doing so, we of course work with Ishrat's group, with the operational groups, and very much with the risk management group in the Bank, which is concerned with the Bank's own risk profile.

What I have described thus far is really what we do in terms of financial advisory services. It's very brief, and I will be happy to take questions, if you want any further clarification on this. I would like to move now to the other part of our department's role, which is to help countries, or borrowers in particular, access new forms of financial management, including access to various capital markets.

This function will be greatly strengthened by the merger of the cofinancing unit with DFS, which becomes effective July 1. We will have a new vice president, Mr. Koji Kashiwaya, who is now Deputy Director General in the Ministry of Finance in Japan. Prior to his appointment in the Ministry of Finance, I think until 1987, he was the Director of the World Bank's Tokyo office. Under the rubric of cofinancing we are now putting together an initiative, for consideration by the Board of Directors of the Bank, to broaden our cofinancing program. As many of you know, we have in place a commercial cofinancing program that seeks to foster private commercial participation in World Bank loans, primarily through the

use of debt maturity guarantees and direct participations. This program, which has been in effect since 1982, has met with mixed success. It has been overwhelmingly popular in countries that have had difficulties borrowing in the market. But we have also been concerned about increasing our exposure to an unwarranted level by participating in cofinancing in these countries. Over the years, policies have been put in place to restrict our cofinancing participation in the Heavily Indebted Countries, as the Bank prefers to provide its support to these countries through its own lending program.

At the same time, we have found less interest in our cofinancing program from the other countries, countries that are closer to creditworthiness. There are two reasons for this. One reason is that, for countries just below the threshold for commercial lending, the support we provide is deemed insufficient to get them above their threshold. Second, for countries that are above this threshold and therefore have access to syndicated lending, the support we provide is of no use. It does not give them access to other forms of capital, because it is geared mainly to syndicated lending. The new initiative that is currently before the Board for consideration tries to overcome these difficulties. On the one hand, it tries to broaden and make more flexible the way in which we provide guarantees for commercial syndicated lending. It therefore would allow those borrowers below the threshold to cross it more easily with our help. We have also targeted this program to much broader sources of capital. For those borrowers that already have access to commercial lending, the aim would be not to try to put our guarantee where it is not required but rather to help them gain access to other markets, such as bond issues, specialized forms of project financing, and other mechanisms to which they do not now have access.

These cofinancing operations would be targeted primarily for investment projects. There are two reasons for this. One is that we want to make sure that, as we go into this, as in all Bank lending, the finances being mobilized are being used for productive purposes, as the Bank's charter requires. But we also want commercial sources of funds, especially capital markets and private placement markets, which are very, very large dispensers of capital in the world, to become more familiar with investment opportunities that are available in many developing countries. At this point these sources of capital are not aware of the opportunities. One thing we are making clear in this new initiative is that the Bank cannot afford to be inflexible in fostering private capital market access. What has come out over and over again, during the last five years in particular, has been the ability of private markets to quickly identify new initiatives in which there are opportunities and to take advantage of them. Most of these initiatives have opened up not in the context of development finance but in the industrial countries themselves. If the World Bank is to help its borrowing member countries access these forms of financing, it must be able to move quickly. So we are asking for the flexibility to use our support, within a set of broad guidelines, to aid these countries in getting that financing.

I will give you some examples. Build–operate–transfer projects (BOTs) have increasingly become a means for private sector development of capital projects, including energy sector projects. In the developing countries, BOTs are being done sparingly, but usually on an enclave basis (where foreign exchange coming from the project is reserved for debt service). Two things stand in the way of BOTs becoming more common. One is the concern, which is present in any developing country, of foreign exchange availability. To a large extent, BOTs are limited–recourse financings. By that, I mean these are projects for which the creditors look to service their claims not to the assets of the owner of the project but to the revenues being generated by the project itself. For instance, if the State of Maryland in the United States issues a bond to finance a toll road, there is no concern among potential creditors that Maryland will never have the resources to service those bonds, because the bonds are issued in the same currency as the revenue to be collected through the toll. But in the case of a toll road in a developing country that is to be financed by let's say dollar borrowings, you now have a problem of foreign exchange availability.

One role that the World Bank or other multilaterals could fill would be to provide some cover against foreign exchange availability, assuming that the project is working on commercial terms and the local currency is made available for conversion. When I say 'cover', what I mean is really an assurance that, in the event the project succeeds and the revenues are being collected as planned and presented to the Central Bank for conversion to foreign exchange, if the Central Bank is not in a position to provide that foreign exchange because of other difficulties, then the World Bank or other guarantor steps

in and covers the exchange into the currency of debt payment.

(If there are any words or phrases which I use which are not familiar, please feel free to interrupt and ask questions. I prefer it that way, rather than to find I have been speaking for half an hour and all my terminology is not understandable by the people here.)

The other area where we would like to help developing countries is in access to bond markets. As many of you know, syndicated lending has come and may stay, although with some difficulty, in the developing countries. In the Heavily Indebted Countries, of course there are some special problems, but hopefully they will be resolved in the near future. Yet these countries have had very little success in tapping other sources of finance. Some of these sources are quite large. There is a private placement market in Japan, for instance, which is extremely large. The participants in that market, which include the big life insurance companies and the pension funds, have assets that are growing at almost US$10 billion or more a year, with limited opportunity to invest them. They are looking for opportunities in which to invest. Allowing developing countries to tap such sources would be extremely beneficial to the flow of capital to developing countries. We are working to identify mechanisms that might increase such a flow of funds. And there are many others like this.

But really, we are looking to be flexible in providing our support and also allowing developing countries to be open to getting financing from a variety of sources in a flexible way. Another form of financing that has often been talked about but has not yet been used in the context of a developing country is commodity–linked bonds. The debt service on this type of bond is linked to the price of some underlying commodity. One kind of commodity–linked bond may link the interest rate to the price of oil. So if the price of oil doubles, one would be responsible for paying double the interest. On the other hand, if the price halved, the debt service on the bond would also drop by half. That's one kind of a bond, called an index bond. Another kind is a bond with a warrant; the bond has a nominal face value denominated in a currency such as dollars, but has a warrant attached which allows the holder to buy oil at a particular price. So the value of the warrant itself would increase or decrease with the price of the linked commodity. These bonds are useful in the sense that they link the debt service capacity of a country that is dependent on a particular kind of export to its export earnings. Work is being done within the World Bank—in the PPR Complex in particular—to look for ways in which we could make these bonds more acceptable to the investment community. Bonds like this have been issued many times in the industrial countries. For instance, the U.S. mining companies issue silver–linked bonds frequently. Oil warrants have been issued by oil companies. The problem again has been the special transfer risks that are associated with the developing countries.

There are many problems with commodity–linked bonds. The primary one is that countries are worried that they might be selling their commodities at bargain prices. There are also problems of enforcement. The commodity is typically being produced, mined, drilled, or whatever, in a country where, if anything goes wrong, the creditors have very little recourse to those sources of payment.

As you can see, the challenge is to have a large amount of flexibility built into the rigorous debt systems that have been mentioned and discussed in previous sessions. The systems should be able to take account of a variety of financial liabilities that could arise, yet still maintain the current rigor, reporting requirements, etc., that have been clearly demonstrated in the systems that I have seen, and have been very impressed with, in the last couple of days.

Let me now move on to the financial technical assistance provided by the Treasurer's Complex in the World Bank. I think we are all sorry that no one is here from the Treasurer's Complex to present what they do. Their work is described briefly in a paper included in [Volume 2]. I'm not going to spend a lot of time on it, because I am not really the expert. Since the expert is not here, I'll tell you what I do know. In a sense, the work done in the Treasurer's Complex is to help borrowers deal with interest rate and exchange rate volatility in terms of both assets and liabilities. The primary interest is in liabilities, because that's where the underlying concern is. The core of the Financial Technical Assistance (FTA) Program, provided by the Treasurer's Complex is in institution building. They try to develop the expertise within a country for both the financial management and decisionmaking capability required in asset–liability hedging. This usually involves a series of missions, during which they set out the possible ways in which these hedging techniques can be put into place, and then ask that a team be assembled. This team goes through a training program and receives ongoing support for an

extended period of time, to develop that capability within the government itself. The FTA staff stay away from the actual decisions; they do not advise the country on whether this is the right time to buy or sell a futures contract, whether this is the time to cap your interest rate risks or whatever, because that's a decision that has to be made within the country. It would be improper for the World Bank to make those decisions. We do not have any inside information on these matters; it's a market decision which has to be made in the context of a country's own considerations, risks, and propensity for accepting risk.

From a technical standpoint, hedging can be done through either of two mechanisms: through futures, which include swaps, or through options, which include caps. I'll explain each in a little more detail.

In a futures contract, you take a position that a particular interest rate is going to occur. If you expect interest rates to rise, you take a position in which you make a profit if interest rates do rise. If you do take that position and interest rates fall, you realize a loss. In other words, you take a fixed position, and after that your losses and gains are determined by the market. For instance, suppose you had a floating rate liability with an interest payment due in a year. Also suppose you were happy with the current level of interest rates and would be prepared to pay at those rates even if market rates fell in the future, but you could not afford an increase in interest rates. Under such circumstances, it might be well worth locking in the current rate, through the sale of a futures instrument. Then, if rates did go up and your interest obligation went up accordingly, you could sell, or unwind, your futures position at a profit that would be roughly equal to your increased interest cost.

The swap works in almost the same way. A swap is basically a series of cash flows which are locked into the future. So you don't have one cash flow, as you do with a futures instrument, but a series of cash flows. The problem with swaps, though, is that most swaps are undertaken between AAA–rated counterparts. That is, swaps need two parties: one who wants to swap, say, a fixed rate to a floating rate and another who wants to swap a floating rate to a fixed rate. But they may not want to take a counterparty risk. Either there is someone who stands in the middle and takes the risk for both sides or the two parties themselves are satisfied with the credit risk of their counterparty. Most developing countries find it difficult to get into the swap market for the reason that their credit is not good enough. Usually the credits exchanged through a swap are the highest quality credits in the credit markets. For anything below that, it's difficult to execute a swap.

To give an example, when the World Bank started its swap program, the Bank only worked with highly creditworthy counterparts who, like the Bank, are AAA–rated. About two years ago, we found a mechanism whereby we could execute swaps with lower–rated credits. What we did was to insure those swaps with an insurance company that was itself AAA–rated. In effect, the rating for the swap became AAA, although the counterparty itself was below that rating. One possibility for developing countries would be to find an insurer that could insure their swaps and thereby make them acceptable to the swap market in general. The World Bank is considering setting up a program to guarantee swaps for this purpose. There may also be possibilities for commercial insurance for these purposes, but these are still matters that are being thought about right now.

Apart from futures and swaps, the other form of hedging interest rates is through caps or options. The advantage that options have over futures is that they do not lock in your position; as the name says, you have an option. You can exercise the option and make a profit if there is an opportunity for profit. However, if there's no opportunity for profit because the interest rate or exchange rate or whatever it is has moved in the wrong direction, you don't have to exercise your option. So you come out even. That's the good news. The bad news is that options are expensive. Because it gives you the option to do something or not do it, you have to pay a premium for purchasing the option. The premium can be expensive.

Caps are the same as options. They are called caps because they cap interest rates, or they cap something out. But they are basically what is generically known as an option. As an example, for a five year cap of LIBOR at perhaps 2 percent above current LIBOR rates, you may have to pay about 8 to 10 percentage points as a premium. So it is an expensive proposition to buy options or caps. Before buying an option, a cost–benefit analysis is almost unavoidable. One has to look closely to see whether the cost of buying the option is worth the benefit it provides. A good evaluation of the sensitivity of the debt to various scenarios of interest rates and exchange rates is a *sine qua non* before one should even contemplate getting into any

of these kinds of instruments. The cost may well outweigh any benefits.

The second point is that there are lots of sub–hedges that keep occurring in a big borrowing program. Borrowings have been made in different currencies. Some are fixed rate; some are floating rate. So one has to look at the net position that needs to be hedged before making a decision on what amount, to what extent it should be hedged, and also to what extent the hedge is necessary because the country cannot bear the unhedged risk. Sometimes it is cheaper just to bear the risk if you can take the volatility. For example, consider a situation with two parastatals. Each of them has its own borrowings, and each of them in a sense is unhedged. But together they form an offsetting position and therefore need not be totally hedged. That might be one way of looking at it. Another way of looking at it is that even though they might be hedged together, each of them has the potential to go under unless the government is prepared to provide a subsidy to take account of the offsetting positions. So it may be that some countries would prefer to hedge the full position and provide a subsidy between them as interest rates vary. Another government might decide each of these is an entity that needs to stand on its own and hedge its own position. So there are a lot of issues that need to be considered in the context of deciding what risks need to be hedged and to what extent.

Finally, I should also reinforce what Mr. Kalderen said yesterday. Implementation of these kinds of institutional capacities in a developing country is not easy. Hedging operations are fairly new. They are quite commonplace now among sophisticated investors, especially on Wall Street, but in many countries they are viewed as a fairly esoteric instrument. There is often a false perception that what is really a hedging position, such as the purchase of a futures instrument as a hedge, is a speculative activity. If the hedge does not work to a net advantage and an extra cost is borne, it is very easy after the fact to criticize the taker of the hedge, to say, "Look, you made the wrong decision." However, the primary reason for the hedge was not to make a profit but to make sure that the country or the entity was able to service its debt on a continuous basis.

There is no easy solution to this. I think that, as in the past, it will be a learning process. People need to be exposed to the kinds of financial techniques that are available; financial assistance needs to be given on these subjects. As some developing countries take on these techniques, other countries will learn. This is happening with our own systems, for instance, where we—and the Treasurer's group in particular—have given technical help to some countries. Other countries are observing this and asking, "Should we try it also? Should we make the decision to go ahead and hedge some of our risks?" There is no substitute for sound support from multilateral agencies in helping the developing countries to put into place very conservative and careful systems for the use of hedging techniques.

In closing, I would like to emphasize again the increasing importance of good debt systems in all these things. Private financing techniques and hedging techniques continue to evolve. The challenge to all of us is to have rigorous systems with the flexibility to respond to opportunities that will continue to arise. Thank you.

DISCUSSION SESSION

Mr. Cosio–Pascal: I was very interested in your mention of the linkage between oil prices and interest rates. If possible, I would like to have some more technical details on that, because it's an idea that was put forward in August 1986 by the Mexican delegation in negotiation with the Steering Committee in New York. At that time I was, let's say, "seconded" by UNCTAD to my government to give a hand in these negotiations. We were using the simulation package that the conference saw yesterday, the DPS for debt. In addition to this "sensitivity analysis," which we presented to the banks, we were also trying to create an innovative way of repaying the debt. We put before the banks a constant present value repayment scheme, which is the one that is used by the Central Bank of Mexico and which is called FICORCA. It allows the country to absorb interest rate variation and to "smooth" the repayment schedule in a very nice way. But the banks were allergic to that because it implicitly capitalizes interest, and they don't know how much and how. It's a nice trick, I have to say.

In addition to this amortization scheme, we included a ratio, which was calculated on an historical basis, between oil prices and the LIBOR interest rate. We

selected as a "normal" historical ratio one that had occurred during relatively stable periods, those periods in which the variation in these two prices had been minimal. This ratio was then applied to the repayment schedule, which as I mentioned was already absorbing some of the variation in interest rate. If the variation of old price against the interest rate was favorable, that is, if the income due to a rise in oil prices was favorable to Mexico, then the repayment schedule was shortened. On the other hand, if interest rates increased faster than the oil price, then the repayment schedule was stretched out. It was a very nice amortization scheme, I have to say.

But the banks didn't want to accept it. As I mentioned, it was an implicit capitalization of interest. In addition, it was a "continuous function" of the ratio of interest rate to oil price. Previously, Mexico had already reached an agreement with the IMF that was really very innovative, in which all these different targets fixed by the letter of agreement between the IMF and the Mexican government were a function of oil prices. But it was a discontinuous function in the sense that it had three tranches, rather than being a continuous function. So the final agreement with the banks reflected these three tranches. But the idea was eventually digested by the banks and, if I remember correctly, that same year Merrill Lynch presented something similar to the Mexican authorities. It was a function of interest rates and oil prices. It was an idea that finally had a breakthrough. Now I have just heard it mentioned by the distinguished delegate from the World Bank. I would like to know whether it is along the lines I have described that these commodity agreements are made. Also, whether this and other commodities are linked in the same way to repayment of external debt. Thank you.

Mr. Husain: Let me tell you that much water has flowed down the East River since 1986, and now the banks are in a different situation. But there you were talking of the recontracting of the existing syndicated agreements. And here we are talking of commodity–linked bonds as new issues, as new instruments. I think you should keep that distinction in mind.

Mr. Rajasingham: Thank you Ishrat. To respond to the comment, maybe I didn't clarify this while I was talking before the coffee break. These new instruments, including the commodity–linked bonds, are primarily geared toward new investment, as Ishrat just pointed out. In the proposal that we have presented to the Executive Directors of the World Bank, we emphasize that we do not intend to use them at this time in the Heavily Indebted Countries, because we do not want the issues of debt reduction and other ways in which the Bank can provide support in those countries to be clouded by cofinancing techniques. In these countries it is also sometimes difficult to distinguish restructuring or refinancing—which is also called new money, by the way—from genuine new money for productive purposes. For the moment we are not proposing that these techniques be used in those countries.

To come back to the constant present value and the other mechanisms you discussed, they are very interesting. You may also know that the World Bank has in its current cofinancing program a contingent liability option. In a syndicated loan with this option, the creditors agree to constant–annuity repayments over a period of time with a reference interest rate, but the loan itself is given on floating rates. If the actual rate increases above the reference rate, then you have a certain amount of principal remaining outstanding at the end of the repayment period. Under this cofinancing option—I hate to use the word option—we give the banks the option of collecting that unpaid amount from us at the end of the repayment period. It is not linked to oil prices or anything like that, but it's a way of getting banks to agree to a form of capitalizing interest. If they want to keep the loan at the end of the period they can, but if they want to they could put it through for collection from us. Since this option was put into effect in 1982, there has been very little interest in it. It was supposed to have been used once for a loan in Paraguay, but that loan was cancelled eventually, so it has not in fact been used.

With respect to Mexico, I think we should also point out that their 1987 restructuring agreement did contain an oil contingency tranche. This reflected the sensitivity of the Mexicans to the fact that they might not have enough money to service their loans if the price of oil dropped below a certain level. I believe the reference price in that agreement was US$10 a barrel or something like that. If the price of oil dropped below that, they would get an extra amount of new money from the commercial banks. That tranche expired unused because the price of oil never went that low. With regard to the relationship between LIBOR and oil prices, there are all kinds of relationships, one could say without really looking at it, since oil is a major influence on the CPI (Consumer Price Index), especially in the U.S. Because the Federal Reserve in the United States is very sensitive

to inflation, especially now, there could be a linkage between the level of oil prices and LIBOR. But, I am not sure to what extent we could set up something like that which could be used. It might be better for us, taking into account and recognizing that these techniques will not be used in the Heavily Indebted Countries, to set it up in the context of either interest rates or oil prices. But again, flexibility is the key. We should be open, and we hope that others, too, will be open to exploring these innovative schemes.

Unidentified Questioner #1: We have been assisting some of our member governments in managing their debt portfolios. This has largely been with respect to restructuring their commercial borrowing portfolio to improve debt service costs, maturities, etc. We find that in providing this assistance, we often have to go beyond mere assistance and actively assist them in finding markets, in identifying the most appropriate commercial bank to lead the transaction, perhaps in choosing currencies and the like. With this kind of advice, there is also an inherent risk involved. A deal could turn sour, or maybe the anticipated gain is not fully achieved. These risks adhere to the advisor. So I was very struck with Mr. Rajasingham's remark that the Treasurer's Complex advises without participating in the decision knot. I just wanted to learn how one could develop this kind of a duck skin, where the water doesn't leave a stain or stay on one.

Mr. Husain: Building an institutional capacity is the effort that Mr. Rajasingham described, not participating in actual decisions.

Unidentified Questioner #1: Is there any advice given on more active debt management, like hedging, swaps and the like? Or is it only institution building? Does the Bank go beyond that?

Mr. Husain: Only institutional building.

Mr. Rajasingham: We do give them advice on what they should look for, what are the indicators and so on, but I think it would be inappropriate for the Bank—and this is a decision taken by the senior management also—for the Bank to tell them what to do, or even to provide them with a view on what interest rates are going to be doing, or exchange rates are going to be doing.

Mr. Husain: Since we are also participants in the same market, I think there would be a conflict of interest for us. Also, the country could turn around to us and say, "We could have made US$10 million, and by your advice we made only US$5 million. So we lost US$5 million." It becomes a very embarrassing situation. You try to provide them with a framework and the institutional capacity to analyze the different instruments and make those decisions. That's exactly what the Bank is doing, not really taking positions.

Mr. Kalderen: Of course, Mr. Chairman, you already pointed out that banks are more than willing to advise you. In fact, it's difficult to sift the advice that you get in a situation where you have to take a decision on financial opportunities and options. Even if they receive qualified advice from a friendly borrower, like the World Bank or any others, that is not the only advice they get and their only basis for that decision, I am sure. I don't really see the danger, and the Commonwealth Secretariat should be in the same position. Because, no borrower would rely on only one source of advice. That is one piece of advice you should give them.

Mr. Rajasingham: You are quite right.

Mr. Alamo: As was mentioned yesterday, Chile was one of the countries which sought advice from the World Bank in hedging of interest rates. Once this was all implemented, we realized that more was involved than the the actual training problem. We had training not only from the World Bank. From other sources as well—for example, from Europe and certain New York banks—we sought information for the person who was to set up this new department for liability management. The problem was that when the system did get under way, in this case it was in the Central Bank, there was to be some US$4 billion worth of hedging with buying and selling of futures. We had to stay in the market for a year. Because these creditor contracts are 90-day contracts, that meant four rounds of 90 days each. During the year, there are varying interest rates. They go up and they go down; you win and you lose. But a time came when internally, within the Central Bank, it was hard to explain why we had a deficit of US$17 million. As it turned out, we ultimately had a positive balance; we had in fact an income of US$11 million because the interest rates went up at the right time. We can feel very happy about that, but the Central Bank reacts in exactly the opposite way, if you've got a different kind of hedging. It's very difficult to convey to our authorities what is happening and why you want to lose, when one would think you want to gain, and so on.

Therefore, you have to train the people very, very, well for this liability management exercise. Of course the Central Bank has been working with us. It is management

for the long term—how to have your portfolio of assets and currencies and all that. This is a very complicated system, and it's hard to learn about liability management. We are now also working on hedging for exchange rate risks. But here we are only talking about Central Bank operations and transactions.

I would like to move into an area that links up with what we talked about yesterday. I know this might not be the appropriate forum, but yesterday it was noted that the debt systems were in contrary difficulties with the IADB system and the currency pool system within the World Bank. And this is dramatic. Not only for accounting systems, but also in Chile there are certain privatization operations. Firms are moving into the private sector, and some have actually had bankruptcy problems because of these different currency pool systems and so on. Why couldn't you have a currency hedging system whereby the user would receive a transfer to cover the cost of the insurance for some sort of a currency pool, or something like that? Isn't there some way in which you could protect the ultimate person at the end of the chain. I don't know whether this is the appropriate forum or whether we could talk about this yet.

Mr. Rajasingham: Thank you for your question. I should point out that your program in Chile has been extremely successful. The Treasurer's group was especially instrumental in putting it together, and we have used it as a prototype for our operations all over.

With regard to the possibility of hedging the Bank's own loans, the Board has just considered a paper on the currency management of our loans, as many of you are aware. The paper proposes that in the future the Bank's loans should follow a much more rigid currency composition. They would be, I believe, one–third in each of U.S. dollars, Japanese Yen, and the European currencies, with 10 percent in the other currencies. Once this system is in effect and borrowers switch from the current currency pool, where in effect the composition of currencies within the loans is not well defined, to the new system, it would become quite easy to hedge particular currency positions. Again, one has to make the decision whether one wants to hedge a diversified currency pool, which you would only do if you had a strong view on one particular currency appreciating against another or whether you want to stay in the pool. Obviously, the Bank has to cater to a large number of countries in providing a loan product. It would be difficult for the Bank itself to provide hedges to each borrower country and perhaps even to each borrower within each country. What can be done is to set up a mechanism, and this I believe is feasible, whereby we could help borrowers hedge what would become a fairly straightforward loan with respect to repayment currency composition.

15 Country Presentation by Participants from Bolivia

Roxana Silva

Mr. Husain: We will now turn to the Country Presentation on Bolivia. I would like Ms. Silva to introduce the subject.

Ms. Silva: First of all, let me say that I am grateful for this opportunity to describe some of the problems that we have encountered in my country. I will describe some of the hurdles we were able to overcome so as to continue moving forward. I think we've heard a lot about the ways to go about solving problems; I am going to divide my presentation into three aspects, which I consider to be the most important. First I shall talk about the hierarchical position of the present external debt office, then about the human resources, and finally about the physical hardware resources.

Let us look first at the hierarchical position of the external debt office, or directorate. At its beginning a few years ago, the external debt office was in fact the Department of the External Debt. In the organizational chart, it was at the third level down. Now, after certain restructuring in the Central Bank of Bolivia, there has been significant change in personnel. A number of people were convinced to leave; they were strong–armed out of the Central Bank. Others left voluntarily. Ultimately, as a result of this restructuring exercise, only 20 percent of the original manpower remained. Then they came up with a new structure in which the External Debt Directorate was at the fourth level down in the hierarchy. So its hierarchical position was lower than it had been in the past.

I am talking about strategic information, definitely, for a country such as mine. This is something that is very important, and the external debt office should perhaps be higher up in the hierarchy. I am not going to go into the questions of the niche in which the External Debt Directorate is now placed.

We have four different units within that directorate. One is for programming and monitoring; it conducts studies and analyses the statistics. The second unit is the negotiation unit, which is not carrying out the tasks associated with negotiations because it doesn't have the manpower. The third unit is an Operations Unit. It is specifically linked up with the accounting activities. And then there is the EDP unit, in which I am working and which provides all systems assistance necessary to the External Debt Directorate in general.

It is important to have a computer operation dedicated to the External Debt Directorate. I do not report to a systems department, which would ordinarily be where I was assigned. Rather, I work directly with the External Debt Directorate.

Let me move on now to the second aspect, manpower resources. The External Debt Directorate at present has 23 staff members. In the past, when it was the External Finance Department, there were 60 persons on the staff. The same functions and tasks are being carried out now by one–third the number of people who were in the External Finance Department before it was restructured. As for the computer experts, we only have one systems analyst out of the twenty or so staff of the Directorate. The distribution of the staff members is not altogether satisfactory, and this is another problem with which we have had to contend. There was not an appropriate allocation of tasks to the people within the directorate. This is one of the problems we really are grappling with at the present time.

Other speakers referred to the problem of salaries and salary scales. This has had considerable impact on the way people perform. Because of salary problems, people frequently are not really motivated to carry out the tasks that have been assigned to them. In some instances, the head of a given sector is earning less than somebody who is below him, because of the restructuring.

The next aspect concerns the physical, or material, resources. Now what do I have in mind here? First of all is the computer hardware. This is an area where we had to contend with many problems because there was no across–the–board decision as to what kind of hardware we should have, what kind of facilities we should have. Once a decision was taken, there was not the bureaucratic support, the budget allocation, so we did not get satisfactory facilities. We felt that we were working with strategic information and data and were therefore entitled to a minicomputer facility, which would give us certain

data security capabilities and save costs. A PC [microcomputer] doesn't give that kind of data security. So studies and analyses and diagnoses were carried out, not only within the External Debt Directorate and the Central Bank but international advisors have come through as well. Outside consulting firms were also called in. The majority's view was that larger–volume hardware, that is to say, minicomputer hardware, would be more appropriate than a PC. But unfortunately, once that opinion was reached, not enough resources were available to acquire the recommended hardware.

I would also like to talk about the systems and the software packages that we have been using for external debt management. We were in a way fortunate to go through different stages. I'm repeating myself a bit, I know, but as the Central Bank progressed we followed in these various adaptations and stages. Initially we tried to work with an UNCTAD system. Then we got support from the World Bank staff; then came input from local people. Next, a Bolivian firm that was a consultant to the Central Bank added its input. All these outside, or exogenous, systems did not produce the desired result. We would reach the pre–implementation stage or begin operations, but of all these outside systems none was really fully satisfactory. After analyzing all the shortcomings of these different systems and learning from the exercise, we decided to use our own resources. We were very fortunate to have one consultant, an engineer whose name is Mr. Valdivia, with whom we were able to work. On the basis of the needs we had to satisfy, we have been developing a system which is now in what I would call a primary stage. We have come up with a modular and flexible system. It is portable, and we had to use a microcomputer, given the fact that we couldn't get a minicomputer. I apologize for going into technical details; it is an IBM PC–XT with 640 kilobytes [of random access memory], which is now a bit outdated. We have a 20–megabyte [fixed] disk, which has a processing speed of 4.77 megahertz, and a 5–inch [floppy diskette] drive. We also have an Epson FX–286E printer. It's not the fastest machine in the world, but we can manage with it. What we have been trying to do is make this minimum amount of equipment meet our most immediate requirements.

As I said, we've been working on a modular basis. First, we develop a module. As soon as it's available, we put it on stream. I must say this is not altogether satisfactory, but at least it has the advantage of enabling us to begin working with what we've had, module by module as each emerged.

Let's look at what we have at present. We have five basic modules. One deals with financial terms and conditions; the second is for disbursements; the third is payments. We also have one for the quotation tables used in the different currency calculations. The fifth module is for payments. Once these modules were developed, it was possible to begin loading these machines and entering the data. This gives us at least the beginning of a picture of what the system will ultimately become.

We knew this was something that would evolve over time and that, as we developed the new modules, we would start using them. So we thought that it would be effective if we started training in the application packages as well. There was no customized software; I had to bring my own personal software from home. We've been working with [Ashton–Tate's] DBase–3, which is a database system. Everyone involved was given a month's worth of training, an hour or so per day. Therefore, all the staff know what is involved with DBase–3. They have learned how to work in an organized, sequential way with the necessary discipline. They know what is expected of them and how they can get the system to perform.

I also wish to point out that the system was originally conceived and designed with the idea that it would be loaded on a mainframe computer. The programming that we have at present in DBase–3 is very easy to convert to compilable code, be it COBOL or whatever. Therefore, we think the transition will be possible when the time comes.

These are the points I wanted to cover. I may have omitted some aspects, but I think I touched on the most important areas. What I'd like to do now by way of conclusion is to focus on two important aspects: the problems we have encountered and the kinds of solutions we have been able to come up with.

Let me give you a run–down of the problems. Part of the problem was that the External Debt Directorate has lost ground. It is lower on the hierarchical totem pole than it was in the past. That gives us less leverage to collect information and data, because we do not enjoy the same prestige as before. There are certain decrees which are theoretically mandatory, but nobody enforces them. This means the data do not reach the Central Bank. Many institutions have data and information, but it's not fed into the Central Bank, so we don't get the data either. This problem exists because we are low on the totem pole and

cannot exert pressure. We don't have the leverage that would enable us to compel the institutions to give us that information.

What is the solution to this problem? We think that it's necessary to restructure the External Debt Directorate. It has to be put higher up in the hierarchy. We have been taking the necessary steps to get a "promotion" for our Directorate, so that it will enjoy higher status in the decision–making hierarchy.

The second problem we identified was the lack of manpower, of human resources. There hasn't been a proper allocation of tasks, nor has there been a clear definition of the manpower hierarchy. Who reports to whom? Who is responsible for what? Persons may have been assigned to various posts, but they are not sufficiently acquainted with debt management. Nonetheless, they are being required to make decisions that have considerable impact. So there is a problem because the people who have been appointed do not necessarily have the requisite qualifications. Individuals have been assigned to a given post under the assumption that, if this person has a particular kind of knowledge or skill, perhaps he'll be able to ease into the job. But this approach has really caused problems. Here again, I think we need to revamp the overall organization chart.

Another aspect related to organizational problems has to do with the salary scale. This obviously is interconnected with what I earlier referred to as a lack of properly trained manpower.

There is also the problem that we really were counting on a minicomputer when we began designing our system. We have begun working with a PC; we are making do with it for the time being. But we haven't ruled out the possibility that sooner or later we will get this minicomputer we have requested. We think that, with a little technological sophistication, it will be possible to shift back and forth between a PC and a minicomputer, when and if we get the latter. We hope we will get a greater flow of information and will be able to make the transition, provided we can get the hardware. But for the time being we have decided to make do with what we have, which is to say, with the PCs that we already have on board.

The fourth problem was related to all the successive steps and stages we went through with systems that were brought in from abroad. None of them, as I said, produced the desired results. So ultimately we worked out our own in–house solution, and this system is developing little by little, phase by phase. As I said, it is a modular system, so we design and develop one module and put it into service. It produces results, and then we go on to the next module.

Another problem concerns user access to what has already been done. This is a conversational system; anyone, whether or not he is a computer expert, can access it. We have set up a system which incorporates messages, a help menu for example, and we have a whole system of sequential instructions so that somebody does not have to be a computer expert to deal with the different modules. We [shall continue this approach as we] go on to more and more sophisticated modules, or we intend to at any rate.

Lastly, we have a problem with system maintenance. This is a very delicate issue because of the earlier packages with which we worked but ultimately discarded. As I explained, most of them had reached the pre–implementation stage. But we encountered problems with maintenance, by which I mean there is somebody available who has enough knowledge about the inner workings of the machine and the software to be able to troubleshoot for us. We had nobody like that around. When we worked with these previous systems, we had a consultant on hand and then, just when the system became operational, the consultant left. We had nobody to consult when we ran into trouble.

The External Debt Directorate has realized this is a problem. They have undertaken to give us the necessary maintenance funding so we can keep the system up. Since it is now our own in–house system, we are probably on a stronger footing in this respect.

I may have omitted certain ideas that I intended to convey, but I think I have covered the most important points. Having described what we encountered in my country, I hope this can perhaps save others from going through the same difficulties. If so, that at least will be one thing that we'll be pleased with. If you have any questions, I'll be glad to answer.

DISCUSSION SESSION

Mr. Husain: Thank you very much for a useful recapitulation of what your problems have been. I am sure others will try to avoid the same kind of mistakes that have happened in Bolivia. The floor is open for discussion, comments, questions, on the Bolivian experience.

Mr. Hunsberger: If I may, I would like to ask a question. We heard yesterday that in Chile the head of the debt office has been in the Central Bank for 17 years, and this morning that Mr. Triki has been in the Tunisian debt office for perhaps 14 years. What has been your turnover rate? In the past three to five years, for example, how many different directors of the debt office have there been in Bolivia?

Ms. Silva: Well, this is a very serious problem in Bolivia at present; the turnover rate is unduly high. Another problem with which we are contending at present is that we do not have an official director. We have had interim directors. That means there are problems in decisionmaking as well, because nobody is in charge. We don't have anybody on whom we can depend. This puts us all the way down the hierarchy. For example in my own unit, we didn't know whom to see because we didn't have an immediate boss for some time. When we had administrative difficulties, we didn't know what to do; we could not speak to the actual Director of the External Debt Directorate. We had nobody to consult for our particular problems because we didn't have a department head. Even now, we just have an interim Director of the External Debt Directorate. So the whole decisionmaking process becomes complicated.

Mr. Stillson: I have fairly recently come back from Bolivia. I think Ms. Silva has given a very good statement of what they have done. Perhaps, it was a bit of a modest statement, given the problems of administrative instability that have occurred. Within about a year period, Ms. Silva and this consultant, Eduardo Valdivia, have put together a program which possibly is not as sophisticated as some of the ones presented here this week but serves their purpose rather well. I think that's a remarkable achievement.

However, there are problems in Bolivia that do not concern the computer system. Ms. Silva referred to them. The area where I think the next big step has to take place is in getting good information to the computer. The problem is more than simply an administrative one within the Central Bank. There is no process at the moment for systematically gathering data from debtors in Bolivia. This is an area in which the IMF has given a certain amount of advice we hope will be helpful. But it is essential. At present, Bolivian debt data, no matter what processing system it goes through, is composed predominantly—almost entirely—of creditor source information. For World Bank and IADB loans, this is not so terrible because the reports back to the debtor country are relatively prompt and complete. For other types of transactions, it is in fact terrible. There have actually been a few cases where the Central Bank of Bolivia has not even been aware of a new loan until they received a bill that was already substantially in arrears of when it was to be paid.

I think that, over the course of the next year or so, many of these problems will be resolved. But I think Bolivia's case is very interesting as an example of this sort of problem. And it is also an example of what can be done in a country with even very limited resources, in terms of developing a computer system that serves local needs and that actually forms the basis of a reasonable data processing system for the external debt department.

Mr. Cosio-Pascal: Just a small comment on what Ms. Silva said. She presented a very good summary of what happened in Bolivia. I was involved at the very beginning of this project and, referring to Mr. Hunsberger's question, each time that I went from Geneva to La Paz, I found new faces—with some exceptions, one of which is Ms. Silva. I don't know how she managed to remain there [under the circumstances], because others left and obviously she could have also taken advantage of [other opportunities].

I have to say that we never succeeded [with the UNCTAD system implementation] just because we never completed the training of the staff—not to use the system, but even just to load data into the system. Each time I returned to La Paz, we had to start the training for data collection with new staff. So we were unable to load the system. Thank you.

16 Country Presentation by Participants from India

Duvvuri Subbarao
Ministry of Finance

Mr. Subbarao: Mr. Chairman, on behalf of our directorate, thank you for the opportunity to be here and to make a presentation sharing our experience with the others. I will deal first with our existing institutional arrangements for external debt management and then proceed to contemplated changes, which will make us more effective in managing our external borrowings.

As with any other developing country, the need for external borrowings in our country has arisen in the context of large scale developmental planning. To bridge the gap between the savings [investment required?] and the available internal resources, we have been resorting to external borrowings on a large scale. This is necessary to maintain the existing rate of economic growth, which for the year 1988–89 has been estimated at around 9 percent. The foreign exchange requirements for our imports also are in part met by external borrowings.

By and large, there are three institutions that currently deal with external borrowings. These are the Planning Commission, the Ministry of Finance, and the Reserve Bank of India (RBI). The Planning Commission in consultation with the Finance Ministry determines the overall foreign exchange resources required to implement the planned projects. Once these requirements have been determined, the Ministry of Finance initiates steps to identify sources of the external borrowings, the terms and conditions on which such borrowings can be obtained, and the quantum of such borrowing for each year. In respect of aid from countries which are members of the consortium, the aid commitments are made in the consortium meeting. And in respect of aid received from bilateral sources that are not members of the consortium, the aid negotiations determine the quantum of aid from each source.

Different agencies in the Ministry of Finance deal with the external borrowing portfolio. The Policy Wing is primarily concerned with determining the sources, the quantum, and the terms and conditions of the required borrowings. Once that has been decided, negotiations take place and agreements are concluded. The responsibility passes on to my organization, the Controller of Aid Accounts, to ensure disbursement of the loans and timely debt servicing. [Thereafter it is the responsibility of the RBI to ensure that the inflow of aid is passed on to the government account, if it is a disbursement from the donor. For direct payments out of borrowings, we inform the RBI on a periodical basis of the quantum of disbursements that are taking place. We acquire the counterpart rupee funds for such direct payments from the Indian project authorities. This represents for us an indirect, external aid inflow.]

All expenditures to be met out of external assistance are properly budgeted for, and therefore there is normally no difficulty in implementing projects that are covered by external aid. In other words, budgetary constraints are not applied to projects for which external aid is already committed and forthcoming. Therefore, any project which is covered by external aid normally gets precedence over projects that are not covered by any inflow of [targeted] external borrowings. The proceeds of these external borrowings are not directly passed on to the project authorities in other countries.

All the borrowings are centrally received by the central government. Per the standard financial arrangements that exist under the national constitution, the proceeds are then passed to the various agencies. If the agencies happen to be federating units, the central government gives the proceeds in the form of central assistance. If the project-implementing authorities happen to be public sector undertakings controlled by the central government, their proceeds are made available in the form of loans and equity participation. If they happen to be private sector importers, the government ensures that the expenditure was incurred and that the amount is not [directly] reimbursed by the donor.

Traditionally, concessional borrowing has formed a very major part of the borrowings of the Government of India. But this trend has changed during the past three to four years, as the role of commercial borrowings has increased. A view was expressed some years ago that, in light of the high creditability of the country, we should explore the possibility of more and more commercial

borrowing. This was further necessitated by the reduction in the quantum of concessional aid. Therefore, the quantum of commercial borrowings has been increasing. Because of this, a need arose for a separate organization in the Ministry of Finance to deal exclusively with commercial borrowings. The External Commercial Borrowings Division, which forms part of the Department of Economic Affairs in the Ministry of Finance, deals with all the policy issues relating to commercial borrowings. They approve every commercial borrowing and maintain detailed accounts of disbursements and debt servicing in respect of such borrowings.

So between these two divisions—one for commercial borrowings and other for control of aid accounts—more or less the entire gamut of external borrowings is accounted for. The office of the Controller of Aid Accounts manages all loans to the Government of India under concessional arrangements from bilateral and multilateral sources of the government. The Commercial Borrowings Division oversees all commercial borrowings, whether or not guaranteed by the Government of India.

Apart from these two categories of borrowings, there is another, which does not represent a large portion of external borrowings. It includes non-government loans, where the loans are contracted by private parties in the country with the approval of the government, the government acts as guarantor, the sources of such aid are either bilateral or multilateral, and the terms are by and large concessional. Such loans are called "loans under non-government account" because they do not pass through the central government budget. The receipt and repayment of such loans is the responsibility of the recipient organization. If they were to fail to fulfill their obligations, the government would step in and make the repayment. But so far such a contingency has never arisen.

Since all the loans are either contracted by the government or require the approval of the government, the development of a data base in respect of external borrowings has never been a problem. A detailed data base is being maintained in respect of both loans falling under government account and commercial borrowings. In this respect, the commercial borrowings category has taken a little longer; initially the quantum borrowed was very low and the arrangements were a bit loose. Once the quantum started increasing, the Commercial Borrowings Division was set up, and they began the job of collecting information from the various sources and updating the data. That task has now been completed, and the data on loans under government account and under commercial borrowings are more or less up-to-date.

Unfortunately, even though our quantum of borrowings has been very large and the number of loans is also fairly high, we have been maintaining only manual accounts for a long time. We entered the area of computerization quite late. Initially the emphasis was only on developing a data base for disbursements, rather than for debt-servicing profile and things of that sort, because we found that management was always keen to have ready information about disbursements. With the increased quantum of commercial borrowings, and also the quantum of concessional aid, we felt the need to build up a debt management cell with a proper data base that can give management information ready-made for policy decisions. We were trying to find out what resources were available to help us in building such a system, when we happened across this Commonwealth Secretariat system. About two years ago, we decided to go with this system. It was installed both in my office and in the External Borrowings Division. Since then, it has also been installed in the RBI, Bombay, because the Reserve Bank also deals with commercial borrowings.

The initial process of entering data into the system for all the on-going loans under both concessional and commercial borrowings is now completed. The Secretariat has been making periodical visits to help us in organizing our work. Wherever there have been loose ends or obstacles, we have had the benefit of their advice. Now we have more or less completed the data entry job and have started generating some of the system's standard reports.

However, the provision of software by the Commonwealth Secretariat does not solve all our problems, and the progress in installing the system has not been along the lines we expected. We had to contend with a lot of administrative and bureaucratic problems. In solving them, the Secretariat has been of great use to us. They have intervened on our behalf with the government, so that the government would provide some of the basic facilities required for the system. Otherwise, every time some problem arises, we have to contend with many agencies, even for provision of computer furniture and things like that.

Another major problem that I at least have been facing is physical accommodation for the computer. I am occupying an office in a building from which I am under constant threat of eviction. I hope that soon I will be moving out of that building. By the time the next mission from the Commonwealth Secretariat arrives, we hope to be able to deliver the goods; they will then be in a position to judge for themselves our progress. I mentioned that the RBI also plays a role in the existing institutional arrangements for external borrowings in our country. They are not maintaining detailed accounts of external borrowing under concessional assistance, because traditionally and by convention my office has been the only agency to maintain such accounts. We periodically furnish information on external assistance to the RBI; this information helps them in their currency management policies. However, since the RBI maintains accounts for commercial borrowings, installation there of the Commonwealth Secretariat system also has become necessary. They have also made some progress in collecting the information and entering it into the system. An exercise is currently being undertaken to reconcile the two sets of figures from the RBI and the Commercial Borrowings Division of the Ministry of Finance, so that the system can become fully operational with the ultimate objective of integrating the data under one organization.

The current thinking appears to favor creation of a debt management cell within the Ministry of Finance, to which management can turn for provision of any information required for taking management decisions. At the moment, this information is spread over two agencies within the Ministry of Finance—the Controller of Aid Accounts and the Commercial Borrowings Division. In addition, we include as external borrowings the deposits made by nonresident Indians with the RBI. But in all our calculations of the country's debt liability, we exclude these deposits by nonresident Indians.

We are also not including in our debt reporting to the World Bank what I earlier referred to as loans under non–government account, because our definition of loans under non–government account does not make the government liable for their repayment. However, we find that the World Bank views such loans as coming under the category of official creditors. If the loan has been given to us by an official agency, it is included by the World Bank. We were not including these borrowings because we looked at it from the point of view of the recipient organization. If the recipient organization was [not] the government, we were not taking that borrowing into account in our debt reporting. Recently, on the advice of the Commonwealth Secretariat, we have decided that we will have to include such figures in our reports to the World Bank. The problem we now face is collecting the information about such loans. Previously, there was no particular agency in the government that was collecting this information and storing it. We have undertaken this work and have been able to collect part of the information. I think that sooner or later we should be able to collect the entire information on debt and incorporate it in our debt reporting to the World Bank.

There are a few problems that we have been facing in the proper management of external debt. One problem relates to the lack of one agency where the basic data can be stored and from which data can be made available at any time. Whenever information is required, three agencies must coordinate their activities to provide the information to the user. This is now being done largely on an as–required basis. Once this debt management cell is constituted and becomes operational, this problem will be solved.

Another problem is that we do not have a specialized cadre of staff to operate the computer system from the Commonwealth Secretariat. The staff are also engaged in other tasks, both in my office as well as in the Commercial Borrowings Division. They are dealing with the work relating to the computer system in addition to their existing work. We have plans on hand to have separate staff who will deal with this item of work so that once the system becomes operational, it runs smoothly. With that I close my presentation. Thank you very much.

DISCUSSION SESSION

Mr. Husain: I just wanted to clarify that the World Bank's Debtor Reporting System is looking at the *national* debt; it comprises all the external debt contracted by a national entity, or the *sovereign risk*. It is not looking only at the official debt. Therefore, if you look at our classifications, they include public and publicly guaranteed debt, and private non–guaranteed debt. The non–governmental loans, which we are

requesting that the Government of India report to us, are part of the sovereign risk liability of India. These loans may not be the liability of the Government of India, but for purposes of statistical compilation, we must have the complete information on all kinds of loans contracted by Indian nationals. Whether they are official obligations or not is a secondary question.

Another issue, which you have not touched upon, concerns the short-term debt. Recently, short-term debt has also been increasing in India. My understanding is that the RBI is responsible for incurring the short-term debt, which should also be reported under the Debtor Reporting System.

Mr. Subbarao: As I mentioned earlier, in the past we did not have a particular agency in the government to keep track of these non-governmental loans. It was left to the recipient organizations. Some information used to be collected on an annual basis only for academic interest, for incorporation in our external assistance booklet, which we publish every year. Because of the lack of an arrangement for collecting the information on a regular basis and because our interpretation of government loans differed slightly from the World Bank's way of looking at the country's debt, we were not including them. It was only after we got one particular statement from your office, which showed a figure much higher than what we have been reporting, that we started analyzing the discrepancy. As a result of the discrepancy, we found out that we have not been including these non-government loans, and now we have decided to include them. Unfortunately, the problem is that our data base is not yet complete in this respect. We are collecting the information, and once the data are available to us, we will incorporate them. As regards the short-term debt, the policy so far has been not to reflect it in the debt reporting system. I think a policy decision will have to be taken before the Government of India starts including it in their reports to the World Bank.

Mr. Husain: It is a policy decision certainly, but short-term debt is also becoming a major issue in the external liability management of the countries. As you pointed out, the nonresident deposits are also an external liability, as far as the management of external liabilities is concerned.

Another question I wanted to ask you concerns the procedures when the State Bank of India, for example, raises loans abroad. As long as they keep the deposits abroad, the loans are not reflected in your debtor statistics. But when these amounts are disbursed to the ultimate users, is there a mechanism that captures these disbursed amounts? Or are they still not reflected in your debt statistics?

Mr. Subbarao: For the moment I doubt that it is being captured or reflected in our official compilations, but we will look into it and then respond to you.

Unidentified Questioner #1: I was curious about whether you have any plans for work at the state level in India, the level of the states.

Mr. Subbarao: As I noted in the presentation, external borrowing is the responsibility of the central government. The receipt and the repayment of all these borrowings rest with the central government. The proceeds thereof, in Indian rupees, are made available to the benefiting organizations, including state governments. The state governments are not directly concerned with external borrowings; therefore there is no need for the state governments to be associated in any system of external borrowings.

Second Respondent for India: Although the state governments in India do not directly borrow from abroad, they are large borrowers as entities. They borrow from the Government of India, they borrow from among the people in the states, and they also borrow from the financial institutions. So the Government of India has some interest in using the same software package to enable the states to monitor their borrowings, although these borrowings are not external borrowings. But that project is yet to be developed.

17 Panel Discussion on Financing Technical Assistance to Debt Management Offices

Speakers: *Ishrat Husain, IBRD*
Lars Kalderen, Consultant
Georges Chapelier, UNDP
Robert Valantin, International Development Research Centre, Canada
Nihal Kappagoda, Commonwealth Secretariat
David Hunsberger, IBRD
Enrique Cosio-Pascal, UNCTAD
Jorge Alamo, Chile
Richard Stillson, IMF
Participant from Mexico (unidentified)

Mr. Husain: We will move on to the panel discussion. We had scheduled a discussion on the use of consultants, but in place of that we would like to consider the financing of technical assistance. I will request the representatives of UNDP, IDRC, and the Commonwealth Secretariat, which are the financing agencies, and Messrs. Kalderen and Stillson to join us for this panel.

I would like just to set the framework for discussion. This discussion will tie in with another panel that is scheduled for tomorrow. That panel, which is very important, will focus on how technical assistance should be provided in the future. To me this is a very key question. In respect of that issue, financing of technical assistance can be divided into two parts. First, what is happening in the financing of existing technical assistance activities: what are the sources; what are the needs; and what has been the experience? Secondly, on the basis of this experience what directions in the financing of technical assistance should be modified? Definitely, since 1985 a great deal of financing has gone into developing software packages, installing them, and providing backup services. Is there a need to continue this trend, or are there other avenues that should be given priority in view of the fact that a number of countries have either opted for one or the other package or are in the process choosing among packages? I thought we could zero in on these very specific questions, and then open the floor to discussion for the countrys' experiences.

May I request Lars Kalderen to start the discussion? As you all heard yesterday, he has just completed a major study, so he might be able to set the ball rolling. Although he is not a financier, he has studied this issue in much detail. Then I will ask Mr. Chapelier from the UNDP, which is the main funding agency, to respond, followed by Mr. Valantin and Mr. Stillson. Then perhaps Mr. Kappagoda or Mr. Sundar would talk about this.

Mr. Kalderen: Thank you, Mr. Chairman. I should say straight away that we have not devoted all that much attention to the financing side. Rather, we looked at the effectiveness of technical assistance and how it fits in with the requirements of debtors. We believe those issues should be seen in a broader context than has been the case so far. I think one of our main points has also come out during this conference quite well; the introduction of software packages is important but is not a panacea for debt management problems.

When we started looking at this whole problem a year ago, we added up how much the UNDP had invested in technical assistance to debt management. It was difficult to define that clearly from UNDP statistics. But if you added all projects which had some component of debt management assistance, the sum total was about US$16 million, including the amounts to be spent by the recipient governments. That is US$16 million over the life of the projects that were then being disbursed by UNDP. We never got a figure from other donors, partly because we did not ask. In hindsight, we now think it would have been a good idea to encourage the DAC to arrange a meeting on this matter, perhaps after having a questionnaire filled in by all the participating governments and international institutions. I am quite sure the figure [for all funding sources] is considerably higher. Of course, there are loan funds being used by the World Bank. And there is technical assistance money coming from quite a number of bilateral donors, although the amounts are not so large. The rest of the UN system also provides funds from various sources. If we had made a careful survey, I guess we would be talking about not US$16 million but perhaps something in the US$20–30 million range.

The next question is what are we talking about for the next three to five years? What is the size of the

technical assistance effort required to bring all the 150 developing countries up to standard? And there we can only make uninformed guesses, uninformed in the sense that it is impossible to put a price tag on something that has not yet been given shape. After having talked with so many debtors and with other experts, we believe strongly that much of the competence needed to enable governments to perform good debt management is available within the countries themselves or from the debt management organizations of other debtor countries—those who have achieved senior positions, if you like, the more accomplished debtors.

One would need first of all to lower the barriers between public sector debt management in a country and the private sector, which often has the resources. Rigid staff rules, hiring practices, salary scales, the bureaucratic decisionmaking system, etc., are preventing this necessary or desirable inflow of competence and information from the private sector. Then the cost of technical assistance in the traditional sense would be considerably lower for the same result.

Similarly, we should try to achieve a much more regular and broadly based contact between debtors, not just conferences of this kind every four years but regular meetings on a six-month or yearly basis. The OECD countries have a lot of these, covering almost all areas. Every so often, people come to Paris [or some other conference city] for all sorts of professional meetings. Specialized committees are formed and millions of dollars are spent on this business of traveling and meeting; it's the most natural thing. In fact, no OECD government would survive for a month without having all these contacts with fellow governments in the rest of the area.

But in the field of debt management, which is just one, I suppose, that is conspicious to us because we have looked at it, there is almost no contact across the borders, except at a very high level. Governors of central banks and ministers of finance meet regularly, perhaps once a year. That is very good, but the operating people do not have a similar scheme to make the gains and the achievements in one debtor country easily accessible to its neighbors. I do not mean just geographic neighbors but debtors in more or less the same situation. If we could achieve more of that, I think the cost would be much more reasonable than if debt management were brought to perfection through traditional technical assistance, with resident advisors at high cost and fancy study trips to high cost countries in Europe and North America for everything that a debt manager is supposed to learn.

Nevertheless, from the experience we have of costing traditional technical assistance, which will still be necessary, I think we are talking about total costs over the next five years on the order of US$100 million. That is a very round figure, but it wouldn't be much less. You must include the efforts of governments to broaden the scope of debt management and intensify it. So it is a fairly sizable amount that would be invested. Still, since the potential gains are massive savings to the government, and ultimately to taxpayers and their economies, it will be a small investment in comparison. The cost–benefit calculation would still be very favorable. Nevertheless, one would have to raise perhaps two or three times the amounts now available for technical assistance in debt management. How can that be done?

Well, we have not spent much time and effort on it, but I would like to convey to you an idea that was given to me, once this Brady Plan was announced. One feature of it is that the IMF and the World Bank would guarantee some of the new money that banks would lend, in return for debt reduction on their part or voluntary reductions of their claims. If such guarantees are issued, then of course one could put on another few basis points to finance better debt management. It would be paid by the banks. The banks would benefit; the lenders, we think, would benefit as much as the borrowers from better debt management. It is really an activity in the interest of all parties concerned. If one sees that better debt management is a necessary precondition for the success of any long term solution of the debt crisis—a condition that must be fulfilled by the debtors in cooperation with the creditors for any long term solution to stick—then it would be perfectly in order to share the cost among the creditors, the debtors, and to some extent the international aid system. It should somehow be within the reach of financial ingenuity to provide the funds, which are after all fairly modest, to solve this very central problem.

Thank you. I spoke too long and without all that preparation you will find going into the statement in the report to the UNDP. But this was off the record, I hope.

Mr. Husain: Thank you very much. It was a very thoughtful presentation. May I request Mr. Chapelier from the UNDP to take the floor?

Mr. Chapelier: Thank you Mr. Chairman. We in the UNDP feel that the projects to strengthen debt

management are part of our overall attempt to strengthen the public sector in general. It is in this framework that over the last few years we have ascribed growing importance in our overall programs to the different projects relating to the debt.

An ever–increasing number of countries have been seeking technical assistance in the debt sphere. Within our country programming activities, we have endeavoured to secure the requisite resources to cater to these requests. I might point out that the UNDP funds are spent first via the country programming exercises. For each country there is an indicative planning figure at the beginning of the cycle. Each item of expenditure comes under the heading of a project. So there is a two–fold conditionality, if you will. First, the country within its country program—either at the beginning of the cycle or in the course of the cycle, but at some time—the country has to identify on a priority basis its need for assistance in strengthening the debt management activity or the public sector in general. Secondly, a specific project must be drawn up, with an executing agency involved in implementing it. The country itself should determine the priorities, not the UNDP.

This is very important; it is worth underscoring that the country makes its own selection. We heard this morning that in some circumstances assistance from UNCTAD was interrupted because no financing was available. But the countries should determine their priorities in respect of the financing package available. Perhaps the debt department is relatively new in many of these indebted countries, and this debt management department may not be one of the sectors with which UNDP has traditional links, as it would have with such ministries as Rural Development, Health, Education, or Public Works. The debt departments do not have this kind of long standing access, even within their own government structures. So they are not necessarily high enough in the pecking order to be able to present their case for funding from UNDP sources. Having said that, there are other donors—numerous ones in fact— willing to participate in this effort towards debt management enhancement. Some of these donors are willing to shift resources towards this area.

So the amount of resources referred to by Mr. Kalderen is not perhaps really indicative of the kind of priority that we at headquarters ascribe to the debt problem. We are convinced that this whole debt dilemma is of the highest priority. We intend to step up our assistance in this field. Last year, we spoke with Mr. Kalderen and a group of consultants and experts. We explored what kind of technical assistance could be provided in the debt sphere to make our assistance more sophisticated, to refine it. But as I said, ultimately the countries themselves must define their own priorities.

I would like to come back now for a moment to Mr. Kalderen's report. I have not yet had an opportunity to peruse it. We had decided that he would submit his conclusions to this meeting even before UNDP had had an opportunity to receive them. We felt that for a meeting of this sort it was extremely useful to have an exchange of views, all the more so because many of your countries received the Kalderen mission. So we thought it would be very useful for you to get immediate feedback on that mission. When we asked Mr. Kalderen to explore this area, and each time he has taken the floor yesterday and today, he has stressed the importance not only of supplying the software but also of dealing with all the upstream and downstream problems. Upstream, the problems of the reporting component are very important. You have to get the data. And then downstream, you have to know what you want to do with the software. For example, do you want to turn out projections of debt to link up with macroeconomic policy and planning? So, in connection with enhancing the debt management capacity, our approach within the UNDP is very broad. We do not want merely to be involved in providing software to any government that requests it. We want the government to have a much broader kind of coverage of the whole problem, upstream and downstream.

Mr. Kalderen also referred to other possible assistance activities that I think are valuable and should be explored further. I think these could heighten the effectiveness of our own interventions. We have not only country funding but also regional funding. Within the spectrum of programs for regional funds, we might envisage the kind of activity referred to by Mr. Kalderen: regional meetings, regional training activities, or training courses. These would make it possible for the countries of a given region to benefit from each other's experiences. They would ecourage an upgrading, spin–off, effect from experiences shared among countries. Thank you.

Mr. Husain: I completely share your views about both the upstream and downstream problems. I just wanted to let you know, as most of you may be aware, that the World Bank has a reporting requirement of its own, which we call OMS 3.11, that says no country will be able

to get its credits presented to our board unless it has complied with the debt reporting requirements. This is a very powerful stick, but I personally do not believe that we should use this stick to get reporting compliance from the countries. My view is that it should be in the country's own interest, in the interest of the managers of the country, to develop and comply with the reporting requirements in a sensible and flexible way that aids them in taking informed decisions. As Mr. Kalderen said, these decisions may be taken to minimize the cost of borrowing, or to do very simple refinancing, or to take advantage of other opportunities to minimize the debt burden. I believe the incentive framework must motivate managers to give importance to debt management. As for our reporting requirements, we have been dealing with these countries now for many years, and our Debtor Reporting System has 111 countries who report to us every year. This is a very important data base. But I think here we are trying to focus, on a country–by–country basis, on aspects of debt management that are in a country's own interest. I totally agree that it comprises many aspects that are upstream or downstream from the software system, which is just a tool to support the whole process.

While it is true that the country has the UNDP—and I happened to be the [Bank's] resident representative in a country where I worked very closely with the UNDP—still, the positioning of the debt office is crucial. If the debt office is headed by an assistant director who only takes an appointment to see the Minister once a year, it is hardly possible for the Minister to put debt management in his request to the UNDP for the indicative program of the country. I think this has been a major issue. From the outside, we have been saying, "Look, your debt management office is not in good shape. UNDP is very much interested in trying to help you out." Despite that, there is no action because the debt office is so low in the governmental hierarchy that its needs are not adequately reflected. While I totally agree with you that the UNDP works according to the priorities of the country, the articulation of those priorities is also a major issue, which I would like you to keep under consideration.

Mr. Chapelier: Thank you, Mr. Chairman. This is in fact a meeting of debt specialists, and clearly our discussions have focused on debt issues and the organization of debt management offices. But I think it must also be acknowledged that the operations and the organization of these debt offices are all closely linked with public administration issues. In the developing countries of sub–Saharan Africa, where you have tremendous crises in the public administration sector in general, it is very difficult to do anything to improve debt management activities if you do not have parallel activities under way for across–the–board improvement in the status of the civil service and public administration, to upgrade salaries and to provide some sort of career prospects for public administrators. All this has to go hand in hand. It is a broader effort that must be undertaken.

Allow me to point out that, in addition to our country programs, last year the UNDP governing council adopted the management development program, the MDP. This is designed to help countries that want to embark on structural restructuring activities. First we help these countries with institutional diagnosis. Then, in cooperation with the donor community, we try to carry out [the recommendations from] these institutional diagnoses. We believe this can be a useful tool to assess the status, or the hierarchy, of the debt management office. From this vantage point, recommendations could be made that would certainly improve the situation. Thank you.

Mr. Husain: Could I ask Mr. Valantin to tell us what plans your organization may have? We have heard about what you have done so far; it may be useful if you could share with us your future plans.

Mr. Valantin: Before I do that, there is a point that I wanted to make about software. Even though we have spent quite a bit of time talking about the other components of the [debt management] system in the countries—the need for institutional arrangements, for training, and so on, I think it is interesting to look at the software itself from the point of view of value for money invested. My experience, not only in the area of debt management but also in other types of information tools that we have supported, has been that software is a very cost–effective vehicle for delivering knowledge and understanding to people in a form in which it can be used immediately.

For example, consider the problem of organizing information in a developing country. There is an old programmer's adage that says,"garbage in, garbage out." The computer does not, of course, make your information any better; in fact it can make it much worse. But, to be able to work with a computer, one first has to get organized—locate the sources of information, put things

in order. There are even some cases in which, after all the preliminary study has been done, people have discovered that they do not need the computer. They just needed to organize their information better. I think if we look at the expenditures on software for debt management, we would find this. I have not done any kind of calculation directly, but I think we would find that the actual cost of producing the software, including preparing documentation and delivering the system, is a relatively small portion of the total cost of technical assistance for debt management. I think it has proven to be very cost–effective.

Let us remember, for example, that when an organization like UNCTAD or the Commonwealth Secretariat prepares the software package, into it goes all of the accumulated knowledge and experience of the people who worked on it. All the consultants, all the developing country problems that they have helped solve, and so on, are all crystalized into a form that is immediately usable. When an error message pops up on the screen and tells the user, "so–and–so does not match," it really is a way of taking all that previous knowledge and putting it where it can do some immediate good. So I think that software and software tools will continue to be a valuable and cost–effective investment for technical assistance agencies and for agencies like IDRC, which is primarily a research funding organization.

As for where IDRC as an organization fits in all this, since it is primarily a research funding organization, it tends not to get into major implementation projects. There are other bilateral donors, for example, CIDA in Canada, that handle development assistance projects. IDRC tends to support innovative tools and methods or new kinds of information systems to get the idea started and to provide some risk funding so people can try out new ideas. While we have supported a number of developing country implementations of debt management tools—we have also supported the developments of some of these tools—over the long term, we would not be doing country implementations one after the other. On the other hand, the kinds of things in which donors like IDRC are more likely to be investing include areas in which we have not been working collectively, such as some of the things that I mentioned in my talk yesterday, some of the more general information sharing activities, and maybe some new kinds of tools. I would guess that our total investment in debt–related activities has been about a million dollars over five years, which is a rather small amount of money in the global scheme of things. This includes not only the information projects but also the economics analysis projects that I mentioned yesterday. I think that even for that small amount of money, we have been able to get quite a bit of "bang for the bucks," as some people say. That is something we would like to continue doing. So I think that the technical assistance donors, the bilaterals, are going to have to pick up the cost of implementation, continuous training, and so on. But where it comes to new research areas, a number of donors—not only IDRC but some of the other European like–minded donors, as they are sometimes called—are interested in working in this area. Thank you.

Mr. Kappagoda: Since we are talking primarily about the future, I will say at the outset that the program of advisory services on external debt management is a program to which the Commonwealth Secretariat attaches high priority. It is an issue of continuing concern to Commonwealth Finance Ministers and the Board of Representatives of the Commonwealth Fund for Technical Cooperation, which really governs our day–to–day activities.

In the implementation of this program we are structured somewhat differently from UNCTAD. Our projects are primarily implemented by in–house staff as part of the consultancy services we offer to Commonwealth governments in our program areas. Therefore, the advisory services and the training that are part of our debt management projects are undertaken by staff. There have been instances where we have had to place resident advisors using Commonwealth resources, but these have been few in comparison to the total number of projects under implementation. Therefore, it is my expectation that the priority that has been given to this program since it was launched in the fall of 1983 would continue for another five years at least.

There is one area where we do not offer assistance, and that is in the purchase of equipment. This has not been a problem in any of our project countries because our software was developed to run on microcomputers. There have been only two instances where other agencies have come in and financed the purchase of computer hardware for our projects. We hope to continue cofinancing arrangements for our projects, as we have done quite successfully in the past, with IDRC. More recently, we have been developing similar financing

arrangements with the Asian Development Bank for projects in the Pacific region. That is all I wish to say at the present time.

Mr. Husain: In the overall resource envelop for TAG [Commonwealth Secretariat Technical Assistance Group], do you have stable financing for the next five years? Or is it an annual budgeting cycle? How do you operate?

Mr. Kappagoda: The Commonwealth Fund for Technical Cooperation, which is the technical assistance arm of the Secretariat, has a budget formulated on the basis of annual pledges. It is a voluntary fund; both developed and developing countries contribute. There is no scheme of assessments. The budget for our group, and therefore for this program, has really expanded exponentially over the past five years. It will expand in the next fiscal year, and that is about the only assurance I can give. But given the fact that the Commonwealth finance ministers place high priority on this program, I would say the worst–case scenario is stability at next year's level.

Mr. Hunsberger: I would like to add a comment here, which derives from my work on missions in developing countries. I think no discussion of financing of debt systems and debt management work would be complete without a mention of the self–financing potential of these systems. What I mean by this can be seen from a simple mathematical example. If a country has a debt burden of something like US$5 billion and you work out the interest payments to an hourly or daily rate, you find that this country is paying a million dollars every day of the year just in interest, without counting the principal repayments. If, by improved debt management, the country could shave off the tiniest sliver, even one–tenth of 1 percent, from that cost, the savings would immediately pay for all of the staff and all of the computers it could possibly need for debt management. So even a poor country, suffering great austerity, has a self interest in improving its debt management, because at the end of one year it more than pays for itself. It is like the blood vessels for the heart. If you're losing blood there, it does not matter what else you need to do. You should first try to heal this hemorrhage, this loss of valuable resources.

The largest debtors, including those in this room, are paying much closer to a million dollars every two or three hours. That includes Saturday and Sunday and all night long. If you work it out to the money per hour per day, suddenly the importance and the value of financing technical assistance becomes so dramatic that the issue is not where should I go to look for it. I should be paying it out of my own budget as a priority item. At the end of one year, it pays for itself ten times over, even if I only take off one tiny sliver of my interest cost.

The obvious problem is that governments do not pay for these items out of the same pocket. The budget that goes to pay interest on the debt is not available for the use of the debt managers. Therefore, for this vision, this idea, of self–financing of technical assistance to take fire, one must go to the very highest level of the government. It is very hard to reach the level where the money spent on interest on the debt is seen as really being from the same pot as the money spent on salaries and computers in the debt office. But if you can find that level, there should be no problem in principle in saying that a million dollars a year, which is less than 1 percent of the interest on even an average developing country's debt, is actually a very justifiable amount to spend. I would ask you to think in terms of the dollars per hour, the dollars per day, that you are spending on interest. Compare that with the paltry hundred thousand or two hundred thousand dollars it takes to really renovate a debt office, and you wonder why it isn't being done faster all the time. Suppose you lose six months waiting for some grant to come through from a financing source. You have already spent US$10 million dollars more than you gain by waiting for a free US$50,000 from a financing source. It is a new aspect just to think of governments using self–financing [of technical assistance] as a way of reducing some of their overall debt servicing cost.

Mr. Cosio–Pascal: Just to support what Mr. Hunsberger was saying, in one of our projects we found that a country had been paying something like US$3 million more than should have been paid. They are now asking the creditor to give back that money with interest. If that happens, it alone would repay the cost of the project by more than 30 times.

I was just looking at the figures in the 1988 UNCTAD progress report [included in Volume 2], in which the amount that UNCTAD has received from UNDP is shown as US$2.5 million. This covers the whole time we have been financed by UNDP. So, this one instance represents a reimbursement greater than our entire cost to the UNDP.

Unidentified Respondent [Mr. Kappagoda?]: Just a point in connection with Mr. Hunsberger's intervention.

We have had two instances where governments unilaterally increased their contribution to the fund as a result of savings resulting from our projects. Perhaps if technical assistance could be put on a success–fee basis, as some banks operate, it might solve some other financial problems.

Mr. Husain: On this point, are there any success stories of this nature that can be documented, published, and thereby disseminated to raise awareness? I think we should try to do that. Both UNCTAD and the Commonwealth Secretariat TAG, who have been very active in this field, would do a great service for the whole concept of technical assistance. We find a lot of negative criticism about technical assistance, but we do not find success stories that highlight the costs and benefits. One specific instance of savings could really offset all the costs of the technical assistance. I think it would be very much worth your while if you were to highlight these success stories.

Mr. Cosio–Pascal: I can give you the reference for one Economic Intelligence Unit publication in which an estimate is made for the savings that Egypt receives through the debt monitoring system it has implemented. That information is publicly available. For the example I mentioned before, I mentioned neither the country nor the creditor; I would have to get authorization to release those details.

Mr. Alamo: What Mr. Hunsberger just said is crystal clear, as far as we are concerned. The problem is not to convince us that the program can be self– financing; the problem is to convince our authorities of that point. I think this is a task for the international agencies and bodies. Every time the debt problem is dealt with, this point should be raised. There should be a summing up of the problems described here. Perhaps because the authorities are not aware of this, we in the debt management offices are making personal sacrifices and putting in a great deal of extra effort at our level. So, somehow we have to get the message across to our highest authorities. I think the explanations could be presented through the international institutions. We ask for additional resources, but somehow the message has to get across as to what can be saved.

Mr. Kalderen: Mr. Chairman, I can give some examples, but the problem of verifying the figures is fairly substantial. One is an estimate made by an advisor to a sub–Saharan African government. He enumerated some fifteen items of good debt management that, after about a year, would shave off something like US$50 million of a total annual debt service of US$3–4 billion dollars. A further substantial amount, something like 100 basis points, could be saved just by doing the things that a good director of a financial department of a major corporation or commercial bank would do.

The second example comes from my own country, where we have done a lot of swapping business over the past two or three years. There was a fairly detailed estimate made of the amount saved by about 200 of these operations. The sum came out at about US$150 million on the total debt service of about US$2 billion. Again, this is difficult to verify unless you accept the assumptions on which these calculations were made, but it can be proved. Of course you can do the estimation more cautiously by just quoting the savings you are absolutely certain would not have been realized unless there was active debt management. You also include an element of risk, because that is always present.

I endorse the suggestion that international organizations like the World Bank should spend a little of its time and brainpower to work out models. It is partly a matter of accounting practices and enabling countries to use the models in showing to their "lords and masters" that investing more money and resources in debt mangement pays its own way. It is not just a matter of convincing ministers or governors of the central bank. I think one has to reach out to the general public, the politicians, the media and really show that debt management is very profitable. They must be shown that you have to make the resources available as a kind of investment. It may not even be a permanent investment because, if the system is set up in the right way, you can phase out the highly–salaried experts and run the system on a regular government basis. Still, putting this satellite up in orbit really takes money and effort, but it is worthwhile.

Mr. Husain: The difficulty is that you must have some substantial empirical evidence. When the World Bank was seeking our IDA replenishment—this is our soft–arm concessional assistance—we were asked, "What has IDA been able to accomplish?" When we were able to document the costs and benefits before and after projects, the external donors realized that IDA was worth their support. And there was an increase in donations to IDA.

What I am seeking from the people who have been active is not the theoretical basis, not how much you

ought to be able to gain, but in actual fact, the costs and benefits before the computerization and management system were in place, compared with afterward. We need the calculations for experience with and without the proposed debt management. This would make a lot of sense; we would be able to document it and present it in our annual reports. For example, we do a survey of the debt situation every year in the *World Debt Tables*. We would be delighted to present this evidence in a form acceptable to the community. However, it has to be credible; it has to be rigorous and substantiated by facts. So I am saying to both the countries and the agencies that have been involved, we would be happy to document and present the evidence of the costs and the benefits of good debt management. If you could help us, this would be an excellent opportunity.

Mr. Stillson: I guess I agree with pretty much everything that has been said. In terms of documenting the advantages of external debt management it is pretty important to be convincing. It reminds me of some financial services that one can buy, which basically make the same pitch: "If I can raise your rate of return by even one-tenth of one percent, then I will have paid you ten times more than what you paid me in the attempt." Of course that is true, but there is a big condition. Indeed, by accepting a certain amount of risk in liability management, if the rate of return goes down a little bit, the costs are also heavy. But still, undoubtedly there is profit to be made.

I would argue that the pitch, when made at the level of the governor of the central bank or the minister of finance, is even more effective if the return can be put in terms of more sensible policy and easier decisionmaking for these people, who after all are faced with terrible conundrums. It is not only the question of lowering your interest costs by a basis point or two, it is also such questions as whether to accept the terms offered for a loan, whether to accept particular conditions for debt reduction schemes, or whether to accept particular conditions for debt-equity swaps, which can be very expensive in some cases. These are the kinds of difficulties that these policymakers have. Good debt information can ease their burden and also produce better decisions. I would argue that the return is even greater for policy decisions than the return for effective liability management. So one should not forget that aspect, which is probably the most key.

In terms of the points that Mr. Husain wanted us to discuss, I do not know much about the current financing of technical assistance in external debt, except that the IMF plays almost no role at all. In terms of the future of technical assistance, possibly the IMF will play a larger role. The IMF has been holding discussions with the UNDP to become an executing agency. One of the ideas behind that is to allow a certain amount of financing for long-term technical assistance in countries associated with Fund programs. External debt is one of the high priorities on that list; indeed, I have already had some talks with the UNDP representative in La Paz about possible help for the Bolivian program, assuming that this executing agency status gets finalized fairly soon. So possibly in the future the IMF will play a slightly greater role, although I cannot see the IMF becoming a major player in that game.

That does not stop us from having opinions on what others do, though! There are a few ideas that have been talked about here that I think are terribly important. Apparently everyone agrees that the noncomputer aspects of debt monitoring are probably the things which will be the most important to emphasize in the future. I am very pleased to see that, because that is certainly one thing I feel strongly about. But what are some of these noncomputer aspects, and how can they be attacked? I think it most likely that those who attempt to give technical assistance will find the noncomputer aspects are much more difficult than the computer aspects. This is partly because the former problems are less amenable to solutions by experts sitting in an office in Toronto, Washington, New York, Paris, or London. They involve the politics and domestic administrations within each country, and of course they are different within each country. Within the countries with which we have been dealing, they can be quite severe.

A couple of problems have been mentioned that I hope we will come back to, in some of the panels tomorrow. Among them are the problems of the organization of debt offices. Ms. Silva mentioned something of the difficulties in Bolivia. My understanding is that these are not unique, although perhaps they are a bit more extreme in Bolivia. In several places, we found that the salaries paid in external debt offices for domestic nationals are low. This probably relates to, and has an impact on, technical assistance problems that are related not only to debt but to the fact that when international experts are hired to sit in these

places, they may be paid five or six times the amount paid to the people with whom they are working. Yet we are trying to make an argument that the local government is receiving a very high return. This is a problem that should be seriously thought about by the international organizations providing this kind of assistance.

In my view, it relates to something else we have mentioned, which is the sustainability of the effort when the international assistants go away, which surely they must (or at least they should). This really involves more than the kinds of training programs that have been talked about here. The training programs are necessary—the elaborate training programs of the Commonwealth Secretariat, the UNDP, and the World Bank. But something more is involved, and I think the representative from the UNDP really said it correctly, and that is the development of the public service within these countries.

This is only one part of that problem. Possibly one should look at it in that broader context because, in the countries in which I have worked, in both Latin America and Africa, I think it is unlikely that an external debt office would suddenly be elevated to a level that would seem quite extraordinary within the bureaucracy of a central bank or a ministry of finance or a ministry of planning. Even though a legitimate argument might be made that this debt office earns a million dollars a year for the central bank, it seems a little unlikely that these individuals would be separated out and paid international salaries, or given computer equipment that no one else within that central bank would have. This would be true no matter how legitimate the argument that comes to that conclusion. So I think that international agencies—and in this case the UNDP and the Commonwealth Secretariat, seem to be major players, in terms of providing money and assistance—should think about these issues and how they can be resolved within the national context and within the national bureaucratic constraints, which may be the most serious constraints of all.

In this context, perhaps the IMF can play a role. Mr. Alamo mentioned the problem of convincing not the debt people of the value of this exercise but rather a higher level of authorities. I think this really means the governors of central banks and ministers of finance. Within its programs, the IMF does have access to people at these levels. And so I think within program countries the IMF can play a role that could be important in elevating the degree of concern, shall we say, for external debt management. It does not mean we are going to convince them to pay better salaries to debt managers, but possibly we can convince them to elevate their own concern about external debt mangaement and pay more attention to some of the success stories like Chile. We have not heard from the Mexicans yet, but I think that is another example. This, I think, could be quite useful; as I said, I think it will be more and more emphasized in the future. Thank you.

Mr. Kalderen: May I just add one or two brief comments. First of all, in several of the countries we visited on our mission, nationals were provided with key jobs in debt mangement on salaries paid by UNDP. These salaries were about 50 percent above the going rate but still only a third or so of what those individuals could earn if they joined an international commercial bank operating in the country. Some of them had done so, but of course it was a personal choice. In an African country not represented here, we found that much of the informatics work for debt management in the government was performed by an institute outside of the government, which was also paid for largely by UNDP. These are ways of overcoming the salary difficulties, particularly in the stage of getting the satellite into orbit.

For the long haul, I think some governments should consider if it would be profitable to develop the debt office into a parastatal, to make it a special body, neither government nor private sector. There is an expert on these things in this room, Mr. Winai from Sweden [representing Swedish International Services], who has just done work on defining this special animal. One might think of it in organizational terms as differing from a bureaucratic organization or a private firm but combining traits from both. Just because debt offices can be very profitable investments if they are well run, they seem to me to be excellent candidates for this category of public/private sector operation.

Mr. Husain: Are there any commments from the country delegations on this topic? We would benefit from your intervention at this stage. The previous speakers have been from the supply side; let us hear from the demand side.

Speaker from Mexico: I will be very quick I promise. We are convinced that organizing the debt is absolutely essential, particularly in a country such as mine with a very heavy debt burden. But as was already pointed out, it is difficult to get the message across to both the higher and the lower levels. In our budget, for example, it is very

difficult not only to have to pay the tremendous debt burden but also to pay for additional computers. So we have to live on a shoe string and pinch our pennies. I think it is very difficult to convince all these people.

It all boils down to whether you have got the money or not. You can point out that the cost is very little compared to the tremendous debt interest being paid, but it is a long–term preaching operation to try to convince people. You may be talking about millions of dollars; nonetheless, this thousand–dollar expenditure is difficult to justify in the minds of some people. We know that this debt is absolutely astronomical, but circumstances have compelled us to set up a very careful legal structure. I think this can be appropriate for certain countries. But in fact we have had to use a great deal of ingenuity to deal with things because we lacked the equipment, the hardware, and so on. We are very grateful to have heard all of your contributions, but I think no system is going to help us cope with the tremendous amount of our debt.

18 Presentation by ADETEF [1]

Jacques de Chalendar
President, ADETEF

Mr. de Chalendar: I would like to start my remarks by reminding you that ADETEF is an association that was founded in the early 1980s by the French Ministry of Economy and Finance for the purpose of studying and promoting technical cooperation programs with foreign countries in the economic and financial area, with the assistance of that ministry's staff. It is in large measure thanks to the World Bank that ADETEF first took an interest in the establishment of debt management systems.

The Ministry of Finance of the Republic of Niger sought to reorganize, modernize, and, to the extent possible, computerize its administration while tapping the experience of comparable offices in France. The World Bank's resident representative took an interest in this project and the Bank agreed to finance—within the framework of a structural adjustment loan—a protocol of agreement signed by the Niger Ministry of Finance and ADETEF. The French Ministry of Finance agreed not to charge the Government of Niger for cost of the time spent by its experts.

By agreement among the three parties—the World bank, the Niger Ministry of Finance, and ADETEF—one of the first operations consisted in setting up a debt management system that would at first be run manually and would subsequently be computerized using appropriate software. Also by agreement with the World Bank, and following a series of tests carried out by the Directorate of Public Accounting, the SIGNE software developed by the CEGOS company was selected. In addition to its technical capabilities, this software had the advantage of having previously been financed by the World Bank for another African country. Thus, the cost for Niger was limited to the expenses of adapting it and installing it locally. Installation of this debt management system enabled the Government of Niger to prepare its case for the Paris Club under the best possible conditions.

A similar operation has been initiated, on the same basis and with World Bank support, with the Ministry of Finance of Mauritania. In parallel, but using bilateral financing from the French Ministry of Cooperation, this same debt management system is being introduced in other African countries, including Equatorial Guinea. Finally, the services of the French Directorate of Public Accounting have been requested to assist three other countries, Benin, Chad, and Cameroon, with preparations for the Paris Club and London Club meetings.

I will now turn the podium over to Mr. DesCargues, an official of the French Directorate of Public Accounting and the Treasurer of ADETEF. He is in a better position than I to present to you the debt management system used in the countries to which I have just referred.

[Mr. DesCargues' presentation followed closely the paper submitted by ADETEF for the conference, which is translated below. The original French draft is included in Volume 2.]

Debt Management

Gerard DesCargues, ADETEF

Introduction

It is the function of public debt managers, as generally accepted and as implemented in particular in software developed under the auspices of the French Directorate of Public Accounting, to carry out all the steps necessary to perform three missions:

- Negotiate loans with lenders
- Manage existing loans, namely by:
  - Monitoring the drawings on each loan
  - Calculating repayment schedules
  - Maintaining accounting records on payments made
- Inform policy makers of:
  - The status of the public debt
  - Probable and/or possible debt developments.

Let us briefly review these three missions.

Negotiation of Loans. The objective is to provide decisionmakers with the information they need to assess the impact on the debt and government finances of concluding a new loan agreement. Therefore, it is particularly necessary to establish the cost of the new loan on the basis of the lender's proposals, taking into account a number of different hypotheses, for example, the currency of the loan, the amortization period, and the applicable rate(s).

Management of Loans. Any debt manager must be able to track the status of any loan until the agreement comes to its end. To this end, he must be able to monitor drawings so as to calculate the subsequent repayment costs. Similarly, he must be able to do projections of drawings, their impact on the debt level, and their burden on the public finances, in particular by producing repayment schedules and by maintaining records on payments that have actually been made. This mission thus includes the obligation of preparing the payment of all maturities by producing the settlement letter addressed to the lending organization in a timely manner, either directly or through the office responsible for payment operations (usually the accounting officer of the Treasury).

Information for Managers. This function, which is fundamental, is both the outgrowth of the loan management mission and the basis of the loan negotiation mission. It further serves a control function, notably through the publication of a number of statistics, the most significant of which relate to the status of each loan agreement, the reporting of commitments, or statements of transactions. The information provided to managers makes it possible not only to produce the debt budget automatically but also to give managers a more comprehensive view of the status of the public debt. This enables them to examine the debt within the context of the overall administration of public finances.

Thus, it was necessary to devise instruments for obtaining information and ensuring the monitoring of the debt. For this reason, consideration of this requirement was initiated within the framework of actions taken by the French Directorate of Public Accounting.

From these thoughts, it is apparent that the selection of a debt monitoring system, whose performance would be all the better if it automated a number of steps, i.e., involved data processing, should ensue from sound knowledge of what has been referred to as the "problematics of debt." The problematics of debt aims essentially at properly analyzing the existing situation or other situations that are regularly encountered. One conclusion that is frequently reached consists in proposing an organization or reorganization of the channels and the entities responsible for information. This fundamental aspect, which is mentioned here only as an aside, is crucial.

On the basis of the foregoing, model specifications for debt monitoring may be drawn up and distributed in the form of public debt management software. In the case in question here, this is what ADETEF did by calling upon the services of the Directorate of Public Accounting of the French Ministry of Finance and the CEGOS research firm. It should be noted that this is not all there is to an operation of this type; design follow-up and technical assistance on site may also be provided to governments that request these services. This working note deals with the experience gained and with the refined software product that ADETEF has had the opportunity to install in a number of African countries and elsewhere.

Study Methodology

Based on an analysis of what already exists and the questions to which a debt manager must provide answers, it is possible to propose study of the debt function in the form of a mating of administrative tasks and missions with data processing resources or operations. On the basis of such a match, the essence of which is set forth in Table 18.1, it is possible to determine the appropriate specifications.

Table 18.1. Administrative Structure

Administrative Activities	Role of Computer System
Which agency manages the debt?	
Study of characters, structures and internal organization	
Study of interconnections with:	
– Central Government's budget	
– Treasury	
– Financial Control	
– Creditors	
– International organizations	
How is its budget prepared?	
– Budget appropriations, earmarked revenues, etc.	
Indebtedness	
Study of capacity	Macrofinancial simulation over five years
Search for financing	Comparative statement of financing acquired
Examination of proposals	Estimation of final cost
Simulation of currency rates	Special processing
Development over past three years	Foreseeable developments, Trends
Legal Support	
Examination of clauses	Financial calculation Determination of total cost, average rate, taking charges into account. *Possible financing counter-proposals.*
Adequacy of project finance	
Management	
Recording of agreements	
– Terms	Calculation of maturity
Current work	
– Debt service by year	Automatic printout of debt service
– Monitoring of drawings	
– Publication of monthly statements	Statement of anticipated repayments

Administrative Activities	Role of Computer System
Management (con't)	
	Assignment of drawing number Calculation of new schedule Information to creditor
– Taking exchange rate changes into account	Reupdating of annual debt service
Payment	
– Issuance of payment orders	Automated printing
– Relations with Treasury	Printing of updated cash flow plan Revenue and expenditure file
– Monitoring execution of debt budget	
Taking financial costs and transfer costs into account	
On-lending	
Statistical work	
– Statement of outstanding amount by country, type of loan, and currency	Scheduled printing and printing on demand
– Amounts of loans by economic sector	
Outlook	
– Future debt service for year n, year n+x, etc.	Printing
Organization	
– Setup of information channels	
– Organization of Debt Management Office	
– Communications with investment bank	
– Organization of filing of loan agreements	
Analysis of Indebtedness	
– Consequences of indebtedness on public finances	
– Economic and financial balances	
– Plan for adjusting indebtedness or public finances	
– Study of the impact of rescheduling	Simulations

Then, the proposals for debt monitoring specifications may be presented to management. The automated debt monitoring applications should make it possible, using a modular approach, to address the three following objectives:

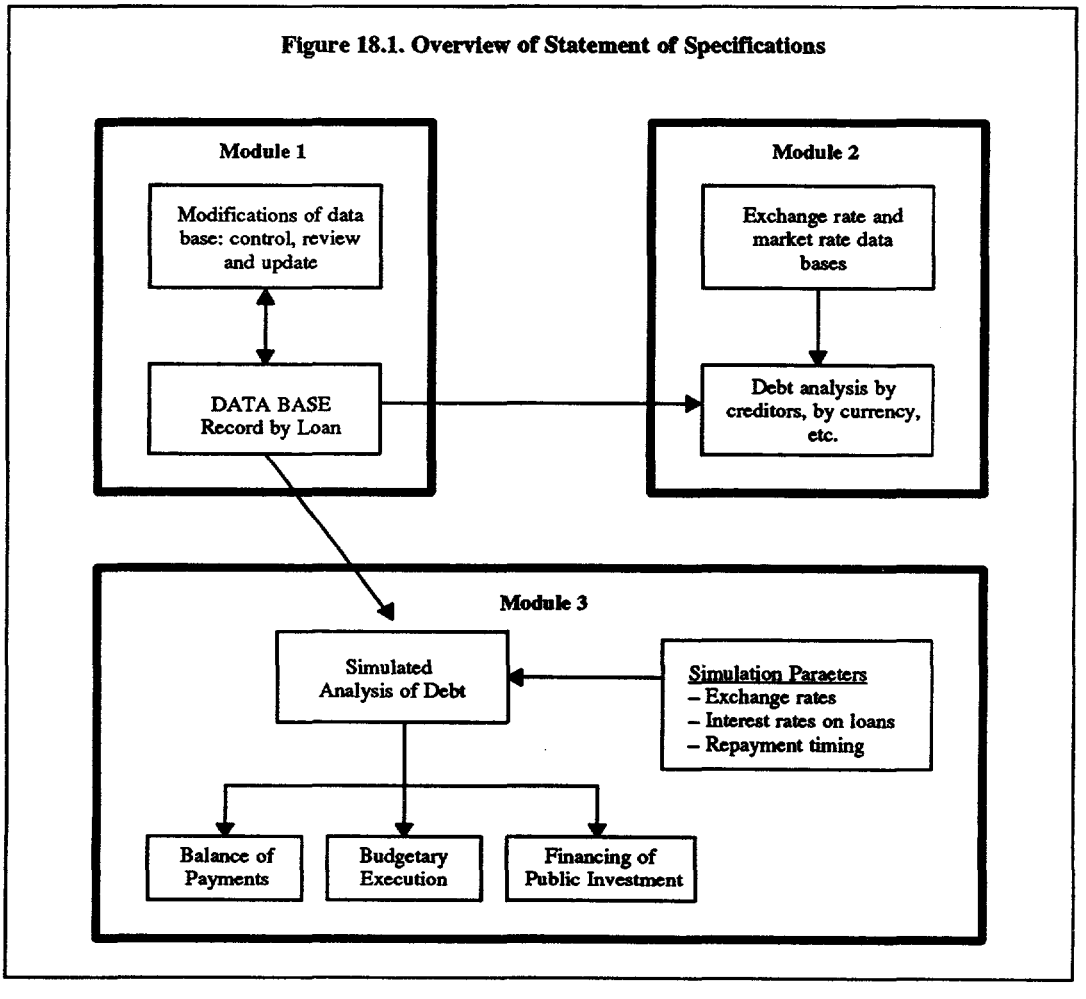
- Module 1. Day–to–day management of the debt
- Module 2. Periodic analysis of the public debt, particularly in terms of commitments, outstanding amount, and amortization payments
- Module 3. Simulation of the effects of changes in the internal parameters (timing and amount of drawings made) or external parameters (changes in exchange rates and market interest rates, etc.) on the principal debt aggregates.

The major functions of these three modules of the application are summarized in Figure 18.1 [and described individually below].

Module 1: Public Debt Management. For day–to–day management, the data processing application should make it possible to monitor each loan in detail on a real time basis. To do this, it would be best to update a full descriptive file on the loan which will show the **identifying variables**, the **technical characteristics** of the loan, and the past history of and projections for the **maturity schedule.** The **identifying variables** include:

- The identifying number of the loan corresponding to the number used by the World Bank in its annual listing
- Name of the debtor (e.g., government, etc.), making it possible inter alia to determine whether it is a direct debt, guaranteed, debt or on–lent debt
- Name of the lender and the type of creditor (foreign government, multilateral organization, supplier(s), banking system, etc.)

Figure 18.1. Overview of Statement of Specifications



- Nature of loan (concessional or otherwise)
- Purpose of loan (project X, exceptional assistance, etc.).

The **technical characteristics** of a loan include:

- Date on which loan was signed
- Date of first and last repayments
- Type of interest (fixed interest rate or two separate rates A and B applicable to two periods)
- Interest rate (money market rate, bank prime rate, LIBOR, etc.)
- Amortization rules (fixed principal and declining interest, fixed annual amounts, etc.). On these bases, the principal and interest amortizations may, if appropriate, be determined automatically by the computer or entered manually by the operator.
- Currency of the loan (U.S. dollars, French francs, etc.)
- Selected meaningful ratios (e.g., subsidy components, effective interest rates, term of loan)
- Amount of loan in foreign exchange (initial amount of loan and foreign exchange rate adjustments).

The past and projected repayment schedule of the loan, or its **maturity schedule**, is expressed in terms of foreign exchange for each loan. It shows for each maturity:

- The outstanding balance corresponding to all net drawings and amortizations
- The amount available (i.e., the difference between the commitment and the outstanding balance)
- Transactions during the period, consisting of drawings and various additional activities
- Debt service (principal and interest)
- Arrears (in principal and interest), calculated annually.

Upon completion of Module 1 processing, the operator will have a data base consisting of a record for each loan that contains its identifying variables, technical characteristics, and maturity schedule. Using simple programs, the operator will be able to consult this data base, correct it, or add to it. As a rule of thumb, the data base must be able to cover roughly 1,000 loans. It will be noted that some components of the records, such as amortizations, may be calculated and checked directly by the machine.

This module may also be used for administering the debt from an accounting standpoint. To this end, the loan record could be supplemented for each period by:

- The precise dates of drawings and maturities
- The amounts of charges associated with debt service (which may, as appropriate, be calculated by the computer).

In this way, the management of the debt directorate can print accounting statements of debt settlements. These may be compared with the notices of maturities received from foreign creditors.

Module 2: Analysis of Public Debt. For this objective, it will be necessary to have a detailed data base on exchange rates, which includes, among other things, the average rate for each quarter and the end-year rate, so that the components of the records on the various loans may be aggregated. The main aggregates that should be produced by this analysis are as follows:

- Breakdown of public debt (balance available, drawings, debt service), classified in various ways
  - By creditor (for example, the following grouping could be used: French Government and CCCE, international organizations, suppliers, budgetary assistance)
  - By foreign currency involved (U.S. dollars, French francs, SDRs, CFA francs, etc.)
  - By debtor (distinguishing between the direct debt and the guaranteed debt).

This analysis could also cover past activities and future projections of:

- All the external public debt of a country with respect to suppliers and private banks, distinguishing between the debt of the Government (direct debt) and that of the public enterprises (guaranteed debt)
- The external debt of the parastatal sector, by debtor.

Several fundamental ratios could be generated systematically when the maturity schedules are aggregated.

Module 3: Simulations. The principle of these simulations is to make possible analyses of the public debt under varying assumptions, without modifying the

basic file itself. The simulation module must make it possible to answer such questions as:

- What is the impact on monitoring the debt of a given policy with respect to drawings (amount and timing)?
- What is the impact of a change in exchange rates on debt service (e.g., F7 per U.S. dollar as compared with F8 per dollar)?
- How is the amount of a debt rescheduling affected by changing the characteristics of a given loan (a problem commonly addressed when preparing for Paris Club meetings)?
- Using various assumptions for changes in tax revenues and in current expenditure, what will be the pattern of the fiscal deficit in light of debt rescheduling?

For this third module, the application should be able to print out the main debt aggregates indicated for Module 2 in light of changes in the various parameters:

- Changes in exchange rates
- Changes in interest rates (on selected loans or all loans)
- Modifications of repayment terms (delayed repayment, codicils, etc.).

In addition, debt analysis will be linked through its connections with the national accounts to aspects of economic analysis, such as:

- The table of Central Government Financial Operations (IMF approach)
- The table on financing of the budget deficit
- The public investment budget
- The monetary survey (foreign assets, etc.).

Software Developed by ADETEF

We provide below a brief discussion of the various modalities of the indebtedness and debt management software developed in cooperation with the Directorate of Government Accounting of France.

Operating Characteristics. The guiding principle of the software is that each event in the life of a financing agreement making up a country's public debt (signature, drawings, scheduled maturities, maturities paid, etc.) should be monitored, managed, reviewed, and edited either separately or globally. In other words, it should be possible to retrace, for example, all the drawings made under an agreement, all the payments or arrears relating thereto, and all the payments made under all agreements during a given period.

Data Used by the Software. Financing agreements that are already in existence when the system is first set up and new agreements entered into subsequently, when the software is already functional, are entered into three main files:

- The agreements file, for all firm data
- The drawings file, for all known drawings and anticipated drawings (projected dates and amounts)
- The maturities file for each projected debt repayment maturity.

The maturities are either calculated and entered automatically by the software or calculated separately and entered at the keyboard. These files conform to the special principles set forth below. The software also uses eleven ancillary files, which contain reference data for use in calculations and checking data validity.

The agreements file contains all the firm data on the loan in question, such as its identification number, the amount, the currency involved, and the name of the lender. The validity of the various characteristics is checked regularly, during input, by the software itself, which makes reference to the ancillary files that have been created during installation of the system (see below). For example, the ancillary file on insurance will check to see that there is consistency between the nationality of the lender and the name of the insuring body (a French lender can be insured only by COFACE, a German lender by HERMES, etc.). In the same way, a number of data deemed essential, such as the date of signature of the loan, will be requested by the system, in that it will not validate the input of an agreement which does not contain this information.

The drawings file contains all the characteristics of each drawing, such as its amount, date, and the specific repayment terms. Moreover, as in the case of the agreements file, a number of automatic checks are performed by the software. The operating principle of the software requires that for each agreement introduced into the agreements file, there will be one or more drawings introduced into the drawings file, the sum of which must equal the full amount of the loan. By referring to the

drawing date, which is entered by the operator, the software will regularly be able to assess the status of the drawing (real or anticipated). Two fields are provided for this purpose, a "real" date for an actual drawing and an "anticipated" date for a provisional drawing. This method enables the manager to access information and perform calculations or printouts on the status of the borrowing, not only on the effective debt at a given date, i.e., on the maturities payable pursuant to amounts actually drawn as of that date, but also projections, in particular the projected debt service and outstanding debt.

The maturities file contains all the characteristics of each maturity for each loan, including the projected maturity date, the amounts payable in principle, interest, charges, etc. As regards the determination of the amount of the maturities, the software offers two possibilities:

- Manual entry of each maturity, which allows for atypical maturity schedules
- The automatic calculation and input of the maturity schedule (dates and amounts) by the software.

The automatic calculation method is as follows:

1. The operator keys in a certain amount of data requested by the software about a given drawing, which relate to the method of calculating maturities. These are:
   - Date of the drawing
   - Amount
   - Date of first principal repayment
   - Timing of principal repayments
   - Number of maturities (term)
   - Rate used
   - Date of first interest payment
   - Timing of interest payments.
2. When the above data have been validated, the software proposes performing the calculation and automatically enters the corresponding maturities. The calculation is then carried out in accordance with the mode regularly used in the public debt area, namely:
   - Repayment of principal in constant maturities
   - Calculation of interim interest between the date of signature and the first date for a principal repayment
   - Calculation of "normal" interest as from the same date.

The maturities file is also used to record the payments made. For the operator, this consists simply in keying in the effective date of payment for the maturity concerned, in the field provided for that purpose. The existence of the two dates (projected maturity date and effective date of payment) allows the software to distinguish the following, whether at a given date or for a given period and for one agreement, a group of agreements, or all agreements:

- Amounts that have fallen due
- Amounts paid
- Amounts unpaid (by calculation from the first two).

The purpose of the **ancillary files** is to "personalize" the software by introducing data specific to the debt of the user country, and then to allow for calculations and the running of data validity checks. These files must be provided with certain information when the system is first loaded, but may be updated at any time during a work session. The following brief description of each of these files shows their purpose and mode of operation.

The **exchange rates file** contains, for each foreign currency, its customary abbreviation (used during data entry), its rate against the domestic currency, and its rate against a reference currency, as well as the value date of these rates. When a loan agreement, drawing, or maturity is entered into the system, the software checks for the existence of the specified currency and its proper spelling (to avoid subsequent sorting and indexing errors). The exchange rates entered will be automatically used by the software in any calculations of domestic currency amounts or amounts in the reference currency.

This is in effect a double file, in that there is both a base file containing the real rates for each input date and a working file. The latter makes it possible to perform calculations with different exchange rate assumptions. During each working session, the operator has the option of selecting the data proposed by the software ("base" file) or using a modified file ("working" file).

The **interest rates file** associates various codes used during data entry and when performing calculations with the various types of rates set forth in loan agreements (fixed rate, LIBOR, money market rate, etc.). The software automatically accesses this file to validate

entries for the calculation of maturity schedules. As in the case of the exchange rates file, the user can choose between the base file and a working file.

The **lenders file** contains a certain amount of information about each lender, ranging from the lender's customary lending approach to its exact address, including the names and addresses of the correspondents within the institution. This file is used as a check during input and as an "address book" for contacts and correspondence.

The **payment reference file** is structured the same as the lenders file. It contains information on the entity which, while not the ultimate recipient of payment, serves as the entity to which payment is made for the account of the recipient. The file is used in the same way as the lenders file.

The **framework agreement file** is used to identify framework agreements, largely for purchasers' credits. Each use (FAA) of a purchaser's line of credit makes reference to this file. The software is then able to make various groupings and perform calculations (of the available balance, for example) on all the uses and drawings under one framework agreement.

The **insurance file** lists the credit insurance companies of the creditor countries. It contains the addresses of all the institutions. The software accesses it to check the validity of data keyed in.

The **national references file** indicates to the software the "national" characteristics of the user, such as the names of the ministries and public agencies involved in public debt management. It also contains definitions of the national currency and the reference currency in which amounts are to be recorded.

The **country file** identifies the names of lender countries and their membership in specific country groups such as Paris Club members, Arab countries, etc. The choice of country groupings is made by the user when the country file is created and depends on the classification criteria the user deems appropriate.

The **economic sectors file** includes the names of the sectors of activity and the code for each sector. Sector information is used in the publication of statistics. This file is used by the software to validate nomenclature and data input.

The **credit type file** indicates the names of the various types of credit (e.g., purchaser's credit, financial credit, bilateral aid, etc.) and assigns a code to each. The data contained in the file, i.e., the classification of credits by type, are user-defined when the file is created, in accordance with the classification criteria deemed appropriate by the user.

The **borrower type file** contains the names, acronyms, and codes for the borrowing national entities. Typically, the borrower may be the government, one of its components, perhaps a government corporation or mixed capital company, or even a private body to which the government has extended its guarantee.

Printouts

All the information and results of calculations referred to above may, of course, be consulted directly on screen at any time. However, it is absolutely essential to be able to print all these data. The software offers as wide a range of formatting possibilities as it does possibilities for the processing of figures. A number of output formats are executable automatically by the software, simply by making the appropriate selection from a special printing menu. These output statements may be published with any of the following sorting or indexing criteria:

- Number of agreement
- Payer or lender
- Currency of loan
- Name of lender
- Type of credit
- Type of debt.

In addition, these printouts may cover all agreements, a subset thereof, or even just one, with respect to either a particular date or a given period. The system will ask the questions it needs to have answered in order to define the characteristics of the "environment" for the document the user wishes to print. All the reports can be published either with itemized breakdowns for each agreement or with lines reflecting subtotals and totals only. The following printout formats are available.

1. Formats corresponding to IBRD reporting forms

- Notification of commitments (IBRD Form No. 1). This statement provides, agreement by agreement, the characteristics of each loan such as the date of signature and amount, the interest rate, scheduled maturity dates, names of lenders, in the precise form requested by the IBRD.

- Maturity schedules (IBRD Form No. 1A). This statement lists, maturity by maturity, the amounts payable in principal and interest for each loan contracted.
- Statement of agreements and transactions (IBRD Form No. 2). This statement shows, for a given year, the situation at the beginning and end of the period as well as the drawings and payments effected during the year covered.

2. Current management printouts

- Summary of agreements. This statement provides, for each agreement, the exact status, i.e., the amounts for which an agreement was signed with the respective dates, as well as the terms of the loan, including the type of debt, type of credit, rate, possible margin over a given rate, and the first and last repayment dates for principal and interest. When classified by number, this statement corresponds to the IBRD's Form No. 1, although with a different format.
- Outstanding balance, arrears and projected service. This statement shows, for each agreement:
  - The status as of year N for the outstanding balance (remaining principal minus the principal amounts paid as of the given date)
  - The status of principal and interest arrears as of the same date
  - The projected situation as regards principal and interest service on the debt for years N+1 and N+2
  - The projected status of overall debt service for years N+3 and N+4.
- Statement of payments. This statement provides, for each agreement, either in the original currency of the loan or in domestic currency or in the reference currency, at a given date, in principal and interest:
  - Amounts which have fallen due
  - Amounts paid
  - Amounts in arrears.
- Settlement letter. For each payment to be made, the software can generate a settlement letter corresponding to the document customarily used by the manager or payment officer of the debt budget for ordering the paying agency to effect payment (generally the treasury or the central bank). This letter mentions, among other things, the purpose of the payment, the value date, the amount written out (principal, interest, charges, etc.), the name of the payee, the account number, and the address where the payment should be made.

3. Special case of the budget

The debt budget is made up of all the payments to be made over a given period, generally one year, for purposes of debt repayment. The software is, of course, able to print out this debt service in accordance with various classification criteria, such as domestic debt or external debt, foreign currency, countries, lenders, maturity dates, etc. It will do the same in terms of either domestic currency or the reference currency.

Furthermore, the software adds two interesting possibilities:

- Distinguishing between a real budget for debt service, calculated on the basis of drawings effectively made, and a projected budget calculated on the basis of anticipated drawings which have not yet been made
- Saving the budget thus created.

The latter possibility is of interest because it is possible to save in memory, and subsequently in files, the budget for a given year as first drawn up and set at a given date, then compare the projection with actuals at a later time.

DISCUSSION SESSION

Mr. Hunsberger: Thank you very much, Mr. Descargues. I think we would all agree that Mr. Descargues's comments and observation are very much in line with the presentations we have heard over the last two days. We are very pleased that Mr. Descargues and ADETEF will be participating with us in the future in a number of seminars and programs, in particular for our debt management course planned for Dakar, Senegal, in July. We hope to have close cooperation with ADETEF in matters of technical assistance and debt management

in the future. I open the floor to any questions to Mr. Descargues or Mr. de Chalendar about ADETEF's work or programs.

Mr. Hunsberger: Perhaps I could ask a question myself, if I may. Would you explain in a little more detail the financial costs when ADETEF works with a software firm? Does ADETEF, as Mr. de Chalendar explained, cover the cost of its own staff? If so, is the cost of the software firm paid by the country itself, or how do you divide the costs?

Mr. de Chalendar: After ADETEF carries out a study, it proposes, for acceptance by the government concerned, the use of a software firm for the introduction of a software package. If that government, be it Niger, or Mauritania, or any government, agrees with the idea of using one of these software firms, and if the World Bank also agrees, there can be a comparison of the products suggested by the different companies. Then an estimate is produced. For Niger and Mauritania, as I said earlier, the cost of the software package had already been financed by an earlier project with the World Bank. So the software was provided free of charge by the software firm. The only costs were those for adjusting and tailoring that software package to the Niger situation. There were a certain number of man–months, as they say, allocated for that adjustment. There was no bidding involved because the software package already existed; there were merely discussions between the World Bank, the national government concerned, and ADETEF, which had also signed the general memorandum of understanding with the Niger government. The discussions with the software consulting firms simply dealt with the costs for adjusting this system, which costs were underwritten by the World Bank. We could not ask the software firm to provide the time of its people free of charge; that would not have been appropriate or proper. The French ministry makes its manpower available without billing the country involved, because this is a contribution of the French government to international cooperation. But we couldn't ask a private firm to do likewise.

19 Country Presentation by Participants from Mexico

Mariana Paredes and Imelda Tamez

Ms. Paredes: I would like to express gratitude for the invitation extended to our country to discuss with you the administrative structure adopted by the Mexican government and to address issues relating to official public debt, particularly external debt. By way of background, let me mention one of the manifold problems, other than financial, that we faced at the end of the last decade, namely, data generation. Public sector agencies and even the Federal Government reported data in myriad breakdowns and presentation formats to three different public entities for subsequent consolidation. These entities were the Central Bank, the Nacional Financiera—which is a kind national industrial development bank—and the Finance Ministry itself. They in turn, irrespective of their in-house use of the data, supplied information on request and even published the data.

Then, with the enactment and publication of the Public Debt Act, the Finance Ministry became the sole channel for (1) submission of periodical reports from the public sector on this information, (2) consolidation of the data in various formats, and (3) responses to requests for information. Information requests come from the different Federal Government agencies, from the public and private sectors, from the Mexican Congress, and from abroad, for example, from the international financial institutions and the international banking community. The publication of the Public Debt Act started the legal framework for all this by specifying and regulating where the authority actually would lie. The positive impact of the Act since its publication has grown considerably.

Among the main improvements, first of all has been bureaucratic streamlining. All reporting is to a single ministry with a uniform, preset format, content, and periodicity. The periodicity involves, for each unit, weekly reporting of cash flow and monthly reporting for credit lines.

Secondly, the quality of information has improved through the use of uniform parameters, such as exchange rates and cut-off dates, and standardized use of certain concepts and criteria. The improvement is reflected in a reduction in response time for requests for information from the various authorities. In particular, there is an enhanced ability for the quick responses required in the various international debt rescheduling negotiations.

This comprehensive data system was put to intensive use when there was a period of domestic financial crisis. At that time, Mexico was not able to continue servicing its debt on the terms of the loan agreements as they stood. So officials appointed to negotiate with the international financial community sought the agreement of each creditor bank to modify Mexico's external debt profile. That was the beginning of the various restructuring stages. These negotiations for a modified debt profile simply could not have gone forward without precise and reliable figures on the make-up of the external debt balances. This required a breakdown by credit line and by creditor, as well as classifications of information into a whole host of sophisticated presentations, such as tables by type of loan, source, country, currency, maturity, type of rates, or surcharges and fees. Because we were able to supply this information, it was possible to negotiate a new debt package with the commercial banks of various countries.

Ever since the initial experience of the emergency use of this comprehensive data system, we have been providing continuing back-up for the different debt negotiations. These include two other restructuring exercises, namely, the Paris Club agreement and zero coupon bonds, as well as the jumbo loan agreements. All of these restructuring agreements have enabled Mexico to secure new money or, failing that, to lighten its financial burden.

As to the administrative structure which has been set up with the Mexican government to deal with external credit matters, most of the authority has been delegated to the Finance Ministry, which is responsible for drawing up a national financing program that is then approved by the President of the Republic. The Finance Ministry is composed really of two Undersecretariats. One is responsible for all negotiations on loan agreements and debt restructuring. The other Undersecretariat regulates,

authorizes, supervises, and records credit transactions, be they external or domestic.

The Undersecretariat for International Financial Affairs, which is responsible for negotiating the contracting of loans and management of rescheduling of external credits, is itself composed of three directorates general, whose respective functions are procurement of external credit, technical matters of external credit, and international financial affairs. These administrative modules have the following tasks:

- Contribute, through coordination with the Directorate General for Public Credit, to the development of the government's public credit policy.
- Devise the policies and programs for the access of public agencies and entities to secure resources on the international capital markets.
- Participate in the preparation of the loan programs to mitigate foreign exchange requirements.
- Evaluate external financial projects and give an opinion on their proposed lending terms and conditions, which findings are then forwarded to the Directorate General for it to exercise its authority.
- Deal with matters relating to the enforcement of the Public Debt Act.
- Propose foreign trade financing policy to the different authorities.
- Coordinate facilitate, and evaluate loan agreements with the IBRD and the IDB.
- Participate with the competent bodies in the preparation of cooperative or coordination agreements in programs for development and measures to attract foreign investment.
- Design financial instruments for external debt reduction.
- Submit, for approval by senior authorities, opinions on requests received for external debt capitalization.
- Promote the development of foreign investment, foreign trade, and tourism to reduce the outstanding foreign debt.

The Undersecretariat for Finance and Public Credit has two Directorates General, of which one is responsible for public credit and deals with matters related to our topic today. The responsibilities of this undersecretariat are as follows.

- Formulate, in conjuction with the Undersecretariat for Finance and International Affairs, the national program to finance development, in accordance with Federal Government policy and subject to the approval of the President.
- Manage public sector debt information and data.
- Propose budget allocations relating to the debt.
- Draw up programs to meet foreign exchange requirements.
- Propose the authorization and registration [requirements] for signing of loans.

I would like now to deal in particular with the Directorate General for Public Credit, which is responsible for setting standards, managing, coordinating, and supervising the loan agreements for securing resources, including their compliance during implementation with contractual commitments. It also keeps the registration of public debt components up to date. To carry out these responsibilities, the Directorate General is divided into four units: Public Debt, Financial Programming, Private Sector Debt, and Domestic Debt. The Public Debt Unit gives its opinion on requests for authorization of loan agreements submitted by public sector agencies and enterprises. To do this, it considers the overall budget ceiling that has been approved by the Mexican Congress, the authorized allocation, the application of resources, and the terms and conditions of the loan contracts. The comprehensive information and data management system to which I have already referred is located in this unit. It also maintains accounting records of the federal government debt, both domestic and external. It is responsible for maintaining records for the totality of financial transactions from the beginning of the negotiation process throughout the life of the loan. It updates the loans' terms and conditions to reflect rescheduling agreements.

The Financial Programming Unit carries out general tasks regarding public finance for both the parastatal sector and the Federal Government itself. It reconciles income and expenditure within the context of the financing required for both external and internal resources. In addition to the powers conferred upon this unit by the internal regulations of the Ministry of

Finance, the Public Debt Act also provides it with the basis for:

- Appropriate programming of the debt
- Signing of loan contracts for new financing
- Checking, monitoring, and recording all the credit operations and contracts
- Compliance with financial obligations.

The tasks of programming and monitoring the public debt are grounded in a considerable body of legislation. They are carried out using technical instruments, which in turn involve a sizable team of civil servants. An important part of the system handles the budget and financial information that comes from the public sector entities. On the basis of this information, requests for financing are assessed, an authorization to sign for the financing is either granted or denied, and this in turn is passed back to the public credit sector.

The Public Debt Act has been an effective instrument for achieving the objectives set forth in the Act. In accordance with this law, the Mexican Congress receives the credit policies and programs from the Ministry of Finance. The Congress reviews and approves both their qualitative and quantitative aspects. Then the Congress authorizes the net amounts for direct indebtedness, both domestic and external, required for the country's financing. This must be consistent with other constraints such as the law on income and the budget for expenditure. In this programming stage, the executive authority under the President of the Republic proposes the amounts of debt, and makes known the projects and programs which have been approved by the other ministries.

As to the manpower resources available to these different units, this is highly specialized manpower and the turnover is low. As to the amount of experience on the job, the average number of years of service for the civil servants in this field is eight years. The present director has been working in this field for twenty years; I have eighteen years of experience in this kind of activity. As has been the case in other countries, we were hired as students; some of us have stayed on and have become increasingly specialized in the field. This has been both interesting and very necessary as well.

Now my colleague is going to discuss the computer system that has been installed. If you have any questions, we will be glad to answer them. Thank you.

Ms. Tamez: I am going to speak to you this morning about something that you have heard much of, during the last two days. I will try to summarize the problems that Mexico has faced in setting up its [debt management] data base and trying to make this into a stable and dynamic tool.

The first computing system that handled debt information for Mexico was developed at the beginning of this decade. At that time, Mexico had a debt of some US$33 billion. This package was developed on a [Hewlett–Packard] HP3000 minicomputer. All of the programs at that time were done in FORTRAN. That was nearly ten years ago, and at that time we had a series of computers to produce the reports requested by the government. With the amount of debt as it then was, that hardware and software were sufficient to carry out the task in a satisfactory way.

Serious problems began with the first restructuring of the debt. That was when our old system began to have problems, because its design did not take into account changes due to renegotiation of the debt. Among these changes were modifications of amortization schedules, flexibility for variable–rate interest rates, and currency conversions. Another complicating aspect of importance was the transfer of debt in the secondary market. In a single day, one bank, bank B let's say, might sell some of its Mexican debt to bank C. The same day, bank C might split this three ways and sell portions to banks D, E, and F. All we had [to follow these transactions] was a telex that listed the operations for us. We had no credit numbers or serial numbers in our registries for these operations that would allow us to trace which bank really owned which debt at a given time. So following these flows on the secondary market was very difficult.

Still, we were surprised to see that our system on the HP3000 was able to meet a number of new demands. This was also due to the skill of our programmers, who were able to keep the system functioning. But more serious problems were forthcoming than the ones I just mentioned. Because of these, we decided to change our computer hardware. As is often the case, the authorities were reluctant to approve this. They said, "If the system so far has been working and giving good results, why should we go in for a big change in hardware?" We who were working on the equipment knew that there were problems; so we had to push for a decision from the authorities to buy new equipment. We were being asked to do more and more reports, with more detailed

information. And, in addition to data on public debt, these new reports increasingly required data on revenues, taxes, and so on. It got to be just too much for us. We had to spend a lot of time convincing our authorities that the computing requirements for economic engineering were becoming much more complicated, so the design of the system had to be more complex.

We spent about eight months studying problems in this field, just to come up with a design for a new system, something flexible, as I said. Last year, for example, we had zero [coupon] bonds come into the debt negotiations. We didn't know what else was going to come up during future negotiations, so we needed a system that would be able to deal with any new input, any changes like that. I should also note that the frequency of such changes is constantly increasing; all sorts of people are asking us for different kinds of information. So, I repeat, just studying the kind of a system we needed took us eight months.

What we wanted was a [computer that could support the] XENIX operating system, something that would allow us to have multiple users working at individual workstations. We thought this would be a good idea, because purchasing of hardware was a big problem. We more or less knew what we wanted, but unfortunately the higher-ups who had to approve the purchase really had no idea of the seriousness of the computing problems we faced. They have other problems of course, trying to balance their budgets and find money. Budgetary allocations for solving these kinds of problems, in light of the benefits, are very minimal. So we had to do a little bargaining with them. We wanted multi-user equipment, but this was much more expensive. The package that we now have is one that will allow us to work with microcomputers. I mention this in relation to the problems that one has when choosing hardware for a system.

As I said, we had a lot of budgetary problems, and these also had effects on personnel. For example, in contracting for personnel, it was difficult to find individuals with an adequate level of skills. We need very highly skilled people to work here, and not only for developing the computing system.

This project was a real challenge for Mexico because it was a very complex system. I think we have achieved good results since then. We who are experienced in this field realize that most people don't know that it can take one or two years to come up with a really decent system. Most people think that we can use a computer or push a few buttons and come up with an ideal system design. I remember when we were studying this, my bosses were saying, "How long are you going to keep on working on this project? You have been reading tons of material on it, can't you make a decison?"

We decided to develop one module to deal with swaps, and it has just about been completed. The people who make decisions in this field are very happy with the use of this module. But this is only one branch of the whole field of information with which we have to work.

What about the data base itself? The data base that we used on the HP3000 system now must be transferred to the new equipment. This is the main trunk line of our information. We are now having to do this transfer manually. The main objective of the new system is that all movements should be registered automatically in the data base.

When we had these swap operations occurring, we did some verification of data. We were receiving information from the twelve service banks in Mexico for commercial credit, but there was a serious problem. As someone here mentioned yesterday, certain government agencies were rather jealous of their information, protective of it, and I would say this must be a worldwide problem. I requested data from all of these banks in a specific format, using specific fields. Some of the banks answered that they couldn't do it. Some said the data were requested on diskettes—floppy disks—and they did not have them. I then asked if they could transfer the data by modem. Other banks said that was impossible. Some banks sent the data by mail. Usually service banks send quarterly reports containing this information to Mexico; after I had asked them for the information several times, all they did was to send me the written report or the report on a floppy disk. When I tried to put this in the computer, I realized it wasn't information in the format and fields that I had requested. So we had serious problems with the service banks; they do not supply the information we request.

To return to the situation that I started to describe, concerning personnel, that is also a serious problem. In this field, people may work for two to three years with our system, gain experience, and then find that they can earn three or four times more in private banks or elsewhere in private enterprise. This means we have to make a constant effort in training people just to handle our equipment.

Another module we have developed to use with our equipment and data base is a model with which we can simulate the behavior of the debt on several different negotiating hypotheses. This was a very interesting exercise, because Mr. Gurria was able to make several economic projections; this is really a part of what we call "economic engineering." We are very proud of our work in that respect, and some of our people were using solely Mexican personnel to do this.

Another program deals with credits from the IDB and the World Bank. Let me repeat once again that all these modules are being dealt with separately now. In five to six months, we are going to start running tests on putting data in our data base and processing it. Another objective is to have a fairly versatile method of producing reports. I should add that sometimes we use CLIPPER software for our reports. Our experience with the new system is showing us what other kinds of reports might be requested of us.

I think that is a general over view of the situation in Mexico concerning computing for monitoring public debt. Thank you; if you have any questions, I'd be happy to answer them.

Ms. Paredes: Let me just conclude on this computing system by saying that we have a very large data base supported on our HP3000 computer. We have the whole history of the debt, line by line. It is very complete, very good. What we need now is technical assistance to in fact use it, to use the system. The machine's capacity is now obsolete because, as Ms. Tamez said, it was installed in 1980. All of the restructuring efforts [since then] were managed using this machine, but by [finishing the work manually, based on the output it could give us]. Speaking of swaps and portfolio sales, these were done using our microcomputers in stand–alone mode. In other words, we are using the microcomputers off–line [from the HP3000] to do this. The microcompters' capacity of course is very low compared to the requirements for this kind of processing. Also, there is still a lack of technical personnel, as we said earlier. Many of us have several years of work in this field, but usually the people leave for higher paying jobs after a short period of working on these machines. We face constant problems in cuts in our budgets, and so on; we never have sufficient resources. So, we've had good results but realize it is very difficult to have a comprehensive system.

We are working with the World Bank now, exchanging data on diskettes, and so on. Although this effort has had its problems, I think we're doing pretty well in using these magnetic media. We cannot at the moment do any simulations; it's a shame to have such a huge data base and not be able to do simulations. Thank you.

DISCUSSION SESSION

Mr. Husain: Thank you very much. That was a very facinating story about the situation in Mexico. I was working with the Mexican data tape before I came here, and I want to ask you the following question. When the secondary market sales occur and, as you pointed out, there are whole chains of transactions, in the reports you send us on magnetic tape, are you updating the information to reflect these secondary market sales? Or do you code the loan information only for the original syndicated participants? I am not sure what finally comes up to us. Is it the end purchaser of the loans or the original participants in the syndication?

Ms. Paredes: We update that information as much as we can. As we said, when we requested the information from the banks, even the current balance, for example, they would not send it to us. They do not send us information in detail. Certain codes that they send us we cannot match with our own. PEMEX, for example, knows more or less to whom they owe money, and this is what we try to find out. Whom do they pay? We try to follow the payments, and we compare this with our information from other sources. We know that we are not completely up to date. There's probably one to three months' delay, or lateness, in our information. In fact, we ask for information from the banks to see what this gap is, to see how far behind we are. And we try to get the information from the debtors on our end. It's not a very high figure. Once we are operating with our new system, I think updating the information will not be a very difficult task for us. Right now, we are talking about two months' gap. That is the maximum, I think, and that's not really a lot.

Mr. Husain: Do you make a cross–check with Citibank or with the economic advisory committee that assists the

Bank Advisory Committe on Mexico? Do you exchange data, or do you supply them with data, or do they have independent sources of data from the commercial banks for sales on the secondary market? I ask because the new money base keeps on changing, depending on which cut–off date one uses. I suspect that the Bank Advisory Committee, which in Mexico's case is chaired by Citibank, would have its own data base. Do you make any comparison or cross–check with them?

Ms. Paredes: Yes, ordinarily. At the end of the financial period, we do compare balances with the companies and the banks. If it's not the agent, then it's the bank directly. On a day–to–day basis we get telexes regarding payments. There is authorization, and in fact the obligation, to validate the payment that each firm will make abroad. Our statistics show the daily schedule of payments. We tell the enterprise there is an agreement and it has to pay this much in principal, this much in interest. We send a telex to the Central Bank, which sends us the validation. Then the foreign exchange is deposited in the bank where the payment is to be made. So we keep this all very much up to date.

Unidentified Questioner: I do not have a question but rather a comment. Although there has been a reference to the amount of money being handled, we haven't discussed the number of transactions that are involved. I believe that Mexico has a volume of information, or data as the computer people would say, which is very high. This has to be borne in mind when you are selecting your hardware, because the volume of data that you have to handle in a case such as Mexico would be very difficult to manage with a microcomputer facility. The fact that at the present time they are working with what I would call a large piece of equipment, even if it is obsolete, has at least enabled the Mexican computer unit to keep its data more or less up to date. To move to a microcomputing environment would, I think, facilitate some statistical analysis work. But I do not think it is going to be very successful in terms of processing time.

We all must bear in mind the volume of information and data that will be handled and the desired processing time, because there is at the present time software as well as hardware that does provide more rapid response. It is not necessarily the underlying philosophy of microcomputers to provide this very fast processing time, as is the case with the larger kinds of hardware such as mainframes.

Ms. Paredes: I am not conversant with the technical aspects of the computer system, but I have been working for years on the debt problem in the administration field. We have a lot of experience; we have been around for a long time. We are used to dealing with the figures, checking, cross–checking with the banks, and so on, and I think we produce results. We feel very sure about our figures; we think they are reliable. In fact, all the debt negotiations have been carried out with our figures, and the banks have accepted them. As to what is under review at present, I do not know whether our authorities are going to approve the new expenditure, but we are in fact getting a great deal of help from the microcomputers. They have been useful. I do not want to go into the technical aspects, because I really cannot tell you, but the money invested is well spent.

Mr. Stillson: I would like to ask what have been the requests of the Mexican computer people for hardware. There was sort of a long story, at least as it came through in the [simultaneous] translations, about your negotiation process [for new computer hardware], but neither what the result was nor the specifics of what you requested. It seems that this hardware question has come up several times, in several countries. When we have talked about the computer aspects, we have really talked more about the software. The hardware part is also important; it would be worth a short discussion as to what sort of hardware is minimally adequate, what sort of hardware would be reasonably good, and particularly whether a microcomputer, perhaps a 386–based microcomputer [i.e., based on the Intel 80386 microprocessor] is in fact adequate to run a substantial loan portfolio and simulations.

Perhaps the Chileans could contribute also, because they said they had some hardware problems, and yet they do, like the Mexicans, run a very good system. First, though I would ask what have been the results of the Mexicans' negotiations with your authorities for hardware, what you requested, and what you think is necessary to run the volume of transactions that Mexico has.

Respondent for Mexico: I think the results have been positive. We have had all the data necessary to carry out the [debt] renegotiations. I cannot tell you what would be the appropriate hardware; I can tell you that we are handling some 12,000 lines. This means syndicated loans with some 600 different banks [participants], where for each participant there are two or three different rates and

two or three different currencies. So this is highly complicated.

As for the technical aspects, I really cannot give you the information. I could give you the volume of data, but I canot tell you what would be the appropriate hardware. As to the hardware that we have requested, we want to have a multi–user system. For example, there are UNISYS, NCR, and IBM [mainframe] machines that would have the characteristics [we want]. These systems can include disks with 680 megabytes of storage and tape facilities. Microcomputers could be used as terminals on the mainframe system or as independent, stand–alone processors. We have asked for equipment with 20 [microcomputer workstations], so a [mainframe] unit with 360 megabytes would be quite sufficient if we had the 20 workstations as well. That would do. Does that answer your question?

Mr. Stillson: Yes, thank you. Perhaps Robert Valantin could comments on this, or Hugh Dowsett.

Mr. Dowsett: I would like to make a few comments on hardware in general, because I think this is an issue, as was pointed out, that many countries have faced. Ten years ago the choice was fairly simple. You could choose a mainframe or perhaps a minicomputer, but there was no other choice. Around 1980–81 microcomputers became viable means of handling a debt system, so long as it wasn't too big a country with too many loans. Over the past few years, we have seen vastly increased power and capacity of microcomputers. This does not mean there is not a place for large mainframes. When you look at a country [whose debt is] the size of Mexico's or Brazil's, where the number of loans is pushing ten thousand, they require the capacity of a mainframe.

However, I think one must also look to the future. A microcomputer gives you much more flexibility. It's now very easy to put 300 megabytes, 300 million characters of information, onto one disk attached to a microcomputer. These disks and the processors of [the newer] microcomputers are running as fast or faster than mainframe computers were ten years ago. So what we are seeing is a rapidly evolving technology. We have much more available, readily usable, software for microcomputers. Whereas one may want to start off, in the case of a country like Mexico, on a mainframe, I think part of the system planning and design should consider how you intend to meet your requirements in five years' time. The number of your loans will undoubtedly have increased; the complexity of debt instruments will have increased. But will these requirements have increased beyond the range of probable increases in microcomputer technology? My feeling is that they will not. I would like to see more use of microcomputers. Perhaps a system starts off with data bases on a mainframe, but certainly it should be designed so that its users can migrate to microcomputers in the future.

Consider the point of view of an analyst using the system. It is much easier for the economists and the policymakers to use a microcomputer equipped with a Lotus spreadsheet package, or some of the other easily used, easily learned, software packages, and do their analyses, rather than accessing a mainframe computer through a terminal.

Mr. Valantin: I agree with Mr. Dowsett. Sometimes I wonder what is a microcomputer these days and what is a mainframe or a minicomputer. The important point is that you have to look at the particular circumstances of the country, the environment in which they are trying to operate. Whether it is more appropriate to share a mainframe or have a mini, a mega–microcomputer, or whatever you want to call it, should be judged according to the circumstances.

But the real point is that the hardware cost is relatively a very small cost, certainly in terms of David Hunsberger's million dollars per day or minute, or whatever it was. In the case of Mexico, we were talking about extensions to an HP3000 minicomputer; Hewlett–Packard has now come out with micro–HP3000s. One can also network microcomputers in a local area network, so that you have a common data base on a file server and a number of [microcomputer units communicating with] it. But whether we are talking about 10 micros, or 20 micros, or a minicomputer, we are talking about costs of only a hundred or two hundred thousand dollars; we are not talking millions of dollars for equipment. Considering the total cost against the increased productivity, whatever the machine is, it is not costing a fortune; it should be affordable.

The problem is the one we discussed yesterday, of getting the adequate resources, either internally or externally, to provide for it. The computer hardware is easy. It's off the shelf; you put money down, and it comes, and it's plugged in. The [installation] problems are eventually solved and it works. Software and programming and dealing with users are much more complicated. With these issues, it is not a matter of just putting down a few dollars and saying, "All right, I pay

for this now, and next month I will have my program ready to run." It doesn't always work that way.

But hardware should be the least of our problems and constraints. With the technology changing—you've all seen the graphs where the cost per number of operations per minute goes down, rather like the stock exchanges do on some days. That is going to continue, I think—at least the cost of hardware, not the stock exchanges. I don't think we should let that be a constraint. The external donors should work together with national governments, because there is a lot of hardware around. I have been to Mexico, and in various places you fall over microcomputers. It is a matter of getting the equipment into the places where it is most needed. It is a problem when you don't have it, but it shouldn't be a problem, at least in debt management.

Mr. Hunsberger: I would like to put a question to the Mexican delegation. Given that many governments seem to be penny–wise and pound–foolish, as we've said before, and seek to economize on salaries and on computer systems while vastly larger sums of money are at stake, what can we in conferences like this do? What role should the major multilateral organizations play in trying to raise the consciousness of governments to the importance of investing adequately in this kind of financial system? Do you have any advice for us, or any requests to us, on how to communicate to your senior authorities the importance of getting adequate systems and hardware, so that there is a chance of reducing slightly the millions of dollars (in Mexico's case) that go by every hour in interest on the debt? Do you have some thoughts or suggestions for us?

Mr. Alamo: Well, perhaps yes. At present, our Minister of Finance has been traveling around and the [debt] renegotiation exercise has revealed that it is very important to have more reliable information. They are negotiating at the present time, so we should strike while the iron is hot. We should say that they must have absolute confidence in the figures from which they are negotiating, and for that we need the hardware. I think we need to provide the figures to show that, although we have been producing well up to now, things are getting more and more sophisticated. The time will come when things are going to jam up. This could mean the failure of an important rescheduling operation because we don't have the information. If you could get that point across, that sooner or later we are going to hit a jam–up, this would be very useful.

On the first day, I referred to an incident when we had an internal problem, and we could not continue to work in the computer field. To have credibility for our request, we sought assistance, but we had to do this very formally. We came to the World Bank and asked you to assess and appraise what we were doing and to make a recommendation. This recommendation from the World Bank said that we should do one thing or another. In our country, and I assume this applies in other countries, it can be very useful to have a written document from a World Bank mission that comes up with recommendations to the authorities on how to support the debt management unit. It has a tremendous weight and impact if you have this outside recommendation. This was a very fortunate initiative, because we got additional resources and new hardware. Now again we have been having problems, and we have to deal with the authorities on this. But I remember when David Hunsberger's mission came [to Chile], and I am increasingly aware of the importance of what was said then.

In short, it could be useful to come back to the country, to have a sort of status appraisal or status report. For example, the World Bank could send a mission back and say, "This has worked, but there are problems in these other areas," so as to reinforce the Bank's original request and recommendations. It would be very useful if we had a mission come to Santiago and the World Bank could say, "Unfortunately, there is not sufficient support coming from the central government, and therefore there are certain snags." It would be very useful if, during a World Bank mission to South America, you could come by, have a cordial visit, and say something. But the key element before was the written report that came from the World Bank to the highest authorities of our Central Bank, saying that from the standpoint of the World Bank it would be useful to do such and such. We have been submitting our own reports, but it is very useful to have outside corroboration.

Respondent for Mexico: We also have been in contact with the World Bank. When they have asked for information from us, we were told that this can be very important. We wanted to have compatibility for the magnetic tape, etc. But the higher the level at which you deal with this, the more impact it will have. For example, if there could be a letter written from the World Bank to the very senior authorities, this would certainly have an impact.

Mr. Husain: In respect of that service, we do make assessments of the computing system and, given the present state of the art, how the country can proceed in that direction. I think we have requests from both Venezuela and Argentina right now, to which we will be responding. If Mexico is also interested, we would certainly look into this.

Mr. Dowsett: I would like to comment on what the representative from Chile said, then make a further comment on Mexico. I have frequently found that it doesn't matter if it is the World Bank; anyone from outside can serve the same purpose. If the government is paying for the services of someone, either directly, as for a consultant, or indirectly, as through its World Bank membership, the authorities tend to listen much more than they will to the people working there locally. Quite frequently I find that, when I visit a country, the people working in the debt offices are saying things that make a lot of sense, but nobody is listening. I don't have to think it up for myself; if it makes sense, I repeat it, and now they listen! The use of an outside resource can be very valuable in this way. I believe we have a session this afternoon on consultants, and that point might be worth bearing in mind.

As to my second comment, I entirely agree that a written report is very effective. Over the past few years the World Bank has moved much more towards written reports. I remember nine or ten years ago, when we went on mission we gave a verbal report [to the country authorities]. When we returned, we wrote it up basically for internal use. Now more and more often, we are writing an aide-memoire when leaving the country. This is delivered at the senior level. So I think that certainly during the past few years, the World Bank has moved much more towards this direct contact through a written report going to the highest levels. I'm glad you support the idea.

Mr. Stillson: Maybe at the risk of being slightly impertinent, I am wondering whether the World Bank, UNCTAD, and the UNDP provide computer equipment very freely in their technical assistance. My own experience has been that it is easier to finance a consultant through these programs, perhaps at greater cost than a computer, than it is to finance specific hardware, which requires a different sort of project. The Commonwealth Secretariat has already said that they do not get involved at all in hardware questions.

Robert Valantin says that the hardware shouldn't be a problem, that relatively it is the cheapest and easiest part; and yet somehow it is a problem. I wonder if it is not only a problem for the individual countries but even for the international agencies, which perhaps find it more difficult to buy computers for countries than to pay for international consultants. Maybe my perception is based on a small number of observations.

Mr. Cosio-Pascal: If hardware is needed, we have a line in the budget for that in all our projects. It has not been difficult to provide through our projects the equipment required by different countries. In the case of Argentina, an UNCTAD DPS system was installed in the Central Bank. It was the only project there financed in australes by the Central Bank; the Central Bank paid for it. All that the UNDP did was to convert the payment into foreign currency, to import the hardware. It was also a way to get the equipment into the Central Bank without going through all the different requirements for purchase that the administration had to do. So instead of a wait of six or eight months for the hardware, it was delivered in about a month and a half.

I would like to give another example, which is our project with the Commonwealth Secretariat in Guyana. We are taking care of counter-trade and private debt. The software of the Commonwealth Secretariat is being installed for debt management. Through our project, we bought the hardware that was necessary to support software that did not belong to us. So we are very flexible, and things like that can be sorted out.

Mr. Kalderen: Mr. Chairman, I am thinking out loud here, but maybe we should propose to the UNDP to set up a small fund, similar to the World Food Program, to which contributions could be made in kind by the suppliers of hardware. There are not very many, and it is the kind of aid, commodity aid, that seems to be quite attractive. Maybe we could have US$5-10 million worth of computer hardware put into this fund to be distributed by some sort of committee consisting of the UNDP, World Bank, UNCTAD, and Commonwealth Secretariat.

Mr. Husain: I agree with you entirely, provided that it is not obsolete technology. We are now in the fourth generation [of computer technology]; suppliers may tend to donate their first and second generation equipment they want to be rid of, because it is occupying space in their warehouse. That is the only reservation I have.

Mr. Valantin: There is also a problem of [hardware–software] compatibility, even if the technology is new. With some manufacturers' equipment, if you do not have software available that runs on that machine, you will find that when it arrives in the countries . . . there are all sorts of problems with these donation schemes.

In the projects in which IRDC has been involved, the hardware component has not been a problem. Where we have needed equipment, we have been able to provide it, in some cases with joint financing with the country itself; in other cases just with our own financing. If we are talking about microcomputer–based systems, it is a very small proportion of the cost for the entire project. If we are talking about minis or mainframes, that usually has to fit into a larger context. In the case of the mainframe, the hardware is never just for debt management. In the case of a minicomputer, it is not necessarily a problem. I think that when one looks at the overall project, one can come up with whatever is necessary, one way or the other.

The question is, do the countries really make a point of going at this. I think, in fact, in Mexico this will only be resolved when you stop producing your outputs because your computer has broken down completely. As long as you are able to keep delivering information, management will say, "Why do we have to give you more money? It's working fine; we get what we need. If you need to put in a little more overtime at night or you need to use some bandages on your computer, as long as it's working it's fine." But when the system grinds to a complete halt, then they will have to think about it. This is a problem we all face. But maybe you are doing too good a job for your own good.

Unidentified Participant: I'd like to tell you a story about what I had to do to heighten awareness on the part of my authorities. I read something in a book written by a mathematician that said a computer is incredibly fast, accurate, and stupid. Man is surprisingly slow, imprecise, and creative. The union of the two created tremendous strength and force. I think this is true, so I sent this quote to all the authorities to whom I write letters. One reply I received is quite humourous: "What happens if you get the stupidity of the machine and the imprecision of the human being?" So sometimes your sensitivity training backfires on you.

Mr. Dowsett: I would like to follow up on some of the points that Robert Valantin made and also Mr. Husain's comments about first and second generation machines. Given the choice between nothing and a first or second generation machine, I would probably take the machine anyway.

Mr. Valantin brought up the question of compatibility. I think there is a much more dangerous situation, and that is a lack of maintenance availability. Offhand, I can think of three countries—and probably if I went through my notes I would find a few more—who have equipment that has been delivered but is not used and, in one case at least, has never been used. When the equipment was sent, it did not work and there was no one to fix it. This is not an uncommon problem in many parts of the world. As part of this, you also have to consider back–up. What happens if the machine is down? How critical is your debt processing? If you are preparing for Paris Club and you are without a machine for a month, that is pretty serious. In our training seminars, we used to spend a lot of time discussing hardware issues: mainframes, micros, their advantages and disadvantages, can you get on to a mainframe when you need it, and so on. We have not touched on many of those issues here, but one of the key points we made about a microcomputer was that it is easy to provide a back–up machine at a relatively low cost. If we use the idea that Lars Kalderen suggested, which I think is a magnificent idea, to get manufacturers to provide equipment, we should bear in mind that this equipment must be suitable. The equipment chosen must be suitable for the environment in which you are going to put it. In other words, be sure that judgment is used in installing a machine that is maintainable within the country and that it has back–up within the country.

One other point I would like to make, which was not made yesterday or today, concerns the question of foreign exchange versus local funds. We talked about budgeting hardware as opposed to getting a consultant. External consultants and the hardware are probably both going to cost you in foreign exchange. But many things can be done internally that have no foreign exchange component. These are much easier to get through the budgetary process.

20 Roundtable Discussion on Participants' Debt Systems

Speakers: *Ishrat Husain, IBRD*
Robert Valantin, International Development Research Centre, Canada
Participant from the Banque centrale des Etats de la Afrique de l'Ouest (BCEAO)
Saied Abdulkadir, Ethiopia
Kifle Tesegaye, Ethiopia
Milan Milovanovic, Yugoslavia
Mauricio Roitman, Venezuela
Fernand Nkouka, Congo
Yang Xiangyuan, China
Participants from Morocco, Pakistan, Poland, Tunisia, Zaire, and Zambia

Mr. Husain: I think it may be time to close this discussion by going through the delegations and asking for replies to the question that Robert Valantin posed yesterday: How many countries have a fully operational computerized system, or a system that is partly computerized and partly manual, whether it is a mainframe, minicomputer, or microcomputer? This is a way to go around the room and find out what the experience has been since 1985. Can we start around the table, maybe start with Tunisia?

Mr. Valantin: Also, whether the manual system is still working in parallel with a computerized system.

Mr. Husain: Yes, whether a manual system is still being used in parallel with the computerized part, I think that is a very important point.

Participant from Tunisia: As concerns the Central Bank in Tunisia we have a system which is partially operational. It uses a [Hewlett–Packard] HP3000 [minicomputer].

Mr. Husain: Do you use this partially operational system or a manual system to produce reports?

Participant from Tunisia: The reports are a combination of both. In the first stage, we do it manually, and this is completed in the final stages by using our operational computer system.

In Tunisia the problem is that there are several units that collect statistics on debt, and therefore each unit cannot publish an exhaustive report because it does not have total information on other aspects of debt. For example the Central Bank does not have all the data on public debt in its debt unit. The remaining data must be requested from the Ministry of Finance. Coordination among the three units is needed to publish complete statistics and to make detailed reports. That is why there is always consultation among these three units. We in the Central Bank are trying to centralize all the information we can, but the problem remains. That is why Mr. Triki mentioned during his talk that we want to set up an interdepartmental committee, which would look at the problem of establishing a data base to be used by each department within its purview.

The Central Bank is certainly going to look at the question of reducing the debt burden, whether with free market techniques, swaps, or other financial instruments to reduce our debt servicing costs. Perhaps other facets, such as projects and so on for our plan, will be studied in the Ministry of Finance.

Participant from BCEAO: Thank you Mr. Chairman. My establishment covers West African countries of Ghana, Burkina Faso, Cote d'Ivoire, Mali, Niger, Senegal, and Togo. There's an issuing agency in each. The role of the BCEAO in managing debt is to provide assistance, which consists of setting up seminars, often with the support of the World Bank and the French Ministry of Finance.[1] In 1987, we organized a seminar that dealt with debt managers; this seminar followed one in 1983 .

For each of the seven countries I mentioned, it is difficult to say whether they have an operational computer system or manage their debt data manually. Five of the countries have gone to Paris Club, and they have operational systems. In Benin, for example, ADETEF is working with them on this problem. Burkino Faso does not yet have a system with which it can generate computer data. It has not signed an agreement with the IMF and manages its debt as it sees fit. Cote d'Ivoire has an independent system that works very well. I think it is a fully operational system, which is used at the same time for facets of banking and for debt management. Thank you.

1. A paper prepared for the conference by BCEAO on its experiences in debt management has been included in Volume 2.

Participant from Pakistan: We in Pakistan have four bases of 320 megabytes. At the moment, we are preparing the budget manually, but this year we have started doing the budget from the UNCTAD system. We find that the budget prepared manually is very near to that prepared by the UNCTAD system. We hope that by next year we will be able to have a complete budget for our external debt prepared entirely from the UNCTAD system.

A World Bank advisory mission visited Pakistan recently. They submitted an aide–memoire that suggested all external debt liability should be in the Economic Affairs Division. So we have created a coordination unit in the Economic Affairs Division that has responsibility for all external debts except suppliers' credits, which are being dealt with by the Central Bank of Pakistan, and commercial borrowing, which is managed by the Finance Division. But the debt servicing on commercial borrowing is being maintained by the Economic Affairs Division. By next year, we will have complete information regarding the external debt.

At present, we are making all payments on the manual system. We are already preparing one report from the computer system, which is being distributed to all parties, including the Finance Minister, all secretaries of the Government of Pakistan, chief economists, and economic advisors. This report gives the external debt outstanding at the beginning and end of each month and the disbursements made during the month. Now the top levels of government are realizing that computerization in debt management is necessary.

Mr. Saied: In Ethiopia, we started computerization not for the purpose of external debt management but really to facilitate the mobilization of resources, since we have a lot of technical assistance funds and other aspects of foreign economic relations. In the past, our foreign economic relations were conducted by two different ministries. Loans and credits were followed by the Ministry of Finance, while the Central Bank followed other aspects of foreign economic relations. At that time, we found it necessary to computerize, as I said, for the purpose of mobilizing resources and coordinating all externally financed projects, whether financed entirely externally or with matching funds from domestic sources. We had assistance from the UNDP for computerization of our economic relations, and we really had no problems in acquiring hardware. As Mr. Valantin said earlier, there is no problem in acquiring hardware; somehow we get it.

The problem was what kind of software to use. We recruited a consultant to produce our system, but with the present restructuring of the office, we found that debt management must also be done. We wanted to link all aspects of computerization concerning foreign economic relations, and we contacted UNCTAD [for assistance]. We started in September or October of last year to install the UNCTAD DMFAS system. We are not using it completely now because we are still in the data entry phase, but we are already building our database. We are also expecting UNCTAD to come for its second mission, to see what has been done. Simultaneously, we are using earlier procedures for debt management purposes. We have a Burroughs (now Unisys) computer, and we are using the UNCTAD package and the old system in parallel to test one against the other. We are already giving this report to the officials.

During the first two days of these presentations from various sources, such as the Commonwealth Secretariat and the World Bank, we found that these software packages are in some aspects good, while in other aspects they are a real terror to our countries. We see that what is missing in one package is available in the other one. In fact, it would be good to have some kind of wrap–up to consider the possibility of integrating the three packages for the benefit of the borrowers and then standardize it. After that, it may still be found necessary to adapt it to individual countries' specific requirements. Concerning problems, as Mr.Valantin said, there is no problem in hardware. But the big problems are in compatibility, expertise, and maintenance. So those are our problems at present.

Mr. Husain: So you are not using a manual system at all now?

Mr. Kifle: I would like to talk on this point because that will reduce the time required in my future country presentation. I work for the Ministry of Finance now. Mr. Saied is working for the Office of the State Committee for Foreign Economic Relations, and we really do two separate jobs. They are involved with total external resource mobilization, whereas the Ministry of Finance is specifically entrusted with total government debt, both external and internal.

For the past ten years that I have worked in the Ministry, I have never seen any manual job done there; everything we did was put on the computer. But what I should like to pinpoint is that, although the software produced in–house, which we have been using in the past,

provides basic accounting functions for managing the external public debt, it does not provide us with statistical reports, such as can be produced by the newly developed systems of UNCTAD, the Commonwealth Secretariat, or the World Bank. What I am trying to emphasize is that we never use the manual system for basic things. If I may, let me list some of the reports we are currently producing; I think these have been done for the last 20 years. We produce:

- Status of Loans reported—by loan and by creditor
- Flows of Transactions reports—by loan and by country
- Reports on Economic Sectors
- Amortization Schedules for individual loans
- Debt Forecast Reports—on a daily basis, on a yearly basis, for ten years, and in aggregate for more than ten years.

These are some of the things our in-house software currently provides us.

Having said this, we have really jumped onto the UNCTAD system now, because we believe the simplicity of debt management in Ethiopia will not continue. If we meet again in the future, I may have to talk about rescheduling, going to Paris Club or London Club. Because of that, we are going to UNCTAD's system. That will certainly help us to produce many reports of importance to management.

Participant from Morocco: Computer problems arose right after the various rescheduling operations with the Paris Club, and so on. Morocco had to confront a series of problems that necessitated the collection of data and information. This was around 1983. In order to make proper rescheduling requests, Morocco started thinking at that time about using informatics as a tool to prepare reports and to carry out projections for debt servicing. We ran several experiments using hardware and software. Some of these were failures because of internal obstacles that had to be overcome.

We used the computers to prepare our dossiers for the Paris Club. This has allowed us to come up with various scenarios and projections for rescheduling that we use in our debt negotiations. We try to make our people aware of the possibilities offered by informatics. We go more for user-friendly systems than mainframes and a large complicated system.

I would say that we use informatics on more of a case-by-case basis. At the current time, we are thinking of having a more highly developed system, so that we could computerize all debt management operations. We are drawing up an action plan for this with the World Bank, to see what can be done. For now, the statistical part is dealt with by computers, but accounting is still done manually. We have two parallel systems, a manual one for accounting work and computers for debt servicing projections. As to our equipment, we use a Unisys [mainframe] and microcomputers [linked to it as workstations via] a network, three of them in all. We intend to purchase further euipment.

Mr. Husain: We already know about Chile because Mr. Alamo made a presentation [see Chapter 3], so I think we will go to Poland next.

Participant from Poland: Thank you very much, Mr. Chairman. As far as the Polish system is concerned, I must admit that on the side of debt management we are still in the phase of manually prepared reports. We do hope that with the help of our friends from the World Bank we will be ready to make our debt management system operational as soon as possible. We both know how important the problem of proper debt management is to the Polish economy.

As for the system that is currently operational in Bank Handlowy, we use a mainframe computer as an accounting tool. The transactions made in our bank are run automatically through our host computer. However, this system is not flexible enough to give us certain reports needed for our management, for the Ministry of Finance, and for the National Bank of Poland. We have to produce them manually, which is a great deal of work. Sometimes the reports are not good enough as a basis for proper decisionmaking.

Mr. Milovanovic: I am with the Department of Informatics and Statistics in the National Bank of Yugoslavia. Our system of [debt] registration is completely decentralized. Each of the eight autonomous provinces has its own National Bank of the Republic. By law, commercial banks must register their loans with these national banks. The national banks perform data entry and primary control. Then all transactions flow to the Central Bank in Belgrade, where the central data base is. This central data base is a simple one, consisting of a number of simpler, indexed sequential files. The main part is the basic loan register with 30,000 loans, (as in Mexico). The second file is a transaction history file,

which contains 150,000 transactions covering disbursements, repayments of principal, and interest payments. We also have in that central data base a file for future disbursements, repayments of principal, and interest payments, but manually prepared. At present, the total number of records in the debt file is approximately 500,000. It is a very large system.

I would like to say that we have computerized less than 10 percent of our debt management system. We just use the common-purpose computers that are already installed in our department to improve our statistics. I think it is time, especially after this conference, to start a project for a new debt management system. First we are going to contact the World Bank and ask for its technical assistance in making diagnostic studies in project design and training.

Participant from Poland: Sorry, I forgot to add that we also have both domestic debt and external debt. At the end of last year, we stopped using the system of manual reporting from the commercial banks and from enterprises. But we used both systems in parallel for two years, until we stopped using the manual reporting system last year.

Participant from Zambia: Thank you very much Mr. Chairman, for the opportunity to brief this conference on the debt management system of Zambia. Zambia started its debt management system in 1984, after experiencing a huge accumulation of arrears owed to the Paris Club countries. After the first rescheduling in 1983, Zambia thought of establishing an effective debt office. With the assistance of expert advice from the World Bank, it was started as a manual system. In 1986, we acquired technical assistance from UNDP and UNCTAD, who have assisted us greatly in formulating the system and putting it in place. The Bank of Zambia acquired one IBM PC, which we are still using, while our counterparts at the Ministry of Finance also acquired an IBM PC.

To mention briefly our experiences in data collection (maybe I should say our nasty experiences), we have had problems in collecting data, especially from the Bank of Zambia's point of view. We tried by all means to collect data from the debtors, and we did not have a good response in the initial stages. We had to pay personal visits, sit down with these debtors, and collect the data. I am happy to report that at the moment we have all the data in our database for all the loans, particularly from the parastatal side. We are actually satisfied with the data collected so far. The Ministry of Finance has done the same; they are lucky, because they have all the documents in their system.

Just to sum it all up, I would say that so far the system that UNCTAD installed in both institutions is doing fairly well. After the installation of the updated version three weeks ago, we have not experienced any problems with the system, and we are satisfied with it. We hope to go into further projects using the same system, so that we can perfect it. This should assist us in reporting our debt data to the World Bank on diskettes. I think once we have perfected the situation, we should be able to report efficiently and effectively to the World Bank from our database.

Mr. Husain: You are using the UNCTAD system for both accounting and statistical purposes? You are not using any manual system in parallel?

Participant from Zambia: We have a parallel manual system; we haven't completely done away with it. We are using the manual system in parallel with the computerized system.

Mr. Roitman: [2] In Venezuela at the present time, we are in a transitional phase because we are currently installing, and then will be operating, a system which was contracted by the Ministry of Finance. Prior to that we had an HP2500 [microcomputer], but it had certain limitations—not in computing capacity per se but the system around it had certain constraints. It wasn't versatile enough to enable us to give effective, rapid responses to the requirements of the public creditor department. At the present time, this new system as it has been designed should encompass all the possibilities and requirements that we have been trying to meet from the public finance directorate, as well as from other entities within the country and beyond the borders. The new system will have four modules or subsystems. One is for public debt administration and will contain both internal and external debt data. The second is an economic research and study system. Then there will be an administrative system with administrative control. There will be a management [information] system as well. These different modules will be linked up in a chain sequence. The first one will be able to generate all the necessary statistics regarding the country's current obligations and liabilities, plus what will happen in the future. The economic research module is designed to

2. Supporting documents describing the debt management system in Venezuela are included in Volume 2.

have a macroeconomic base with both domestic and international indicators. This will make possible projections of future public credit transactions, which are linked to the budget implications in respect of our currency (bolivars). That applies to both present and future obligations. The administrative module will be used to manage the department. The departmental management [information] system will enable the senior authorities to have direct access, via a terminal, to specific information they may require, or to have just a general picture.

The hardware that is being installed is a Data General [minicomputer] system with 300 megabytes. It will have 36 terminals, and we have Epson micro-computers, which can be linked to the Data General minicomputer. The software is being written in the COBOL language and includes a proxy screen generator and a database management system.

Mr. Nkouka: Thank you, Mr.Chairman. I feel honored to be here at your invitation. Let me describe the situation in the Congo. We have a first-generation IBM PC 280 and three IBM PC-XTs. At the present time the debt is being managed with a system written with the assistance of a French expatriate who is in our country. Since November 1987, we have been using the IBM computers. We also had an Apple computer and a PFS-based file system, which did not really enable us to do very efficient debt management. When the [Ashton-Tate] Dbase database management package became available, and with the assistance of this expatriate consultant, we were able to work up something far better. [3] The present volume of data is such that it is no longer practical to have a manual debt management system. It is unfortunate that the representatives of ADETEF who were here have already left, because I would have liked to hear their attitude on this matter.

My head of mission has gone off to the United States and I cannot really mention certain things because I have not been mandated to talk about these matters; the people from the World Bank, Messrs. Hunsberger and Dowsett, know that. Let me just say that the system we have at present is composed of four sets of files. The first file includes the framework agreements and the drawings. The second one is the financial file, which provides all the schedules for rescheduling, the amortization tables, etc. The third is the payments file. The maturities schedule file contains all the maturities that have been rescheduled or are in the process of being rescheduled. In our system we tried to separate the direct [public] debt from the [publicly] guaranteed debt because, at present, the debt managers' skill level is not altogether what one would like. So we use the same system but have separate files for the direct government debt and government-backed debt, which is guaranteed but not directly a debt of the central government.

I must say that we are content with our Dbase software; we find it satisfactory. I cannot reply to all your questions but we are not unhappy with it. Problems can arise in connection with maintenance. As you know, a country such as ours is very remote from the industrialized nations, so maintenance and training are two of our problems. I am talking about maintenance of both the software and hardware. Our debt managers can make do with the system that is available on the spot. They have now abandoned any manual processing, but they do keep some manual files up to date. When we receive, for example, the new loan agreements, they also write things by hand, because we have to contend with power cuts and things like that. So for monitoring and follow-up, they feel more confident if they have a few manual files as well.

We have a certain amount of experience now with this system. We have had some setbacks in some of the different spheres, mainly because of the lack of experience of the debt managers. There were a couple of problems that I should mention here, because technical assistance is not always skilled in debt issues and the debt sphere. There has been interference, if I may say, from some outside agencies. All this has given rise to some very substantial difficulty, but we are more or less satisfied with what has been done now. Unless the World Bank, or the IMF, or other IFIs [international financial institutions] tell us that they are not happy with the data we are reporting to them, we will be satisfied for our part.

Mr. Husain: As I understand you, there is no manual system you are using right now. All your reports are being generated by this system developed by the French expatriate consultant?

Mr. Nkouka: Well yes, I guess I could say yes. Even the World Bank reporting forms are now being generated by the system. So all the different functions do exist on the computerized system. We have the majority of the

3. A paper prepared for the conference on the debt system currently installed in Congo is included in Volume 2.

software developed in Dbase III. We did try to use a compiler [package for Dbase routines], which I think you also use in your World Bank software. And we use spreadsheet packages, such as Lotus and [Microsoft] Multiplan.

Mr. Yang: Thank you, Mr.Chairman. I think our data collection is computerized, but operationally it is not too satisfactory. The computers are scattered in various branches and are not connected. So after the various branches record the data, they must send tapes to the head office for further processing. Processing, analysis, and other things are done in the head office.

Mr. Husain: So the reports which are being generated at the head office, at the SAEC [State Administration of Exchange Control] headquarters, they are all computer-generated reports?

Mr. Yang: Yes.

Participant from Zaire:[4] Thank you, Mr.Chairman. Before replying to your questions, I would like to describe the public debt unit that monitors debt in my country. Contrary to what I have been hearing around this table, we have a number of different structures concerning debt management. We had certain difficulties that we had to come to grips with at the beginning. Then we finally centralized everything in a parastatal enterprise that reports to the Ministry of Finance. This parastatal has been entrusted with a twofold role. It plays a debt advisory role for the Ministry of Finance, and it monitors the public debt, both external and domestic debt. But unfortunately for this parastatal enterprise, after having set up an appropriate tool for management of the external debt, it is only now that it has become involved with managing the domestic debt as well. So this is an ongoing process.

As to the computerized debt management system, our experience goes back to 1980. It was a cautious attempt at first, because the environment was not conducive to that kind of development. The parastatal I referred to had very limited resources, so it began by leasing a computer, an IBM 360 [mainframe], which belonged to a commercial bank. The parastatal had to go back and forth [to the computer located in the bank]. This initial experience only involved the generation of statistics. A great deal of the work was done manually because access to the computer was very limited.

In 1983, it was decided that it would be worth acquiring hardware [for the debt management system]. This was a Data General [minicomputer], which we still use for our computer management system. Everything that is done in this parastatal regarding debt management was developed by the employees of that enterprise. As I said, initially it only generated statistical reports, based on manual processing. But now there is only a slight manual input for statistics. In addition to the reports, we now have computerized the debt accounting activities. This has been the case for the last two or three years; everything is computerized for the accounting procedures. As to the logistics, we have also become involved in simulation exercises, but we have not yet been able to computerize all the simulation processing for two reasons. First, the computer capability that we have is limited; the computer performance is not such that we can put software in that is really adapted to this kind of simulation processing. The second difficulty is that we had designed a project to do this sort of processing, but the funding just was not forthcoming to buy the microcomputer that would have made it possible to run the type of program needed for the simulations. To sum up the status of our computerized management system, the programs and software that have been developed by this parastatal that deals with external debt management do enable us to have statistical and accounting management that are quite acceptable. That is to say, the statistical reports and the accounting are done satisfactorily, but our system does not enable us to incorporate simulations successfully. The hardware that we have is just not powerful enough, but we hope to be able to upgrade our hardware. The problem, of course, is getting the wherewithal to do so.

Mr. Husain: Was there technical assistance for developing this system in 1983 or did you do it in house?

Participant from Zaire: We have had no technical assistance from the outside. I don't know why, but it has never been available. Perhaps a request was never made; perhaps we felt our in-house experts were quite capable of designing and implementing the different programs and software. But now, as I said, we want to upgrade the whole office, and with a view to this upgrading, I assume we will need technical assistance from somebody who has experience. We have gone through eight sessions in the Paris Club. We are preparing for our ninth session,

4. A paper on external debt management in Zaire, prepared for the conference, is included in Volume 2.

and we have realized that there are possible scenarios that could be worked out and would be useful in our Paris Club negotiations. Up until now, all of these scenarios have been worked out manually by my enterprise, although with computerized backstopping, but the final results were also worked out manually. At this stage, I think we could use technical assistance to integrate what we have been doing for the Paris Club into the existing system.

Mr. Husain: Mr. Grau from our Division was a World Bank resident advisor [in Zaire]. Was he with you or was he in some other ministry? Was he in your parastatal? He was there for five years.

Participant from Zaire: The technical assistance we received from Mr. Grau was focused more on simulations to prepare for Paris Club meetings and IMF meetings. But his work wasn't focused on informatics and its use; it was purely the manual management of debt.

Mr. Husain: We have run beyond the time allotted in our agenda, but I thought it would be useful for all of us to review the current status and compare with what was happening in 1985. The panel on staffing and training will meet after our coffee break. I would like to say good–bye to you; I have to leave right now. I want to thank you sincerely for all your excellent contributions, which have made this conference a success. I and my colleagues, for our part, have learned a great deal. We look forward to working closely with the member country participants who are here, to help you in any way we can. We also want to step up and strengthen our cooperation with the international and bilateral agencies that are involved in this endeavor. We all have to work together to further this effort. So once again, thank you.

21 Performing Simulations with Debt Statistics

Aysel Basci, World Bank

Mr. Stillson: In an extraordinary show of Fund–Bank cooperation, Mr. Husain has asked me to preside over the remainder of this conference. I think this is appropriate, given the publicity that the lack of Fund–Bank cooperation has received in various forums. However, I am not actually an organizer of this conference, so Mr. Hunsberger and Mr. Dowsett will still be managing things.

We have talked briefly about the rest of the agenda. There is one more session that has been prepared by the World Bank, on simulation exercises. I thought we might do that now, before lunch break. This afternoon, we can also discuss some of these issues that were on the agenda for panels. I think, however, it would be appropriate for the end of this conference to have a less formal structure and a more free–ranging conversation among ourselves about some of the issues that have been suggested for the panels. These include the use of consultants, the legal issues, and of course anything else persons would like to bring up. At the end, I would then like to go over the six points that Mr. Husain mentioned at the beginning of the conference and have a summing–up discussion to get your views on the topics with which the conference opened.

But first, before lunch, let me ask the World Bank for their presentation on simulation exercises.

Mr. Hunsberger: The next presentation will be by Mrs. Aysel Basci, who heads the Systems Analysis Unit in Mr. Husain's division of the World Bank. She will tell us about the simulation software and simulation activities on which she has been working. We can distinguish her work from the kind of work Mr. Dowsett has been doing (see Chapter 13) as follows. Hugh's work, and mine, are outward looking and directed toward technical assistance to member countries. Mrs. Basci, at least until now, has been working almost exclusively with our own internal system, which the World Bank uses to produce the *World Debt Tables*, plus many other internal documents. Her unit maintains a very large data base, which runs on a big IBM mainframe computer. So the presentation she will give deals not with our technical assistance activities but with the simulations work we are doing internally, inside the Bank. We present it to you to stimulate your thinking, to invite your questions, and to invite ideas on how this might be of use to the countries themselves.

Mrs. Basci: I will start by saying a few more words about our Revised External Debt (RXD) system, which provides us with computerized management of the data collected through the World Bank's Debtor Reporting System (DRS). We have 115 countries who report through the DRS and whose data reside in the DRS data base. Currently, the data base contains information on over 110,000 loans. The RXD system is fairly new; it was completed and put into production about two years ago. In the past, there were three main modules, or subsystems, within RXD: an on–line data entry/update module, a reporting module, and an automated reorganization module. The latter module allows us to implement debt reorganization agreements against all the affected loans in the data base in a highly automated update process.

About a year or so ago, we decided a fourth module was needed, which we call the Debt Strategy Module. This is the part of the RXD system I am going to present to you. We have started developing the module, which is almost complete now. We have a little more finishing–up work to do, but for the most part it is complete. It is operational and has been used to produce several reports in the Bank.

I will talk a little bit about the module's purpose, why we decided we needed it. I am not going to say too much about why we decided to develop it, because I think the reasons are pretty obvious. We had been asked more and more questions about the debt of the individual countries. This information has always been important, but probably never in the past has it been as important as it is now. Our senior management is asking for more detailed and more timely data. The requests are becoming more frequent, and the nature of the requests is changing. To be able to answer these queries and to be able to help in the research and policy activities of the Bank, we decided to go ahead and develop this fourth module for the RXD system.

I think we were lucky to have made this decision over a year ago. Things have changed considerably since then, and there have been some developments that have proven our decision was correct. I will name just two of these developments. The Toronto Agreements created a great need for the Bank to have a simulation model to measure the impacts of proposals in line with those agreeements. More recently, the Brady Plan is again requiring us in the Debt and International Finance Division to do a lot of analysis of this kind and to help the rest of the Bank do statistical and projection work on the impact of debt reorganization alternatives.

Modeling, or simulation, covers a very broad area. When you have a simulation model, it doesn't necessarily mean you are able to handle anything and everything. We restricted ourselves to certain capabilities that we decided we should have in our simulation module, which I will from now on refer to as the Debt Strategy Module. In my mind, there are four key capabilities the Debt Strategy Module offers. First, it helps us in developing new borrowing strategies. I think this is a necessary capability, and it is a part of the module already implemented. Second and equally important, if not more so, is the simulation of debt *reorganizations*. I emphasize the word "reorganization" because I do not mean just debt reschedulings. I mean all the various types of actions taken to reorganize debt; we will be getting into that in more detail in a little while. Third, the Debt Strategy Module enables us to do financial requirements analysis at the country level. These analyses typically require us to combine the first two capabilities, meaning the new borrowings and debt reorganization. So it tends to be more complex than the first two. The fourth capability is short–term or long–term forecasts, where we are looking at a country's debt situation in an even more global sense. This, I believe, is the most complicated of our debt–related analyses. A lot of work goes into doing this type of analysis; a lot of information is necessary. So those are the four broad areas where the Debt Strategy Module is useful in our work.

Having gone through the capabilities that the Debt Strategy Module offers, there are some characteristics I would like to highlight. First, it is, of course, based on the Debtor Reporting System, the huge debt data base we have, thanks to all the submissions you make to us on a yearly basis. (Or in some cases, less frequently than that, although we are hoping it will be more frequent in the future.) This data base gives the Debt Strategy Module a very big advantage, because it has access to all the detailed information to support the various analyses one might wish to do.

Second, we have deliberately kept the simulation part of the module linked with the loan–by–loan data base. We do not go to the data base, extract and aggregate the information, and download it into some other area—not necessarily a different computer, even a different environment within the same computer—to carry on the further analysis of the extracted data. For various reasons, we decided always to operate off the loan–by–loan data base; we felt this was necessary for the various types of analyses we wanted to perform. Our early experience has shown us that this was indeed the right decision. One cannot guess the types of analysis and the queries that end users may want from the module. It would have been very restrictive to use just a standard format to extract a limited data set from the loan–by–loan data base, and then perform all the analyses on that extract. I consider this a key characteristic of the Debt Strategy Module.

A third characteristic is that the module requires minimal data entry. The end user has to enter very minimal data, as will be seen shortly. We tried to make use of all the existing data, whether in the DRS or in other data bases within the Bank's computer. We tried to make as much data available to the user as possible and require from him only what is necessary, only the parameters that the user must specify. The importance of this might not be clear at this point, but later, when I go through some screens and show the types of data the user has to enter, it may become clearer.

Related to this characteristic of minimal data entry work for the user are the standard scenarios provided as part of the Debt Strategy Module. If, for instance, the end user doesn't feel he or she is expert in projecting interest rates and exchange rates, we provide some scenarios developed by the experts in the field. We have benefited from this characteristic of the system quite a bit already. Indeed, we have found there are some scenario inputs the end users will not touch at all; they would rather make use of what is available centrally in the Bank. I must say that we have an advantage in the Bank of having expertise in various fields that may not exist in some of the developing contries, especially the smaller countries. For instance, I doubt that many countries will have as reliable

projections on exchange rates, interest rates, and so forth. But since these analyses are being done in the Bank, we decided to make use of them.

Another characteristic of the strategy module is that the user is able to aggregate or disaggregate his data as he wishes, so it is a dynamic system. In fact the first decision that the user has to make is the level of detail at which he is going to be operating. If he wants to do a very careful analysis of the debt situation in a country, of course he will be using the data at more disaggregated levels. But if he wants to get some idea about what the trends are, or what can be done in terms of debt reorganizations, new borrowings, and so forth, then he might, as a first attempt, work with more aggregated data. Then, based on the results from the Debt Strategy Module, he might decide to work with more detailed information. The module does give the user this flexibility. One of the most difficult parts of designing and developing the system was to provide this dynamic data aggregation capability.

It occurs to me that, since I have been using the term "end user" repeatedly, I should define who the end user is in this case. When we initially came up with the idea of developing a Debt Strategy Module, the idea was that this would be a tool used by the debt specialists within our Division, the Debt and Interntional Finance Division, which has a staff of over 40 people. As the development progressed and other parts of the Bank heard about this capability we were developing, they became very involved and interested. And in a way, they asked us to change our initial design and develop it, especially the user interface, in such a way that it would also be usable by the country economists in other areas of the Bank, most importantly in the Operations Complex.

So we have abandoned our first idea of providing it as a tool to the Debt and International Finance Division staff, and instead came up with an interface that will be easy enough to be used by the Bank's country economists. The tool I am talking about here, the Debt Strategy Module, is intended for wide release within the Bank. It will be made available to the economists who are responsible for providing economic advice, especially in the area of debt management, to the countries. There was a great deal of need for this in the Bank, and so far our experience has been pretty positive. I must say that when these key decisions in developing and designing a system change, it is not a very easy shift to make. First you are designing and developing a system for a selected group of specialists, then you try to to expand it and make it usable for a much broader, nonspecialized, user community. Since it was important for us to make this tool available to the country economists, we decided the design changes were worthwhile. As a result, we have a simplified, user–friendly interface, and I consider that to be an important characteristic of the system, too.

I was hoping to use the slides I prepared for this presentation, but at the last minute I decided it might create some confusion or it might slow me down. So I decided not to use those, but I will have to ask you in certain instances to look at some of the charts in the documentation circulated to you. This is one of those moments. Would you kindly look at Figure 21–1, which is rather important to give you an overview of the Debt Strategy Module. It points out the major components of the module. I will go through them very briefly first, then I will explain each component in more detail.

On the left side of Figure 21–1 are the inputs to the Debt Strategy Module; on the right are the outputs. The middle part is the processing.

On the input side, we start off with the debt stocks. This is the detailed, loan–by–loan information I talked about earlier. It is where the historical information comes from, including the projections for the *pipeline*: the disbursements and payments that will come due as a result of the loans that have already been contracted.

Next are the strategy assumptions. These can be assumptions about new borrowings or about debt reorganization actions. This is a short list right now. We started off with this set, but our early experience already shows that we will probably expand this list and add new capabilities. For instance, one thing that comes to mind is a capability to alter terms [of existing loans], which would belong here with the strategy assumptions. By altering terms, I mean changing the terms of the existing debt to see what the impact will be. We do not have that capabilitiy right now. But today I don't want to get too much into the types of enhancements we are planning. If I can explain clearly what exists today, that is a good start. Going back to the strategy assumptions, this is where the end user's input is required. The end user is responsible for providing a strategy for any new borrowings and debt reorganization.

The third box on the left comprises the scenario files, which are divided into two types. One is the Country Scenario, which contains historical values and future estimates of the macroeconomic aggregates for the

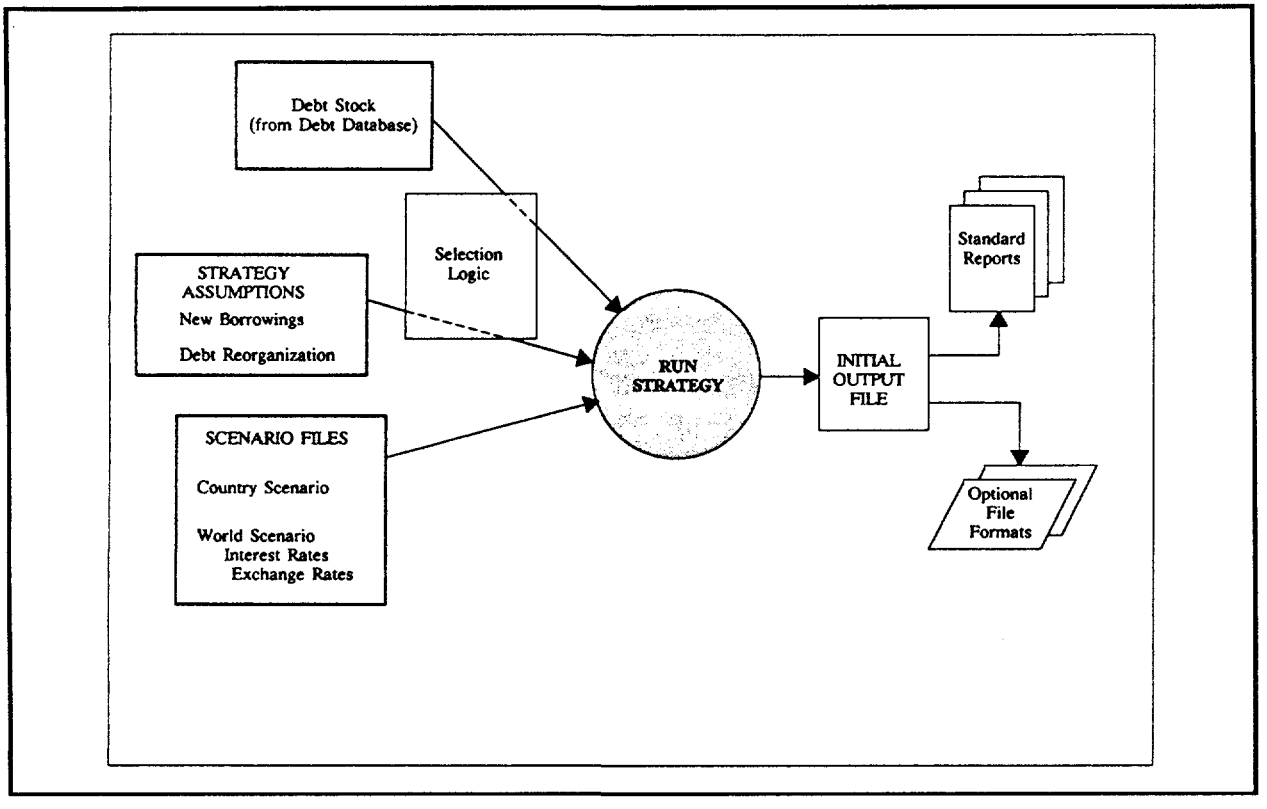


Figure 21.1. The Debt Strategy Module

country. We do give the end user help here, in the form of system-supplied historical and estimated future values previously worked up by others and maintained in various data banks of the Bank. So the user can choose either to use those previously established projections and estimates or develop his own. The second type of scenario files constitute what we call the "World Scenario." It includes data on interest rates and exchange rates. Here again, the end user may decide to create his own World Scenario—and we will talk about how he does that. Or he may decide to choose an existing World Scenario from the central data banks maintained by our division.

Those are the basic inputs. There is an interesting box on the left side of Figure 21–1, entitled "Selection Logic." I'm not going to spend too much time explaining about selection logic, but it is a very key part of the module. This logic is used in dynamically aggregating the data. This is where the user, after analyzing the data and making the decision as to how detailed or aggregated he wants the strategy results, tells the software what aggregations to perform. There are some syntax rules and other rules that must be followed in setting up the selection logic, but I will not go into that too much. Another way of looking at the selection logic is that it is the way you classify your loans.

A brief example at this point will suffice to illustrate what the selection logic does; it will be coming into the picture several more times during the presentation. Suppose you are preparing for a Paris Club rescheduling, and you do not really need all the detail that is in the data base. So you might decide, depending on the terms the creditors are offering, to aggregate your data base into four groups. Let us suppose there are four different types of creditors involved and each of the creditor groups is offering slightly different terms for rescheduling. Maybe the interest rates are slightly different. All you need to do is classify your data base according to these four creditor types. From that point on, you can represent the strategy results as though you have four huge loans, each of which is in fact composed of all the loans contracted with creditors of one type. You can forget about the fact that each of these four groups actually consists of maybe hundreds or thousands of

loans. So you eliminate some of the detail right away. Using the proper selection logic, you tell the Debt Strategy Module you are going to be concentrating on results for these four categories of loans. From that point on, you only have to specify what each new strategy does to each of the loan categories. I don't know if this is clear yet, but it is a key part of the module. Selection logic is applicable to all the capabilities of the module, which means the selection logic drives the reschedulings, new borrowings, and everything else that goes on.

That is it, as far as inputs are concerned. In the middle of Figure 21–1, we have the major processing and projecting work done by the computer, which we call *running the strategy*.

The outputs from running a strategy are shown on the right side of Figure 21–1. The module first produces an initial output file. This is an unformatted file that contains just the results of the strategy run. There are technical reasons why we produce this intermediate file first, rather than generating the final reports. Ultimately, the justification is to have the flexibility of looking at the strategy results in various different presentations or formats. This way, we can get additional reports without having to rerun the entire strategy. We can use the initial output file to produce a variety of reports, as selected by the user. The user can also choose to produce extracts out of the results file that can be downloaded to a microcomputer and imported into a spreadsheet package like Lotus 1–2–3. Or he can produce other extracts predefined to support other analytical tools in use within the Bank. So we have quite a bit of flexibility in how we make use of our results once they are generated.

Next I would like you to look at the main menu of the Debt Strategy Module (Figure 21–2). This menu will give you an idea of how we gather all these different components under one umbrella and how we present them to the user. Also, I will discuss each of the components in the order they are presented in that main menu. We paid quite a bit of attention to the way we designed our panels and the menus, and so forth. We wanted to make it as straightforward and easy for the end user as possible. We didn't want to burden them with extra inconveniences. So the menu is designed to follow the work flow; if a certain decision has to be made before another step, the step for that decision comes first.

The main menu is divided into two parts. The top half is just administrative information and is less important to the actual modeling work than the bottom part. I will go through the top part very quickly. First, you have to give a name to your strategy; each user is likely to have many strategies, so there has to be a way of referring to a particular strategy or recalling it. Next is a field for the full descriptive title of the strategy. Then you specify the country as a three-digit code. The next data entry

```
                DEBT Strategy Modeling - Main Panel                    13:35
COMMAND ===>

Strategy Name ===> MEX4          Title ===> OPTIONS 1 2 3 TOGETHER      <=
Country Code  ===> 358           MEXICO
Database Name ===> WORKING

Strategy Effective Date               ===> 198812
Include Loans Contracted Through Date ===> 198812
Number of Projection Years            ===> 10
Job Execution Time                    ===> 0800
Run Table                             ===> 1       TABLE 1A & 1B
---------------------- Strategy Input Panels -------------------------------
0  Strategy Description
1  Selection Logic        Name ===> MEX4

2  Country Scenario       Name ===> MEX4
3  Interest Rate Scenario Name ===> MEX
4  Exchange Rate Scenario Name ===> PAC

5  New Borrowings      ===> YES
6  Debt Reorganization ===> YES
---------------------- Issue ? Command for help ----------------------------
```

Figure 21.2. Debt Strategy Module Main Panel

field is the data base name. As an aside, we do maintain, in some cases, several versions of the debt data for a country. Where we have clean and complete data, we keep those in our working files. Where there are estimates or where clean–up work is going on, and the file is not yet suitable for results to be released publicly, we keep the file as a special data base. This field in the main menu allows the user to specify which of the data bases to access when the strategy is run.

Next are some dates to specify. The Strategy Effective Date typically corresponds to the last update date of the data base. If the data base has been updated with historical data through the end of 1987, that would be your Strategy Effective Date. From that date onwards, you would use the projection capability of the system to forecast pipeline information, and so on. The second date gives the user the opportunity to exclude some loans which had been contracted prior to the Strategy Effective Date. For example, you may have a Strategy Effective Date set for the end of 1987, but with the second date you can exclude the loans contracted during 1987. You may feel the information is not good enough, or for some other reason you choose to leave those loans out. Next comes the number of years to project. There is no limit here; you can make it ten, fifteen, twenty years, the system doesn't care. Except, of course, the amount of computation will increase as the number of projection years increases. The Job Execution Time specifies when you want your strategy job to start. Do you want it to start right away or do you want to wait until a later time before it starts? This parameter is related to the computer usage system we have in the Bank. At certain times, the hourly charge rates are lower. We operate our computer on a time–sharing basis, and users may decide to wait a couple of hours for lower charge rates before executing their strategy jobs.

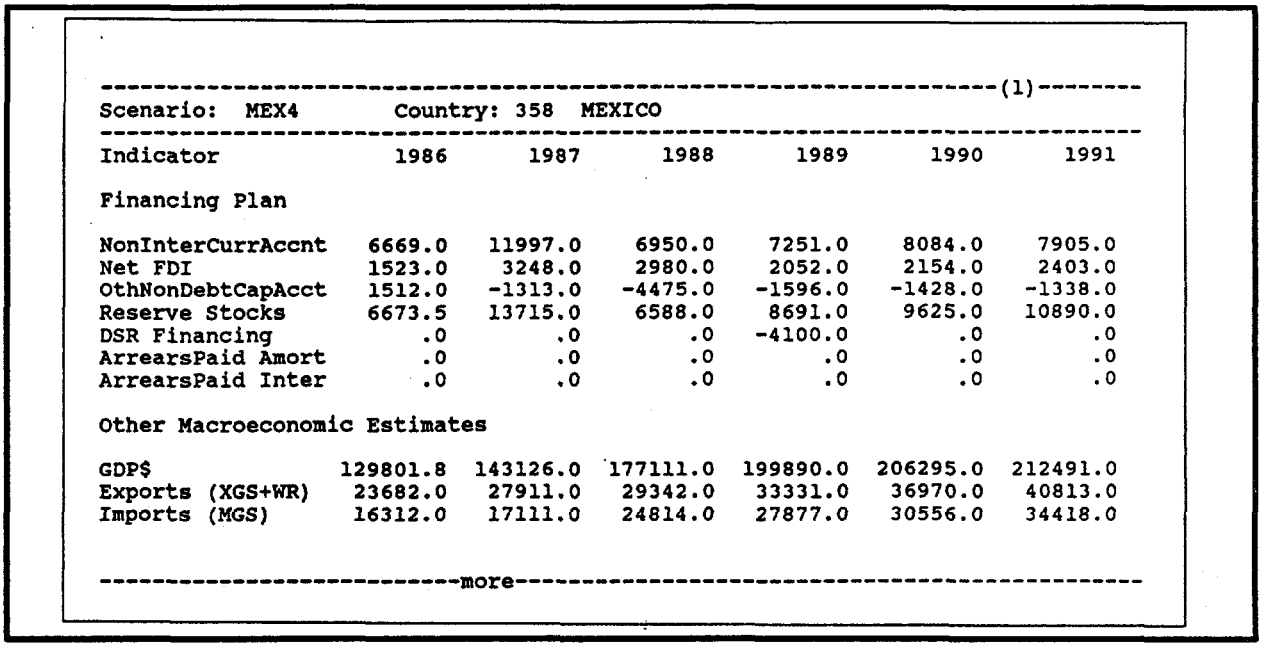
The bottom part of the main menu contains the fields that correspond to the components shown in Figure 21–1, the overview chart. The order is slightly different here. Item one is the selection logic. Before going further in strategy development, the user has to decide on the breakdown classifications for the data base. By the way, there is always the opportunity to go back and change your level of detail or classification.

One important purpose of the selection logic is for report organization. For instance, when you are generating reports you don't want to show all the currencies in the report. In a typical debtor country, most of the debt is in several key currencies, but the rest of the currencies can be very numerous, even though the amounts are small. So if you are preparing reports that break the results by payment currencies, you don't want to have a report showing 90 percent of the debt in three pages for the three key currencies but then have another twenty or so pages, each with small amounts for the many minor currencies. The selection logic gives the user an opportunity to bunch up, or basket, the minor currencies and assign one title to the class, such as "Other" or something like that. For example, you can classify loans as payable in deutsche mark, U.S. dollars, and Japanese yen, because they are the important currencies for the particular country, then classify the remainder as a basket called "Other" or "European Currencies," whatever. All currency–dependent calculations will still be done correctly; all the calculations will be based on the original currency of each loan. Only afterward, for the output file, will the results be aggregated according to your selection logic.

The second item in this part of the main menu is the Country Scenario. This is where assumptions are made about the economic aggregates of the country. The input may come either from the user or from our central data banks. There isn't much information that is absolutely required in the Country Scenario to run a strategy. We include only seven indicators in it, so this is not a very elaborate Country Scenario that we are talking about. Figure 21–3 replicates the screen in which the user records this information. On top of the figure is the title "Country Scenario Panel." Then there are the seven indicators on seven lines. The indicators that are required to do the analysis we will be carrying out at the end of the strategy run are:

- Non–interest current account
- Other non–debt capital account (this is typically the portfolio of foreign direct investments)
- Reserve Stocks
- GNP (gross national product)
- Exports
- Imports.

This is all the information needed to carry out the calculations. I should add that, in the Debt Strategy Module, we are concentrating on the debt statistics. We want to be as accurate and detailed as possible with respect to the debt statistics. We are less interested in elaborate–looking or detailed economic analyses. For this reason we have restricted the Country Scenario to



```
                                                                    (1)
Scenario:  MEX4        Country: 358  MEXICO
-------------------------------------------------------------------------------
Indicator                1986       1987       1988       1989       1990       1991

Financing Plan

NonInterCurrAccnt      6669.0    11997.0     6950.0     7251.0     8084.0     7905.0
Net FDI                1523.0     3248.0     2980.0     2052.0     2154.0     2403.0
OthNonDebtCapAcct      1512.0    -1313.0    -4475.0    -1596.0    -1428.0    -1338.0
Reserve Stocks         6673.5    13715.0     6588.0     8691.0     9625.0    10890.0
DSR Financing             .0        .0         .0    -4100.0        .0         .0
ArrearsPaid Amort         .0        .0         .0         .0        .0         .0
ArrearsPaid Inter         .0        .0         .0         .0        .0         .0

Other Macroeconomic Estimates

GDP$                129801.8   143126.0   177111.0   199890.0   206295.0   212491.0
Exports (XGS+WR)     23682.0    27911.0    29342.0    33331.0    36970.0    40813.0
Imports (MGS)        16312.0    17111.0    24814.0    27877.0    30556.0    34418.0


---------------------------more-----------------------------------------------
```

Figure 21.3. Country Scenario Panel

seven key indicators. So far, they have been adequate. In the future, we may need to add more indicators, perhaps for such things as grants when these are a key part of the contry's inflows, and so forth. But right now, we are staying away from that; our concentration is really on the debt aspects.

I think the indicators will be familiar to most of you. The non–interest current account is just the current account adjusted to exclude the interest paid on external debt; otherwise there would be a double counting, because the module calculates the interest from the debt stock. As I said, we have deliberately kept the Country Scenario as straightforward and basic as possible.

How does one go about generating a Country Scenario? Within the Bank, we are fortunate enough to have some procedures in place, some routine surveys, etc., which deal with this issue. So we have in our central data banks some estimates for these indicators. We make this information available to the country economists to use. But a user may choose not to use these estimates; they may not look good enough or the user may prefer to make his own calculations. Typically, the economists or analysts use a Lotus 1–2–3 spreadsheet with one or more years of historical data and some growth rates taken as input assumptions, from which future–year estimates are derived. So we are not talking about very detailed or econometric–type analysis here. However, if a user wished to carry out a more detailed analysis to generate these numbers, he is free to do so. We have not created a capability within the Debt Strategy Module to generate these scenarios automatically, although that is under consideration right now. The growth rate calculations from a historical base year are trivial and require little input from the user. So we think it might be good to give the user the opportunity to specify expected growth rates for GNP, exports, imports, non–interest current account, and the other indicators, then have the system calculate yearly estimates. The information stored in the Country Scenario comes into the picture when we move on to doing financial requirements analysis.

I forgot to mention that from the main menu you navigate to an option by typing its number at the command line. If you want to visit the Country Scenario screen, you enter '2' as the command. If you want to look at your interest rates scenario you enter '3' as the command, and that panel comes up. So the order of components and the way to get to them are pretty straightforward.

Another point I want to make before talking about the interest rates scenario is that all these scenarios and the strategies are kept in different files. So there is opportunity to develop the scenarios independently, then mix them in different combinations. For instance, you may have three different Country Scenarios. One may be

more optimistic and another more pessimistic. Then you may have one that is middle–of–the–road or a base case. You can develop these three and later on, when you are running your strategies, you may decide to develop different sets of borrowing assumptions for the different Country Scenarios. So you can have an array of scenarios from which to choose a Country Scenario, Interest Rate Scenario, and Exchange Rate Scenario for a given strategy run. You can use these scenario files in different combinations when developing and testing strategies.

For the Interest Rate Scenario, you first have to specify a scenario name. (Actually, this applies to Country Scenarios, too.) You have to give a title or a name to each scenario you are developing, so that later on you can refer to it, whether to edit it, print it out, or incorporate it in a strategy run. The same thing applies to the Interest Rate Scenario. I have chosen to use the name DEMO1 for both the Interest Rate Scenario and the Exchange Rate Scenario. (Scenarios of different types can have the same name.)

There are a couple of date fields associated with the Interest Rate Scenario and another data field associated with the Exchange Rate Scenario. Yesterday we discussed very briefly whether these simulation models should allow the user to freeze exchange rates or interest rates at a given time in the past and keep the rates constant from that point on. For various reasons, we decided this was a necessary option for our users, so we included it in the Debt Strategy Module. Even though there may be actual interest rates in the reference files of historical data or, in the case of a scenario file, estimated values for future years, the user has the option of setting the cut–off date to stay with constant rates from that time forward. The cut–off date option is available for both interest rates and exchange rates.

Figure 21–4 shows the first panel for an Interest Rate Scenario. This panel is called "Interest Rates for Short–term Deposits." The title is a little misleading because it applies only to this first panel. In the upper right corner is the panel number—in this case 4.1. This means there are four panels corresponding to each Interest Rate Scenario and the displayed panel is the first of them. By pressing the PF keys, the user can move among these four panels, viewing and revising each of them. The first panel happens to be interest rates for short–term deposits. Of course, the reason they come first is that they are the key interest rates for variable–rate lending. The other three panels, which are not shown, are panels for prime rates, rates on deposits, and the IBRD rate. So these four consecutive panels display interest rate information the user can access and edit.

With respect to interest rate coverage, in the DRS computer system we store information for 26 different rates used for variable–rate indexes. Some countries have

```
-------------Interest Rates For Short Term Deposits---------(4.1 DEMO1 )---
Interest Base  1987a    1988a     1989      1990      1991      1992      1993

Libor   ( 6)   7.396    7.986    9.300     8.500     8.100     8.000     7.800
Libor   (12)   7.707    8.277    9.600     8.800     8.400     8.300     8.100
Sibor   ( 6)   7.646    7.268    8.574     7.779     7.382     7.282     7.084
Sibor   (12)   7.957    7.648    8.958     8.161     7.762     7.662     7.463
DM      ( 3)   3.987    4.207    5.475     4.703     4.317     4.221     4.028
FF      ( 3)   8.598    8.030    9.345     8.544     8.144     8.044     7.844
LSTG    ( 3)   9.692   10.090   11.430    10.614    10.206    10.104     9.900
SWF     ( 3)   3.826    3.010    4.264     3.500     3.119     3.023     2.833

                1994     1995     1996      1997      1998      1999      2000
Libor   ( 6)   7.000    7.300    7.000     6.800     6.800     6.800     6.800
Libor   (12)   7.300    7.600    7.300     7.100     7.100     7.100     7.100
Sibor   ( 6)   6.289    6.587    6.289     6.090     6.090     6.090     6.090
Sibor   (12)   6.666    6.965    6.666     6.466     6.466     6.466     6.466
DM      ( 3)   3.256    3.545    3.256     3.063     3.063     3.063     3.063
FF      ( 3)   7.044    7.344    7.044     6.844     6.844     6.844     6.844
LSTG    ( 3)   9.085    9.391    9.085     8.881     8.881     8.881     8.881
SWF     ( 3)   2.070    2.356    2.070     1.879     1.879     1.879     1.879
a/ Actual (average of 12 months)
------------------------------PF4/Project-----------------------------------
```

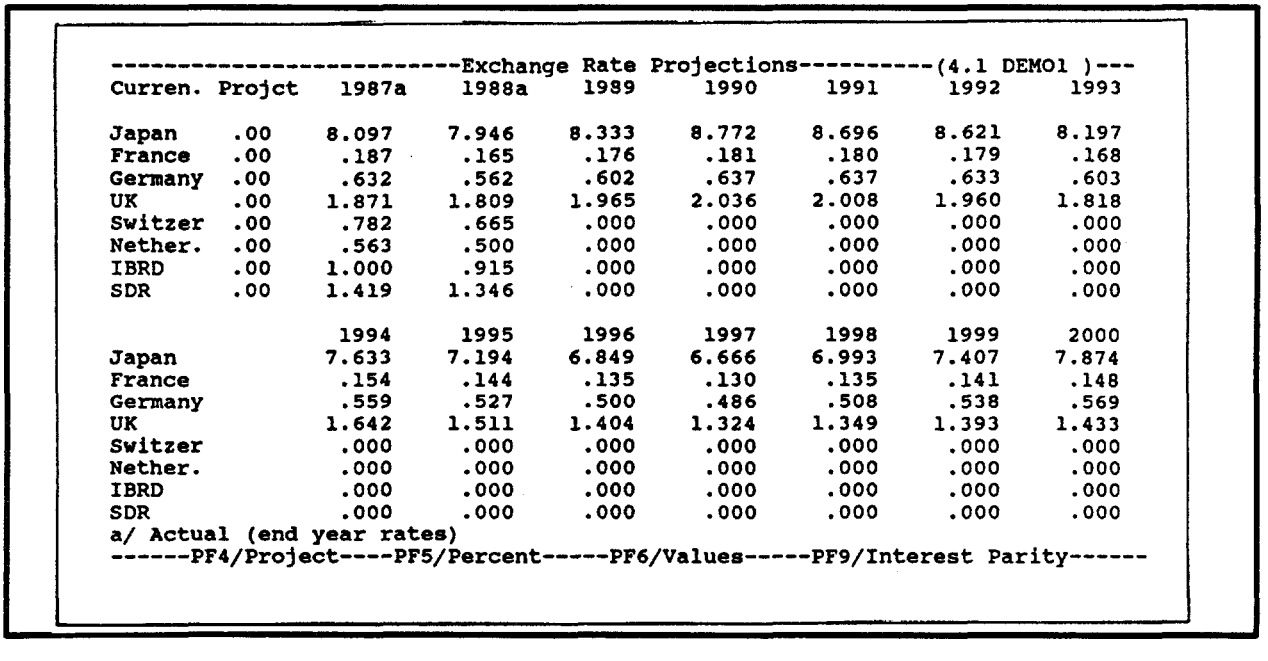
Figure 21.4. Interest Rate Scenario (1 of 4)

greater coverage; some countries have less. For instance, when we visited Brazil we discovered, much to our surprise (or maybe we should not have been surprised), that they have over 80 different variable–rate indexes stored in their data system. We restrict ourselves to 26 and hope they are the key ones. In Figure 21–4, the first two columns, 1987 and 1988, are historical data from our reference files. From 1989 onwards are the projected figures. There are different ways of projecting these numbers. One way is simply to make use of the projections that have been done previously by others in the Bank whose business is to make these estimates. I will not go into the techniques employed, but we do have a group of people who make these projections. So we tap into their data bases, capture the information, and make it available to our users.

Still, this doesn't preclude the user from doing his own projections. He can go ahead and make assumptions for the key interest rates. We even have one projection function built into the Debt Strategy Module, which uses empircally established relations among the different interest rates. Based on the user's estimates for the key interest rate, this function will project for the rest of the rates. These are quite complicated and detailed projection routines, but we have probably spent more of our time dealing with the projection routines than with the rest of the module's components.

The Exchange Rate Scenario is pretty much like the Interest Rate Scenario. Again there are four panels, only the first of which is shown in Figure 21–5. We do not include all the currencies available in the DRS, where we maintain historical exchange rates (into U.S. dollars) for hundreds of currencies. We do not give the user the capability to make projections for every one of these currencies. Instead, we have selected the thirty most important currencies and allow the user to make projections for them. I have not listed all of them, but the first eight or so are in Figure 21–5. Here again the user may use the centrally–maintained projections of rates for the key currencies: those of Japan, France, the Federal Republic of Germany, the United Kingdom, Switzerland, and the Netherlands. Or the user may choose to make his own projections. Again, there are relationships among the different exchange rates built into system–supplied functions. These functions allow the user to project rates for all the currencies based on values for the key currencies. We do not claim that these projection routines are perfect and accurate, but they are probably better than having no projections at all or making the assumption that everything will remain constant over the projection period.

I want to emphasize again that we spend quite a bit of time analyzing these things and looking at the various relationships. For instance, clearly there is a relation



Exchange Rate Projections (4.1 DEMO1)

Curren.	Projct	1987a	1988a	1989	1990	1991	1992	1993
Japan	.00	8.097	7.946	8.333	8.772	8.696	8.621	8.197
France	.00	.187	.165	.176	.181	.180	.179	.168
Germany	.00	.632	.562	.602	.637	.637	.633	.603
UK	.00	1.871	1.809	1.965	2.036	2.008	1.960	1.818
Switzer	.00	.782	.665	.000	.000	.000	.000	.000
Nether.	.00	.563	.500	.000	.000	.000	.000	.000
IBRD	.00	1.000	.915	.000	.000	.000	.000	.000
SDR	.00	1.419	1.346	.000	.000	.000	.000	.000

	1994	1995	1996	1997	1998	1999	2000
Japan	7.633	7.194	6.849	6.666	6.993	7.407	7.874
France	.154	.144	.135	.130	.135	.141	.148
Germany	.559	.527	.500	.486	.508	.538	.569
UK	1.642	1.511	1.404	1.324	1.349	1.393	1.433
Switzer	.000	.000	.000	.000	.000	.000	.000
Nether.	.000	.000	.000	.000	.000	.000	.000
IBRD	.000	.000	.000	.000	.000	.000	.000
SDR	.000	.000	.000	.000	.000	.000	.000

a/ Actual (end year rates)

------PF4/Project----PF5/Percent-----PF6/Values-----PF9/Interest Parity------

Figure 21.5. Exchange Rate Scenario Panel (1 of 4)

```
                        NEW BORROWINGS PANEL - ATLANTIS

Loan Creditor ---Amortizaton-- --------Interest------  -----CurrencyMix------
Name   Type  Grace Period Type Grace Period Base Rate    Cur1     Cur2     Cur3
IBRD     20     5    12    01     0    17   26   .500     981
     IBRD Nonconc  EqualPayComm      IBRD Rates          MIX 100        0        0
Years  1988  1989  1990  1991  1992  1993  1994  1995  1996  1997  1998  1999
Amt$    182   268   379   457   583   586     0     0     0     0     0     0
-------------------------------------------------------------------------------
OTMULF   04     7     4    01     0    11   I3  6.500     005      004      701
     OthMultiNonc  EqualPayComm      Fixed Rate          DM  50 FF   20  YEN  30
Years  1988  1989  1990  1991  1992  1993  1994  1995  1996  1997  1998  1999
Amt$       0   220   243   270   204   236     0     0     0     0     0     0
-------------------------------------------------------------------------------
BILFIX   11     5    11    01     0    16   I3  6.500     005      302      011
     BilatDACNonc  EqualPayComm      Fixed Rate          DM  50 US$  40  SWF  10
Years  1988  1989  1990  1991  1992  1993  1994  1995  1996  1997  1998  1999
Amt$       0   245   127   361   499   568     0     0     0     0     0     0
-------------------------------------------------------------------------------
FINMAR   16     3     4    01     0     7   16  1.000     302      701      005
     FinanMarkets  EqualPayComm      LIBOR-6month       US$  35 YEN  25   DM  40
Years  1988  1989  1990  1991  1992  1993  1994  1995  1996  1997  1998  1999
Amt$       0   747  1403  1534  1595  1590     0     0     0     0     0     0
-------------------------------------------------------------------------------
SUPPL    15     2     5    01     0     7   16  1.100     302      701      005
     Suppliers     EqualPayComm      LIBOR-6month       US$  40 YEN  48   DM  12
Years  1988  1989  1990  1991  1992  1993  1994  1995  1996  1997  1998  1999
Amt$     148   425   272   482   529   620     0     0     0     0     0     0
-------------------------------------------------------------------------------
PRVNGR   77     1     1    01     0     2   16  1.000     302
     PrvNonGuartd  EqualPayComm      LIBOR-6month       US$ 100        0        0
Years  1988  1989  1990  1991  1992  1993  1994  1995  1996  1997  1998  1999
Amt$       0   550   600   650   700   750     0     0     0     0     0     0
-------------------------------------------------------------------------------
BILVAR   11     5    11    01     0    16   16   .100     005      302      011
     BilatDACNonc  EqualPayComm      LIBOR-6month        DM  50 US$  40  SWF  10
Years  1988  1989  1990  1991  1992  1993  1994  1995  1996  1997  1998  1999
Amt$       0     0     0   100   200   300     0     0     0     0     0     0
-------------------------------------------------------------------------------
OTMULV   04     7     4    01     0    11   16   .100     005      004      701
     OthMultiNonc  EqualPayComm      LIBOR-6month        DM  50 FF   20  YEN  30
Years  1988  1989  1990  1991  1992  1993  1994  1995  1996  1997  1998  1999
Amt$       0     0     0     0   100   100     0     0     0     0     0     0
----------------PF3/Exit---------PF4/Help---------Return/Update-------------
Total$   330  2455  3024  3854  4410  4750     0     0     0     0     0     0
```

Figure 21.6. New Borrowings Panel

between movement of the Netherlands guilder against the dollar and movement of the deutsche mark. These types of relation we have identified. The IBRD pool rate can be calculated in the same manner. There are different mixes of currencies involved here, so if you know the composition of the IBRD currency pool and you have estimated the movements of the underlying currencies, you can calculate the effective movement for the IBRD rate. The rate for SDR [IMF Special Drawing Rights] is done the same way; it moves along with the underlying currencies. I am sure most or maybe all of us here know some of these relations. We have done quite a bit of investigation in this area, and we have identified the key currencies for which some estimates are necessary. Once these key currency estimates are entered, the user can go ahead and project the rest of the thirty currencies.

We can now start talking about the strategy assumptions. In the New Borrowings panel (Figure 21–6), the user can specify assumptions about new borrowings. The panel looks very crowded at first and may be a bit confusing. This is not the format with which we started. We had many different panels; the user could code different things in different panels, but that became a problem because our typical users preferred to see everything in one screen. Having many screens introduced inefficiency in their coding efforts. So we

ended up with this single panel, which really gathers everything in one place. The horizontal lines separate the different loans that one is assuming will be contracted by the country. Each division in the panel represents a new loan or a group of loans, all of which are at the same terms.

The bottom half of each division is easier to explain; those are the amounts that will be disbursed in each of the displayed years. If you look at the example in Figure 21–6, it assumes that this imaginary country, Atlantis, will get disbursements from IBRD in the amount of US$182 million for the year 1988, and so forth. The years shown on the panel depend on the Strategy Effective Date that was set in the main menu. If you have specified end–1987 to be your Strategy Effective Date, you will see in the New Borrowings panel the next twelve years after 1987 as your projection horizon. The disbursed amounts are always expressed in U.S. dollars, but the panel allows you to specify the repayment currencies of these loans. The fields for repayment currencies are in the upper right of each division. In the first sample loan shown in Figure 21–6, because the creditor is IBRD there is no choice; 100 percent of it will be in the mixed currency. Further down this panel, other assumed loans are displayed for which the disbursed amounts are still expressed in U.S. dollars but the repayment currency fields divide it into 50 percent deutsche mark, 20 percent French francs, and 30 percent yen. The alternative to this way of coding the amounts is to enter individual loans for each currency. I think our approach is more effective and a shorter way of getting the same information into the data file.

Unfortunately, I am running out of time, so I am going to stop here with the new borrowings. Maybe we will take up some of these things when you ask questions. We will move on to the Debt Reorganization panel (Figure 21–7), which is the last data entry panel I would like to cover. Again, the major horizontal divisions in the panel represent different agreements for a debt reorganization. Each division is a part of an agreement.

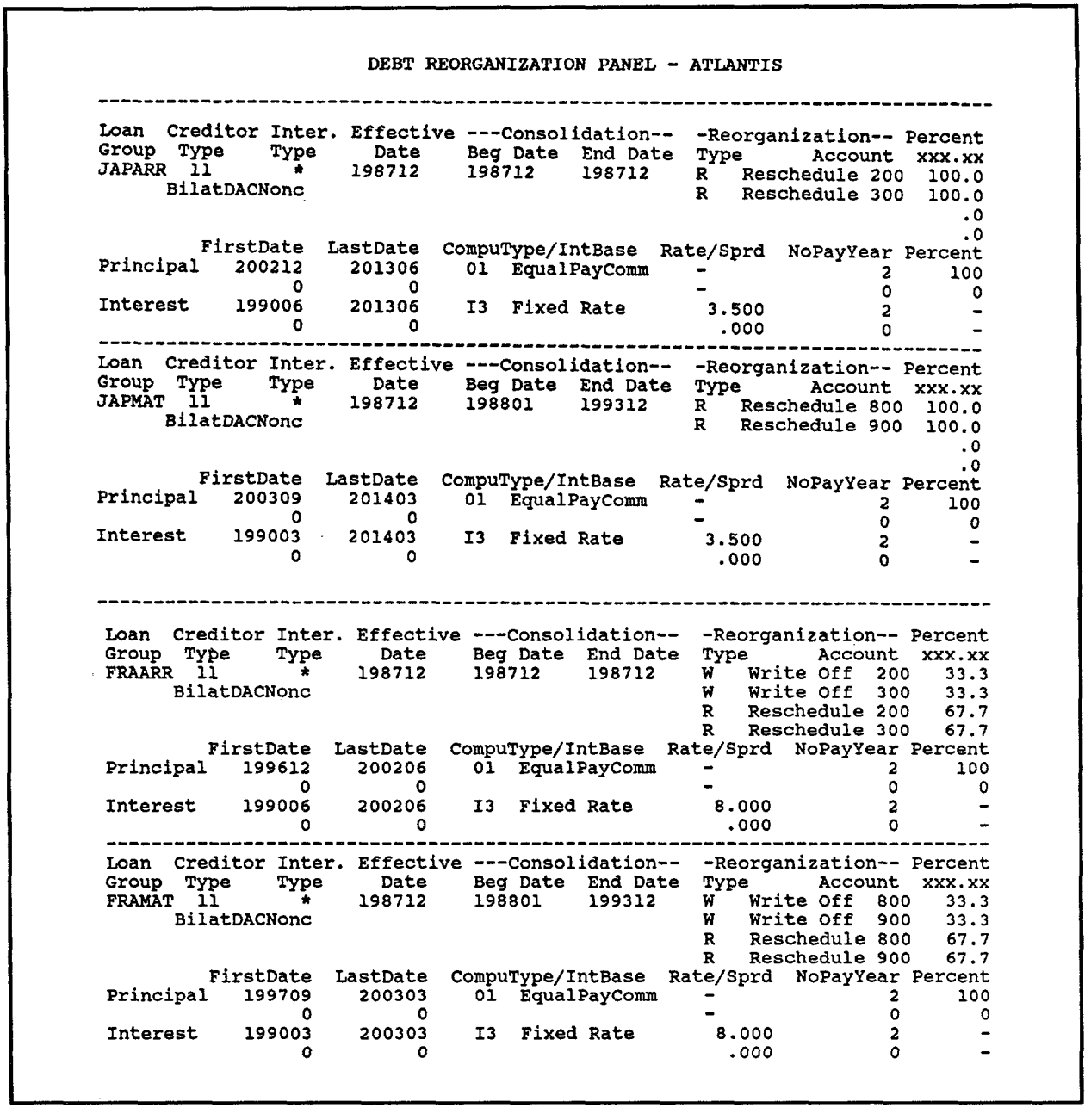
Figure 21–7 shows four of these subagreements. This is actually a simulation of an agreement under the Toronto proposals. The first division deals with the Japanese treatment for arrears. The second division is the Japanese way of dealing with maturities. The third is the French way of dealing with arrears, while the fourth one is the treatment for French maturities. The very first field of each division is a name that the user gives to that loan group. The name doesn't necessarily have to be related to the creditor. It can be related to anything; in fact you can make it up. You could call the four loan groups A, B, C, and D. The key thing is to use names that correspond to loan classes you previously defined in your selection logic. So each of the loan names shown in Figure 21–7 corresponds to one class defined by the selection logic for this strategy. The next two fields can be used to specify the creditor type and the interest type. In certain cases, you have to specify one or both; in other cases, they are optional and can be omitted. Next are date fields for the Effective Date of the debt reorganization, the Consolidation Begin Date, and the Consolidation End Date. All these fields together are used to specify which loans are to be reorganized. In the bottom part of the division for each subagreement, you will see the terms specified for the reorganized loan amounts. But let's first concentrate on the top part which specifies the loans being reorganized.

The Type field on the right side is a code for the type of reorganization action. It is R for the first example, but as you scan through the sample panel, you can see that it varies. The Type code can be R for a rescheduling, W for a write–off, D for deferrals, B for a buy–back, S for a swap, and so forth. The way you specify which reorganization action to perform is simply by putting that action's Type code in this field. Once you enter a code, the system does display the longer name for the action, underneath the coded value.

The next field is for the Account. Unfortunately, at this time the system does not display a descriptive name for the Account. In the first subagreement in the sample panel, 200 and 300 are the Account codes for amortization in arrears and interest in arrears, respectively. We are planning to improve this panel so it displays names for these codes, too.

So to sum up, the first agreement says that, for the Japanese arrears, which have already been selected through my selection logic, the Effective Date of the reorganization is going to be 198712, meaning December 1987. The beginning and the ending dates of the consolidation period are also given in year–month format. This action will be a rescheduling of the interest arrears and principal arrears, with 100 percent of the arrears affected.

The terms of the new loans formed from these reorganized amounts are specified in the bottom part of each subagreement. There are fields for the first date of



DEBT REORGANIZATION PANEL - ATLANTIS

Loan Group	Creditor Type	Inter. Type	Effective Date	---Consolidation-- Beg Date	End Date	-Reorganization-- Type	Account	Percent xxx.xx
JAPARR	11	*	198712	198712	198712	R	Reschedule 200	100.0
	BilatDACNonc					R	Reschedule 300	100.0
								.0
								.0

	FirstDate	LastDate	CompuType/IntBase	Rate/Sprd	NoPayYear	Percent
Principal	200212	201306	01 EqualPayComm	-	2	100
	0	0		-	0	0
Interest	199006	201306	I3 Fixed Rate	3.500	2	-
	0	0		.000	0	-

Loan Group	Creditor Type	Inter. Type	Effective Date	---Consolidation-- Beg Date	End Date	-Reorganization-- Type	Account	Percent xxx.xx
JAPMAT	11	*	198712	198801	199312	R	Reschedule 800	100.0
	BilatDACNonc					R	Reschedule 900	100.0
								.0
								.0

	FirstDate	LastDate	CompuType/IntBase	Rate/Sprd	NoPayYear	Percent
Principal	200309	201403	01 EqualPayComm	-	2	100
	0	0		-	0	0
Interest	199003	201403	I3 Fixed Rate	3.500	2	-
	0	0		.000	0	-

Loan Group	Creditor Type	Inter. Type	Effective Date	---Consolidation-- Beg Date	End Date	-Reorganization-- Type	Account	Percent xxx.xx
FRAARR	11	*	198712	198712	198712	W	Write Off 200	33.3
	BilatDACNonc					W	Write Off 300	33.3
						R	Reschedule 200	67.7
						R	Reschedule 300	67.7

	FirstDate	LastDate	CompuType/IntBase	Rate/Sprd	NoPayYear	Percent
Principal	199612	200206	01 EqualPayComm	-	2	100
	0	0		-	0	0
Interest	199006	200206	I3 Fixed Rate	8.000	2	-
	0	0		.000	0	-

Loan Group	Creditor Type	Inter. Type	Effective Date	---Consolidation-- Beg Date	End Date	-Reorganization-- Type	Account	Percent xxx.xx
FRAMAT	11	*	198712	198801	199312	W	Write Off 800	33.3
	BilatDACNonc					W	Write Off 900	33.3
						R	Reschedule 800	67.7
						R	Reschedule 900	67.7

	FirstDate	LastDate	CompuType/IntBase	Rate/Sprd	NoPayYear	Percent
Principal	199709	200303	01 EqualPayComm	-	2	100
	0	0		-	0	0
Interest	199003	200303	I3 Fixed Rate	8.000	2	-
	0	0		.000	0	-

Figure 21.7. Debt Reorganization Panel

payment and the last date, for both principal and interest. The main point is that by using one panel, the user can code several types of reorganization actions to be run against the data base.

The last part of my presentation concerns the actual outputs, which are generated once the strategy has been developed and run. I would like now to ask you to look at some of the standard tables we are generating. Some of those tables are more important and others are less important. The two important ones are titled the Financial Requirements Table (Figure 21–8 and 21–9). After the strategy has been developed and run, you can get these standard tables to use in evaluating the feasibility of the strategy, or the results that you are

EXHIBIT 1: FINANCIAL REQUIREMENTS TABLE - SAMPLE COUNTRY
(Basecase - High Current Account - Interest Parity Scenario)

	1987	1988	1989	1990	1991	1992	1993
Debt Stocks (EDT)	**40,813**	**37,360**	**36,605**	**35,035**	**32,947**	**30,548**	**28,289**
Long-Term	27,705	25,350	24,714	22,957	20,675	18,075	15,608
Public Debt (DOD)	26,839	24,827	24,382	22,746	20,675	18,075	15,608
Private Nonguaranteed	866	523	331	210	0	0	0
Use of IMF Credit	770	299	0	0	0	0	0
Short-Term	12,338	11,711	11,891	12,079	12,272	12,473	12,681
Gross Disbursements	**6,590**	**3,432**	**2,468**	**1,648**	**1,016**	**568**	**255**
Long-Term	4,616	3,433	2,468	1,648	1,016	568	255
Public and Publicly Guaranteed	4,182	3,433	2,468	1,648	1,016	568	255
Private Nonguaranteed	435	0	0	0	0	0	0
IMF Purchases	0	0	0	0	0	0	0
Amortization	**3,465**	**4,633**	**4,369**	**3,855**	**3,692**	**3,543**	**3,058**
Long-Term	3,020	4,202	4,119	3,806	3,692	3,543	3,058
Public and Publicly Guaranteed	2,741	3,859	3,927	3,685	3,482	3,543	3,058
Private Nonguaranteed	279	343	192	121	210	0	0
IMF Repurchases	445	431	250	49	0	0	0
Interest Payments	**2,615**	**3,044**	**3,097**	**2,912**	**2,728**	**2,510**	**2,316**
Long-Term	1,629	1,977	1,917	1,731	1,530	1,291	1,075
Public Debt (INT)	1,579	1,903	1,861	1,691	1,501	1,291	1,075
Private Nonguaranteed	50	74	56	40	30	0	0
IMF Charges	82	9	23	4	0	0	0
Short-Term	905	1,058	1,157	1,177	1,198	1,219	1,241
Debt Service	**6,080**	**7,677**	**7,466**	**6,767**	**6,420**	**6,054**	**5,374**
Long-Term	4,649	6,179	6,036	5,537	5,223	4,835	4,133
Public Debt (TDS)	4,321	5,762	5,788	5,376	4,982	4,835	4,133
Private Nonguaranteed	328	417	248	161	240	0	0
IMF Credit	527	440	273	53	0	0	0
Short-Term	905	1,058	1,157	1,177	1,198	1,219	1,241
Net Flows	**3,124**	**-1,200**	**-1,901**	**-2,207**	**-2,676**	**-2,975**	**-2,802**
Long-Term	1,596	-769	-1,651	-2,158	-2,676	-2,975	-2,802
Public and Publicly Guaranteed	1,441	-426	-1,459	-2,037	-2,465	-2,975	-2,802
Private Nonguaranteed	156	-343	-192	-121	-210	0	0
IMF Credit	-445	-431	-250	-49	0	0	0
Short-Term	1,973	0	0	0	0	0	0
Net Transfers	**509**	**-4,244**	**-4,998**	**-5,119**	**-5,404**	**-5,485**	**-5,119**
Long-Term	-33	-2,746	-3,567	-3,889	-4,206	-4,266	-3,878
Public and Publicly Guaranteed	-139	-2,328	-3,320	-3,728	-3,966	-4,266	-3,878
Private Nonguaranteed	106	-417	-248	-161	-240	0	0
IMF Credit	-527	-440	-273	-53	0	0	0
Short-Term	1,069	-1,058	-1,157	-1,177	-1,198	-1,219	-1,241
Macroeconomic Indicators							
Gross National Product (GNP)	67,496	72,026	78,508	85,574	93,276	101,671	110,821
Growth (%)	19.5	6.7	9.0	9.0	9.0	9.0	9.0
Export Earnings Incldg Workers Rem. (XGS)	15,863	18,864	19,700	21,238	22,832	24,557	26,422
Growth (%)	27.2	18.9	4.4	7.8	7.5	7.6	7.6
Imports of Goods and Services (MGS)	15,251	15,569	17,760	19,181	20,715	22,372	24,162
Growth (%)	6.6	2.1	14.1	8.0	8.0	8.0	8.0
Reserve Stocks (RES)	2,999	3,682	4,234	4,869	5,600	6,440	7,406
MGS (%)	19.7	23.6	23.8	25.4	27.0	28.8	30.7
Total External Debt Ratios							
EDT / XGS (%)	257.3	198.0	185.8	165.0	144.3	124.4	107.1
EDT / GNP (%)	60.5	51.9	46.6	40.9	35.3	30.0	25.5
Debt Service / XGS (%)	38.3	40.7	37.9	31.9	28.1	24.7	20.3
RES / EDT (%)	7.3	9.9	11.6	13.9	17.0	21.1	26.2
RES / MGS (months)	2.4	2.8	2.9	3.0	3.2	3.5	3.7
Short-Term Debt (%)	30.2	31.3	32.5	34.5	37.2	40.8	44.8
Variable Rate Debt (%)	58.0	60.0	60.2	61.7	62.7	64.8	66.2
Public and Publicly Guaranteed Debt Ratios							
DOD / XGS (%)	169.2	131.6	123.8	107.1	90.6	73.6	59.1
DOD / GNP (%)	39.8	34.5	31.1	26.6	22.2	17.8	14.1
TDS / XGS (%)	27.2	30.5	29.4	25.3	21.8	19.7	15.6
TDS / GNP (%)	6.4	8.0	7.4	6.3	5.3	4.8	3.7
INT / XGS (%)	10.0	10.1	9.4	8.0	6.6	5.3	4.1
INT / GNP (%)	2.3	2.6	2.4	2.0	1.6	1.3	1.0
RES / DOD (%)	11.2	14.8	17.4	21.4	27.1	35.6	47.5
Financial Requirements							
1. Items To Finance (a+b+c+d)	**-5,128**	**-3,748**	**-4,784**	**-3,994**	**-3,557**	**-3,102**	**-2,338**
a Non-Interest Cur Acc Bal (NICAB)	1,520	4,286	2,865	3,021	3,187	3,365	3,556
b Changes in Reserves	-649	-683	-552	-635	-730	-840	-966
c Other Non-Debt Capital Account	81	326	369	387	406	427	448
d Debt Service Due	-6,080	-7,677	-7,466	-6,767	-6,420	-6,054	-5,374
e Amortization	-3,465	-4,633	-4,369	-3,855	-3,692	-3,543	-3,058
f Interest	-2,615	-3,044	-3,097	-2,912	-2,728	-2,510	-2,316
2. Inflows From Disbursements	6,590	3,433	2,468	1,648	1,016	568	255
3. Net Non-Int. Finance Gap (a+b+c)	952	3,929	2,682	2,773	2,863	2,952	3,038
4. Remaining Finance Gap (1+2)	1,461	-315	-2,316	-2,346	-2,541	-2,533	-2,081

Figure 21.8. Financial Requirements Table Before Borrowing

EXHIBIT 2 : FINANCIAL REQUIREMENTS TABLE - SAMPLE COUNTRY
(High Current Account - Interest Parity Scenario)

	1987	1988	1989	1990	1991	1992	1993
Debt Stocks (EDT)	**40,813**	**37,679**	**39,411**	**40,605**	**41,807**	**43,101**	**44,509**
Long-Term	27,705	25,669	27,519	28,527	29,535	30,627	31,827
Public Debt (DOD)	26,839	25,146	26,638	27,441	28,585	29,602	30,727
Private Nonguaranteed	866	523	881	1,085	950	1,025	1,100
Use of IMF Credit	770	299	0	0	0	0	0
Short-Term	12,338	11,711	11,891	12,079	12,272	12,473	12,681
Gross Disbursements	**6,590**	**3,763**	**4,923**	**4,672**	**4,870**	**4,978**	**5,006**
Long-Term	4,616	3,763	4,923	4,672	4,870	4,978	5,006
Public and Publicly Guaranteed	4,182	3,763	4,373	4,072	4,220	4,278	4,256
Private Nonguaranteed	435	0	550	600	650	700	750
IMF Purchases	0	0	0	0	0	0	0
Amortization	**3,465**	**4,633**	**4,369**	**4,157**	**4,369**	**4,474**	**4,459**
Long-Term	3,020	4,202	4,119	4,108	4,369	4,474	4,459
Public and Publicly Guaranteed	2,741	3,859	3,927	3,712	3,584	3,849	3,784
Private Nonguaranteed	279	343	192	396	785	625	675
IMF Repurchases	445	431	250	49	0	0	0
Interest Payments	**2,615**	**3,058**	**3,237**	**3,290**	**3,365**	**3,453**	**3,573**
Long-Term	1,629	1,991	2,057	2,109	2,167	2,234	2,332
Public Debt (INT)	1,579	1,917	1,973	1,997	2,046	2,135	2,225
Private Nonguaranteed	50	74	84	112	121	99	107
IMF Charges	82	9	23	4	0	0	0
Short-Term	905	1,058	1,157	1,177	1,198	1,219	1,241
Debt Service	**6,080**	**7,691**	**7,606**	**7,447**	**7,734**	**7,927**	**8,033**
Long-Term	4,649	6,193	6,176	6,217	6,536	6,708	6,791
Public Debt (TDS)	4,321	5,776	5,900	5,709	5,630	5,984	6,010
Private Nonguaranteed	328	417	275	507	907	724	782
IMF Credit	527	440	273	53	0	0	0
Short-Term	905	1,058	1,157	1,177	1,198	1,219	1,241
Net Flows	**3,124**	**-870**	**555**	**515**	**501**	**504**	**546**
Long-Term	1,596	-439	805	564	501	504	546
Public and Publicly Guaranteed	1,441	-96	446	360	637	429	471
Private Nonguaranteed	156	-343	358	204	-135	75	75
IMF Credit	-445	-431	-250	-49	0	0	0
Short-Term	1,973	0	0	0	0	0	0
Net Transfers	**509**	**-3,928**	**-2,683**	**-2,775**	**-2,864**	**-2,949**	**-3,027**
Long-Term	-33	-2,430	-1,252	-1,545	-1,666	-1,730	-1,786
Public and Publicly Guaranteed	-139	-2,013	-1,527	-1,637	-1,409	-1,706	-1,754
Private Nonguaranteed	106	-417	275	93	-257	-24	-32
IMF Credit	-527	-440	-273	-53	0	0	0
Short-Term	1,069	-1,058	-1,157	-1,177	-1,198	-1,219	-1,241
Macroeconomic Indicators							
Gross National Product (GNP)	67,496	72,026	78,508	85,574	93,276	101,671	110,821
Growth (%)	19.5	6.7	9.0	9.0	9.0	9.0	9.0
Export Earnings Incldg Workers Rem. (XGS)	15,863	18,864	19,700	21,238	22,832	24,557	26,422
Growth (%)	27.2	18.9	4.4	7.8	7.5	7.6	7.6
Imports of Goods and Services (MGS)	15,251	15,569	17,760	19,181	20,715	22,372	24,162
Growth (%)	6.6	2.1	14.1	8.0	8.0	8.0	8.0
Reserve Stocks (RES)	2,999	3,682	4,234	4,869	5,600	6,440	7,406
MGS (%)	19.7	23.6	23.8	25.4	27.0	28.8	30.7
Total External Debt Ratios							
EDT / XGS (%)	257.3	199.7	200.1	191.2	183.1	175.5	168.5
EDT / GNP (%)	60.5	52.3	50.2	47.5	44.8	42.4	40.2
Debt Service / XGS (%)	38.3	40.8	38.6	35.1	33.9	32.3	30.4
RES / EDT (%)	7.3	9.8	10.7	12.0	13.4	14.9	16.6
RES / MGS (months)	2.4	2.8	2.9	3.0	3.2	3.5	3.7
Short-Term Debt (%)	30.2	31.1	30.2	29.7	29.4	28.9	28.5
Variable Rate Debt (%)	58.0	60.3	61.3	63.7	65.1	66.6	67.1
Public and Publicly Guaranteed Debt Ratios							
DOD / XGS (%)	169.2	133.3	135.2	129.2	125.2	120.5	116.3
DOD / GNP (%)	39.8	34.9	33.9	32.1	30.6	29.1	27.7
TDS / XGS (%)	27.2	30.6	30.0	26.9	24.7	24.4	22.7
TDS / GNP (%)	6.4	8.0	7.5	6.7	6.0	5.9	5.4
INT / XGS (%)	10.0	10.2	10.0	9.4	9.0	8.7	8.4
INT / GNP (%)	2.3	2.7	2.5	2.3	2.2	2.1	2.0
RES / DOD (%)	11.2	14.6	15.9	17.7	19.6	21.8	24.1
Financial Requirements							
1. Items To Finance (a+b+c+d)	**-5,128**	**-3,763**	**-4,924**	**-4,674**	**-4,871**	**-4,975**	**-4,995**
a Non-Interest Cur Acc Bal (NICAB)	1,520	4,286	2,865	3,021	3,187	3,365	3,556
b Changes in Reserves	-649	-683	-552	-635	-730	-840	-966
c Other Non-Debt Capital Account	81	326	369	387	406	427	448
d Debt Service Due	-6,080	-7,691	-7,606	-7,447	-7,734	-7,927	-8,033
e Amortization	-3,465	-4,633	-4,369	-4,157	-4,369	-4,474	-4,459
f Interest	-2,615	-3,058	-3,237	-3,290	-3,365	-3,453	-3,573
2. Inflows From Disbursements	6,590	3,763	4,923	4,672	4,870	4,978	5,006
3. Net Non-Int. Finance Gap (a+b+c)	952	3,929	2,682	2,773	2,863	2,952	3,038
4. Remaining Finance Gap (1+2)	1,461	0	0	0	0	0	0

Figure 21.9. Financial Requirements Table with a Strategy

aiming to get. The first table (Figure 21–10) is not terribly important. It shows the historical information you can get from the loan data base, based on the level of detail you specified for this strategy in the selection logic. So it shows the way you are breaking your data base. Let's move on quickly to the tables titled Financial Requirements Table. Figure 21–8 shows the country's financial requirements before a borrowing and reorganization strategy is applied; Figure 21–9 shows the requirements with a strategy. The "before" case is necessary. You have to run a "before" case to see what type of new borrowing requirements exist for the country. If you look at the bottom of the table, you will see these requirements. The only fixed requirement there is, of course, for the year 1988, because the figure US$315 million is the historically correct amount for the year 1988. But based on the types of borrowings you put in your strategy for the year 1988, the estimates of the financial gap for future years will be changing.

Figure 21–11 shows the type of lending that is being assumed in developing a strategy for this "before" case. It shows from where the country will borrow, how much, and the composition of the repayment currency for these new borrowings. Figure 21–9 shows the actual results, or the "after" case, and reflects the actual results of the strategy after the finance gap has been filled by assuming new borrowings. So the gap does go down to zero for each year. You can see the implications for the debt of this strategy. This is the goal that the user had at the beginning of the strategy run.

I'm sorry I spent too much time at the beginning of the presentation. I maybe went into some details that should have been omitted and didn't really concentrate at the end of the presentation on some key issues. But I'm sure you will be sympathetic to that.

Debt Strategy Detail Table (STG1A) - (In Millions of US$)
HIGH CURRENT ACCOUNT - INTEREST PARITY
Debtor Country:SAMPLE COUNTRY
PRV - Financial Markets

YEAR	DOD	Undis-bursed	Commit-ments	Disbur-sements	Amorti-zation	Interest Paid	Total Debt Service	Net Flows	Net Transfers	Cance-lations
1982	4,370	158	346	498	183	566	748	315	-250	0
1983	4,117	471	711	362	316	447	763	46	-401	0
1984	4,154	704	958	633	368	425	793	265	-160	0
1985	4,521	1,598	1,828	1,126	1,087	462	1,549	39	-423	0
1986	5,680	2,294	2,037	1,596	872	421	1,293	724	304	0
1987	7,360	3,686	3,120	2,104	1,201	474	1,675	903	429	0
				* * * * * * * * * * PROJECTIONS * * * * * * * * *						
1988	7,181	1,543	0	1,921	1,740	635	2,374	181	-454	0
1989	7,010	843	747	1,476	1,784	652	2,436	-308	-960	0
1990	7,670	463	1,403	1,799	1,279	650	1,929	520	-130	0
1991	8,338	213	1,534	1,794	1,322	706	2,028	472	-235	0
1992	8,791	47	1,595	1,765	1,558	755	2,313	207	-548	0
1993	9,119	0	1,591	1,638	1,591	786	2,377	47	-738	0

Figure 21.10. Debt Strategy Detail Table

Table 3 - New Lending Assumptions

NEW LENDING ASSUMPTIONS (STG3)
(High Current Account-Interest Parity
SAMPLE COUNTRY

	1988	1989	1990	1991	1992	1993
IBRD						
Gross Disbursement Target	791	850	850	800	801	750
Debt Stocks/Pipeline	609	582	471	343	218	164
New Lending	182	268	379	457	583	586
%USD	0	0	0	0	0	0
%YEN	0	0	0	0	0	0
%EUR	0	0	0	0	0	0
%MIX	100	100	100	100	100	100
Other Multilateral						
Gross Disbursement Target	67	292	286	294	317	341
Debt Stocks/Pipeline	67	73	43	24	13	5
New Lending	0	220	243	270	304	336
%USD	0	0	0	0	0	0
%YEN	0	7	0	0	29	30
%EUR	0	93	100	100	71	70
Official Bilateral						
Gross Disbursement Target	755	1,259	805	805	842	906
Debt Stocks/Pipeline	755	1,014	678	344	143	39
New Lending	0	245	127	461	699	868
%USD	0	100	100	0	11	17
%YEN	0	0	0	41	47	46
%EUR	0	0	0	59	42	38
Financial Markets						
Gross Disbursement Target	1,920	1,476	1,799	1,793	1,765	1,638
Debt Stocks/Pipeline	1,920	729	396	260	170	48
New Lending	0	747	1,403	1,534	1,595	1,591
%USD	0	65	0	12	18	23
%YEN	0	9	80	57	44	40
%EUR	0	26	20	30	38	36
Suppliers						
Gross Disbursement Target	229	496	331	527	553	620
Debt Stocks/Pipeline	81	71	59	45	24	0
New Lending	148	425	272	482	529	620
%USD	0	50	76	41	38	32
%YEN	100	40	0	48	52	54
%EUR	0	9	24	10	10	13
Private Non-Guaranteed						
Gross Disbursement Target	0	550	600	650	700	750
Debt Stocks/Pipeline	0	0	0	0	0	0
New Lending	0	550	600	650	700	750
%USD	0	100	100	100	100	100
%YEN	0	0	0	0	0	0
%EUR	0	0	0	0	0	0
Total						
Gross Disbursement Target	3,763	4,923	4,672	4,870	4,978	5,006
Debt Stocks/Pipeline	3,433	2,468	1,648	1,016	568	255
New Lending	330	2,455	3,024	3,854	4,409	4,750
%USD	0	61	31	27	29	31
%YEN	45	10	37	34	32	31
%EUR	0	18	20	27	26	26
%MIX	55	11	13	12	13	12

Figure 21.11. Borrowing Assumptions Table

DISCUSSION SESSION

Mr. Stillson: I think we had about a two-hour presentation put into a much shorter time period. But these are the constraints of any sort of conference. An extraordinary effort shows what one can do, when one puts the staff resources of the World Bank to work, with the facilities it has. Perhaps the first thing is just to have any open questions about the module or the presentation.

Mr. Cosio-Pascal: First of all, let me congratulate Mrs. Basci for this very good and very interesting presentation. I was very impressed by this tool, and I would like to know more about it. I am sure that I will have the occasion to do so. But I have just a small comment regarding the first Debt Strategy Module overview [Figure 21-1]. I was wondering if it would be interesting to include in the World Scenario also commodity prices for the export and import mix of the debtor country. One of the arguments that is very useful in debt renegotiations is your expectations of export earnings in light of different hypotheses for your export commodities. A similar situation applies in the other direction for your import costs. What I am suggesting is to put in front of creditors the evolution of your terms of trade. If I may, I will refer to the question I put yesterday to Mr. Rajasingham, which unfortunately was understood neither by him nor by Mr. Husain. I think I didn't explain myself clearly, but the idea lying behind it is the following:

If a soverign country is borrowing in the international markets, there are certainly some variables that are absolutely not under its control. Among these are interest rates and commodity prices. The combination of an unfavorable evolution of these two variables can seriously endanger the capacity of the debtor country to repay. I think that the World Bank has absolutely the qualification and the data for commodity prices. It would be very interesting if you could include that here. Also, in the summary tables, you could show the evolution of the terms of trade. That will be really very, very, elegant and very nice.

Another comment just for information: In our system, we have more than sixty floating rates that the users don't have to load. They just load what they are using, but we have a lot of rates too. Thank you very much.

Mrs. Basci: It's possible that while I was describing the Country Scenario, I understated the work and the detail that goes into generating those Country Scenarios. I said that if your growth rates are specified by the country economists, that's how it is developed. That may be true for certain countries, probably for smaller countries where the economics are not so complicated. But it certainly isn't true for others. However, we deliberately left those types of more complicated Country Scenario generation out of the system. First, we wanted to concentrate on the debt part, and secondly, our division does not really have the expertise in that area.

We felt it was more appropriate that the country economist in the Operations Complex, who has a comprehensive and intimate knowledge of the country's economy, should be responsible for that type of analysis. Indeed, if the country economist feels that this is an important aspect of the country's scenario, he can build it in. After he works out, by whatever means he is using, whether a spreadsheet or a more sophisticated package, he can derive the export figures and the import figures or the effects, his resource balance, or whatever. He can do a very detailed analysis of this, after which he can condense it and convert it into the format we require in our Country Scenario panel as input to a Debt Strategy run. So, just because that panel is very simple and just because there are only seven variables displayed there, it doesn't mean there isn't room for doing very elaborate and detailed analysis in creating those numbers. I believe that the country economists do spend quite a bit of time in generating those things.

Mr. Valantin: David Hunsberger was very careful to explain that this is a system which you've developed for internal use within the Bank. Of course, the same kind of analyses are going on in the countries themselves, using the data within the debt management systems that we have been talking about for the last few days. I was wondering if there are any plans—or perhaps plan isn't a good word to use anymore—but any ideas, for taking this system and making it available, perhaps via Hugh Dowsett's software, as an analytic module that developing countries could use.

I should also say that last night I had a chance to see version five of the Commonwealth Secretariat's system, and it has some similarities, in the basic kinds of strategy

formulation, to the approach you have taken. So, it's clear that the countries themselves are asking for and starting to work with this category of tool.

Mrs. Basci: Right now we do not have any plans for making the Debt Strategy Module available to the countries. There are many reasons for this, but probably one of the key reasons is that it is operating on a huge mainframe and it has the DRS data base to support its runs. There are also some other data files we link into to get the information.

Another thing I would like to mention here is that, in many of the studies where we are utilizing the Debt Strategy Module, there is ongoing dialogue between our country economists and the country involved. And there are exchanges of views. For instance, in the case of one country for which the module was used extensively, the results were sent to the country for review, along with the assumptions made for the strategies. As a result of the comments we received from the country, the strategies were revised and rerun. So there is an indirect way for the countries to benefit from the Debt Strategy Module. But to go as far as releasing it to them, or making it available to them as such, that is not in our current plans. But Hugh Dowsett might want to say a few things on this.

Mr. Dowsett: Yes, let me make a few comments. The World Bank has, as you may know, a macroeconomic modeling package that has been around for many years, called RMSM [revised minimum standard model]. Various countries have used this package. However, its use has not been as widespread as perhaps we originally expected. I think we have to look at many things that were said during the first day and the beginning of the second day. We've been talking a lot about debt management systems. But the point has been made repeatedly that the debt management system is only a means of improving debt management within the country. I think that in the various sytems that are around now, we have a means of monitoring debt and providing information that can be used with more advanced tools. When I wanted some means of putting information out on the disk files, it was for exactly this purpose: to be able to interface with packages that I might develop or others might develop. So, even though Aysel is saying that her package is not available because it runs on the mainframe and it runs off our Debtor Reporting System, I think the principles in it are important. This is what we are really aiming for.

As a result of this conference, as a result of the work we are all doing, not only multilateral organizations but also the countries themselves, how do we use debt information in our macroeconomic planning? It's the use of tools such as this, the conversion of tools, the ideas in putting them together with some sort of debt monitoring system, that can really make a difference in the work within the countries on their macroeconomic planning. This applies not just to the things that Aysel has described, but also to the financial engineering ideas that were described yesterday. This is what everybody in debt management is really aiming for, I think.

Unidentified Questioner (from the Commonwealth Secretariat): These very exciting ideas that Mrs. Basci presented have now to some extent or other been incorporated into some of the software packages that have been made available to countries. As Mr. Valantin pointed out, our own system, for instance, has capabilities to do all these various simulation exercises and help our user countries to make projections and see what likely scenarios could be. But as Mrs. Basci pointed out, one of the problems in these countries is making informed projections on interest rate movements and exchange rate movements. So quite often, in many of the countries which do not have access to informed projections, these guesses can be very wild. The World Bank clearly has much greater competence in making informed projections in these areas, which many of the developing countries lack. Mrs. Basci referred to it. Is there some way of establishing a procedure whereby, just as countries report on their debt data to the World Bank, the World Bank could periodically send their projections on various economic trends and movements to countries, so they could use these very data in making their projections?

Mr. Stillson: You know, the World Bank's crystal ball may be more complicated than others. And the IMF's crystal ball is certainly very complicated. But I am not sure that the added complications result in more accurate forecasts. Mrs. Basci was very careful to say that the World Bank doesn't feel it has a very clear crystal ball. I can assure you that the IMF also does not have a clear crystal ball. It's a bit of a shame, actually, because if the World Bank really could project interest rates and exchange rates accurately over a ten year period, then we really could get the creditors to pay for economic development around the world. Some speculation there would really be profitable. However, unfortunately I don't think that the projections made either in the World Development Report, or in the World Economic Outlook,

or from the RMSM model, or from the IMF's various economic models, such as the World Trade Model and other more specialized ones, have turned out to be all that accurate.

I think we mentioned yesterday or the day before that we really should not call these things projections. They are forecasts only in a somewhat peculiar sense—unless you talk about a fairly short time period. That does not make them unuseful, however. They are simulations; they give you the implications of policy actions. Indeed, the very purpose of running these simulations is often to try to make sure that the output the computer gives you does not in fact turn out to be reality. Some of the scenarios projected could be fairly grim.

One question I had though, because I think it is quite important from what Robert Valantin and Hugh Dowsett said, is how these projections fit into macroeconomic policymaking. I notice you do put in projections of macroeconomic variables. How does the model use these?

Mrs. Basci: The model uses those in a very mechanical way right now. It just uses them in calculating the gap analysis and in providing some ratios: debt ratios and things like that, but not in a very dynamic way. That's an area where actually we need to have some enhancements. With the financial engineering instruments that are coming into use, there is more of a relationship now than ever before between the debt variables and the macroeconomic indicators.

I also have a comment in response to the previous question. One doesn't necessarily need to make specific assumptions for the future as far as the exchange rates are concerned. There are some theoretical ways of projecting these things. One that I am aware of and we make use of in the Debt Strategy Module is called an interest parity calculation [of exchange rates]. It has a theoretical basis and depends on the assumption that all currencies will be equally expensive to purchase in the future. So, this gives a very easy, straightforward formula that one can use to generate estimates for all the currencies in future years. We use it quite a bit, in fact much more than the specific currency–by–currency estimates. The country economists find the interest parity scenarios much more useful.

Mr. Alamo: From what I understand, this simulation module is being used on your mainframe. Is that right? I have a question for Mrs. Basci and Enrique Cosio–Pascal as well. We are beginning our own simulation module, and we intended to do it on a microcomputer. We had a problem as to how to retrieve the information from the mainframe to put it onto the microcomputer. According to our computer expert, all this data could be shifted from the mainframe to the microcomputer, but there was a lot of garbage that had to be cleared away. That would involve so much work that it would be equal to entering the data directly on the microcomputer. We were told that we would have to mark the information, tag it to have certain reports, and then it would be able to be transferred cleanly, if you will, in aggregate form to the microcomputer. But it seems to me that you are doing this processing in your computer itself, which is a great advantage because you don't have to mark it. You just generate it and then you put it onto your microcomputer. I am wondering whether there can be any explanation as to the difference between processing on your microcomputer, or what you're doing at the World Bank with this module in the mainframe, in the big computer.

Mrs. Basci: To answer your first question, yes, our system is on the mainframe, which is an IBM 3090. It's quite a big machine, but it is not only used for the DRS; it also supports many other large data bases and large systems of the Bank. The reason that we implemented the strategy module on the mainframe wasn't so much that we had difficulty or we envisioned difficulties in transferring the data from the mainframe to a microcomputer, even though it would require an extra step for the user. It was more related to this idea that I explained at the beginning of my presentation, of being able to aggregate and disaggregate the information in many different ways. If we came up with an implementation where we were extracting the data from the mainframe and importing it into a microcomputer for further analysis, each time the user changed his mind about the level of aggregation, he would need to do another transfer from the mainframe to the microcomputer. For this reason, we decided not to go through that route and instead do all the analysis and calculations on the mainframe. But if one wishes to do the calculations on the microcomputer, and provided he is willing to live with this limitation—which means deciding in advance the level of detail in the extract file, then working with that extract from that point on—I don't myself see any technical difficulties in extracting the data from the database and importing it into a microcomputer to perform the further calculations, the simulations. Of course, there may be some circumstances

in the case of Chile, in the set–up of your data base, or the hardware, or whatever, that might be different and may cause the problems. But I cannot think of any technical reasons offhand, right now, for not being able to do this.

Mr. Cosio–Pascal: This is a relevant question that has been put by Mr. Alamo. In our case, our new version does have a selection module. And we do need to extract the data to a microcomputer to apply our analysis module. Let us assume that you're using the system in a mainframe computer. We wanted to avoid the need for the user to go back to the data processing people to get that kind of analysis. In other words we wanted to shorten the route and shorten the whole process for the retrieval and analysis of the data. We use the potential of the present generation of microcomputers with very user friendly software, which is not the case for the mainframes. I think that in the World Bank's system, the people using all this are data processing specialists and not necessarily the end users. This is why we decided to download to the microcomputer.

Now, as Mrs. Basci just rightly said, what we must do is determine the level of aggregation, or level of detail, that you want to have on the microcomputer and build your file on that base. Afterwards, the downloading itself is quite rapid. You can do this in just a fraction of a second, on the basis of time–sharing with the mainframe; that is not difficult. With our new module, we are looking into the possibilities of changing the level of aggregation through the selection module. But for the time being, we haven't found a satisfactory solution to this.

I just want to give you one example. Our analysis module was implemented and put into service in Peru, on their own system. It wasn't incorporated into our system. They continued to use their own control system. We were able to set up a file to download data from their system and incorporate the data into our analysis module. They had to decide on the level of aggregation, because this function was performed by a module in their decisionmaking system. They call it the [CITRO?]; this is in the Peruvian Ministry. It was hooked up with other modules that were not going to be changed. So our analytical module has been integrated into their system; it's still working satisfactorily. We are doing the same sort of thing for the Argentine Central Bank. But there, we're in the process of constructing the files [to move data] between their records and our analysis module. So we must link up the two. My colleague to my right, who was involved very closely in the Peruvian operation and is also working on the Argentine system, may want to add something.

Mrs. Basci: I am afraid I didn't make myself very clear on one point. The end users of the system, the people who will be executing the Debt Strategy Module, are not specialized computer system staff. We are the developers of it, but the end users of the system currently are, for the most part, the debt analysts in our division. These are not computer specialists. More importantly, we are aiming this Debt Strategy Module for use by the country economists in the World Bank's Operations Complex. They do not possess any expertise in the computing area. In fact, we spent a great deal of time simplifying it and making the interface straightforward and easy to understand. Overall, the system is designed to make it as easy to use and as user–friendly as possible. No, the idea is not that the systems specialists would be running this; that would be impossible.

Participant from Ethiopia: May I join with the previous speakers in congratulating the World Bank for this great achievement? Having said that, may I draw your attention to the calculation of arrears in respect of principal and interest? Does the Bank take extra care, in calculating arrears, to look at the agreed amortization schedule submitted by the reporting countries, rather than just using the growth forecast we provide through your Form 1? If you are basing your calculation on Form 1, which we submit to the Bank from time to time, then there is a danger that some loans regarded here as in arrears may not truly be in arrears. In our case, for instance, I was just questioned last November by our country program whether Ethiopia had gone to the Paris Club or not. I said no, and I finally concluded that [they had asked] just because we have not submitted a revised Form 1. This is very substantial in our case, because some of the loans are ten years to maturity, with two years of grace period, and the grace period starts from the beginning of the commissioning of the project, or whatever, and that can be delayed for as much as seven years. And if I forget to submit information of this delay to you, then that loan would automatically be considered as in arrears. So I ask the World Bank to make extra effort to distinguish between these two aspects of amortization schedules.

Mrs. Basci: A very key point to make is that the Debt Strategy Module is a completely separate process from the regular reporting process that goes on in the DRS. The strategy module is only used for analysis purposes, so it does not affect the DRS data base in any way. The

strategy results are not transferred back in any way into the real data base; the two are not mixed at all. But to return to your question, it's the policy of the World Bank in general, and our division certainly follows it, not to guess, or calculate, or derive the arrears for any country. In the forms that we send out for you, there is a specific place for recording the arrears. If the country chooses to fill that area and explicitly tell us what their arrears situation is, then we record it in our data base. But we do not create or guess in any way what the arrears are for any of the countries, just by working out the arithmetic and figuring out that arrears are implied in certain loans. So you are really in the driver's seat as far as the arrears are concerned.

Now, if you are asking whether we *can* calculate it or not, because of the projection routines and the software that we have, of course we can. But we do not choose to do those types of analysis, and we do not generate arrears data. The only data we store in the DRS data base are those data you provide to us through the forms or through magnetic tape, plus estimates of the analysts. But we do not mix the estimates and the historical information for most cases. There are some exceptions. If a country fails to report to us at all, we have no choice when we are publishing the *World Debt Tables* but to go ahead and make estimates. In that situation we are forced to make estimates for the country. But if the country is reporting, and reporting on time for the *World Debt Tables*, we do not guess or calculate the arrears for the country, no matter how trivial the calculation may be. We understand fully that of course the arrears are very sensitive numbers. We would not take it upon ourselves to guess or calculate what they are.

Mr. Dowsett: Just to make one point, our debt analysts, as Aysel said earlier, are typically working on two or three countries, maybe only one country. Many of them, as I'm sure you are aware, know pretty well the situations in the individual countries. We also get information from creditor sources. If an analyst, with the knowledge she or he has of the country and the information received from other sources, thinks there is a problem with the report received from a reporting country, the analyst will contact that country and say, "From other information, we think there's an error here, or something needs clarification." But it is done in consultation with the country.

Unidentified Questioner: Just one question to make sure I've understood. You have a simulation module within the mainframe. In other words, each time that you come up with a scenario, you extract data from the data base. If you want to change the scenario, I would imagine you would lose all the prior extracted data and have to retrieve it again for a new scenario. Or do you have a way to keep that data, say, for a specific amount of time, so you don't have to lose more time processing and transferring data.

Mrs. Basci: There are really two answers to the question. If the change in the strategy only affects the presentation of the results, that is, if you are moving from one standard output table to another, you don't have to go back and redo the data extraction and calculations. That is why we store the results in an initial output file, as I described in the overview of the system. We store the results in one file, which we keep. So you can get as many results, or as many standard outputs, making use of this file as you wish. You can extract data in Lotus 1–2–3 format, or whatever.

But I think your question is really more related to revisions of the strategy assumptions. When you decide to change your strategy slightly, there are two possibilities. You may have to go back to the data base, depending on the nature of the change in the strategy, and rerun the whole calculation, or you may not need to. If you are revising your macroeconomic indicators, the interest rate scenario, the exchange rate scenario, or your new borrowings, these are kept in separate files as I mentioned earlier. The majority of the calculations that you have done before are still applicable, with the exception that maybe now, because of the change that you have introduced in your strategy, you may end up with a different financial gap. So you may find that you need to do more borrowing or maybe less. This is not a very severe change that you have made in your strategy. You have not really changed it all that much.

If, however, you change the selection criteria for the historical information or the way that you are classifying your loans, then that's a big change in the strategy. In that case, we do need to start from scratch, go to the original data base, and pull out the information again, in accordance with your new specifications.

Mr. Illingworth: I have just one concern that was already voiced by several people here, among them the Commonwealth representatives, in respect to the frustration that one feels when one sees such beautiful software, and not being able to have access to it at the same time. I think it would be useful for the World Bank to organize classes, just as it organizes classes for training

in debt management. They should have further courses tailor-made for simulation exercises in Washington, so that we could, first of all, train the people to do this for countries, and maybe also in this way try to fish for new ideas. In this way, in the country of origin we could have a simpler system developed that would work along the same lines. In any case, my concern here would be to see if we couldn't have this kind of a training session.

Mr. Hunsberger: That's a good idea, and I think we will always keep our eyes open as to how we can improve our technical assistance and our training. Our hope here is not to show you something and then say you cannot have it, but just to give you some ideas. Of course much more simple models can be made that take far less effort than what we are showing you here. I hope that this will whet your appetites a little bit for some of these possibilities.

Participant from India: I deal with balance of payments in my country, and I would particularly value inferences that a model like this can give. I want to take off on the question that the chairman raised a little while ago, about the use of macroeconomic variables in your model. You said that they are used very mechanically. As I see, they are specified from outside the model, things like GNP, exports, imports, and so on. But then, for countries that have very strong external linkages, to the extent that debts are rescheduled, these variables tend to be affected in a very strong way. So, when you said "dealt with mechanically," do you mean dealt with exactly as specified by the user or do you specify simple functional relationships?

Mrs. Basci: We recognize that in certain countries, and probably more and more so in the future, there already exist or there will be relationships between the debt variables and the macroeconomic indicators, the balance of payments indicators. Right now the relationship is mechanical, meaning there is a simple arithmetic built into the tables. It looks at the debt variables and the macroeconomic indicators and from these calculates the external financial requirements of the country. If the gap has not disappeared, then more borrowing or more inflows of some sort are necessary. This is as far as it goes right now.

However, we are in the process of enhancing the module to strengthen this linkage, because clearly there are very strong relationships. For instance, if you do a debt buyback and you are financing it from your reserves, right now the way the module works, you do your debt buyback and reduce your debt as a debt reorganization action. But the system does not automatically decrease your reserves correspondingly. Even though we know there is a relationship there, we do not do that automatically. But now we are building some of these relationships into the system. They came out as a result of the new financial instruments that are being implemented these days. We are thinking about this and implementing some of it in the system.

It's a very dynamic situation. Things are changing every day, and the relationships between the various instruments and the various variables are so complex, and they are changing so fast, that we wonder whether it is a good idea to program these relationships into the system or leave them out. What we have done so far is to identify the most important ones. We are working on those which are easy to implement and those which are going to be around for some time to come. Suppose a new instrument is discovered today and will only be around for a year or two, and it will require us to change the system in a substantial way to have this linkage between the debt and the nondebt variables. We don't know whether it's worthwhile for us to build that relationship into the system. But there are, as I said before, a few cases where the relationship is so strong and so obvious that we feel we must reflect them in the Debt Strategy Module. A lot of work has already been done on it, but it's not operational right now, so I chose not to talk about those things.

Mr. Stillson: Perhaps I could comment on this also, because the IMF has done a fair amount of work in this area. I think one should differentiate between the job of economists and the job of the data processing people. I would have thought that the specification of the relationships between these debt variables and other variables in the balance of payments and the economy is really the work of economists. Indeed, in my former job in the African Department of the IMF, we did specify a model, which had a very simple debt module—nothing whatsoever like what has been developed at the World Bank—but still it was able to handle reschedulings, for instance, and various kinds of simple projections. Even so, the real purpose of the model was not to have detailed simulations on debt but to try to specify these relationships on a country-by-country basis, working with the country economists in the African Department. I mean, some of them are fairly obvious; let's hope that there is some relationship between new debt and future exports. Maybe because there has not been a strong

relationship between those two, countries have gotten into debt problems. There should be a relationship between imports and future growth. There should be a relationship between both of these and the government budget. And all of these are affected by the monetary policy and fiscal policy of the government. These, after all, are the main aspects of the work of policymakers, and World Bank and Fund economists, when we go on missions to countries.

So, it seems to me that the job of the programmers, the data analysts, if you like, is to provide arithmetical tools for economists to use. I think that's exactly what has been done here. It's a very complicated tool, but still fairly easy to use. Then it's the job of the economists within the countries and within the World Bank and the IMF to use these tools to really come up with answers to questions of the sort that you were asking: what will happen not to debt but to the balance of payments, to economic growth, to consumption, to the government budget? This challenge is much more difficult. The final output is not a debt scenario but an economic scenario. But this [debt simulation] tool is very, very important.

22 Presentation by the Inter–American Development Bank

Jorge Espinosa Carranza, IDB

Mr. Espinosa: Thank you very much Mr. Chairman. First of all, I should like to thank the World Bank for having extended this invitation to the IDB to be represented at this meeting. I am personally very grateful to have this opportunity to be a participant myself. To confess very honestly, I feel rejuvenated, because without wanting to seem like I have all sorts of laurels on my head, I should say that the IDB was involved in the very beginning of the management system of the World Bank and provided budget support therefore, up until the mid 1970s. We started with an initiative way back then. Ultimately it seemed rational to let the World Bank, with it's broader geographical coverage, concentrate its efforts and continue along the lines that we had started jointly. And thus, the IDB did provide support for this kind of activity. In March 1973, we embarked on a joint venture, an original seminar on external debt. It had precisely the same topics we have been discussing during the three days of this seminar. In fact, I have the first two pages of the introduction that was delivered at that time. It's incredible to see that not only was the topic similar, but the very nature of the problems has hardly changed a bit.

With this in mind, fifteen years down the road, let me say that progress has been made, nonetheless. I have listened very carefully to the presentations made by our colleagues from the different countries, and it seems to me that progress has been made in an area which was very necessary, namely, a substantive and substantial improvement in the coverage and the quality of statistical data. This is a very necessary tool; headway has been made in that direction. However, at the same time let me share some of my thoughts with you, which derive from the matters we discussed at the seminar back in 1973. At that time, the Latin American countries were given an opportunity to express their concerns. More than one delegation, way back then, expressed the intention to improve its approach, and so on. Therefore, I would like to make the following comments.

It seems to me that this kind of exercise—a World Bank debt systems conference—should be continued at a global level, as is the case here, and at a regional level as well. The IDB is keenly interested in this issue, which we began discussing with David Hunsberger about three years ago, before the World Bank's reorganization. But then it was left in abeyance during the reorganization exercise. Before we can use the IDB reorganization as an excuse to postpone it once again, I think we should get the operation under way. I think that kind of regional exercise should be conducted, a debt systems conference like this but at a regional level. It will give us an opportunity to indulge in some self–criticism. How much compliance has there been? How much adherence to the stated intentions? How much progress has been made? How much responsibility has been assumed in accepting the principles of a debt management system? I think we have perhaps been more ambitious than what has been actually achieved. There has been considerable progress in the realm of statistics. But in external debt management, if you look at the facts, there is a great deal that still remains to be done, that's still pending, in particular for Latin America.

I think the most outstanding factor is the external debt crisis, which has been hovering over the region for a whole decade now and clouding issues. This is very serious thing indeed. The consequences of the external debt burden are very well known. But I should like to highlight two or three particular aspects in which these debt management offices, which are responsible for the collection and analysis of debt statistics, have a particular role. As we saw the financing of external debt in the 1960s, it was something positive. It was felt to be a stimulus, a catalyst. That is to say, external borrowing could enhance the economic growth rate and bring about an economic transformation in these countries. The 1960s were the "golden age," and it was the same for the first five years of the 1970s as well. Then we got into the "dark age," during which, little by little the external debt problems became worse and worse. In the last four years, Latin America has had a net transfer of financial resources back to the creditor nations, the industrialized world. This is something very well known; it has been corroborated by the balance of payments records as well. It is something that can be clearly demonstrated. In other words, one of the key tasks of external debt management

has involved this transition from the phase where we were setting up bodies that were responsible for something seen as positive for the development of Latin America. And then these debt offices had to assume a role of being mute, silent observers of this net transfer out of Latin America of US$300 billion, according to the figures for 1988.

This net transfer out of the region is not only the responsibility, or guilt, of the banking community. Back in the 1970s, I pointed out in an article that Latin America was having a great deal of activity with private banks, with the commercial banks, and in fact this negative transfer was something that could be seen looming on the horizon already. But what was very serious was that in the 1980s, the International Monetary Fund, then the World Bank, and then the IDB also became creditors contributing to this negative net transfer out of Latin America. So it was not only the commercial banks, but the IFIs [international financial institutions] as well. This occurred mainly because of the "hump" of accumulated older debt that had to be paid back and the relative drying up of new lending. Therefore, the three multilateral institutions continued to receive these net negative transfers.

We want to turn around that net transfer in the balance of payments. The IDB intends—and we hope to have the resources available, starting next year—to expand substantially it's flow of new authorizations. We hope to stem this negative tide and reverse the negative trend for many countries, including Mexico, Brazil, Argentina, and others.

I think that it is necessary to carry out some soul-searching self-criticism. It is important to improve the application of debt statistics for analysis of the impact of external financing and for monitoring the implementation of development programs that use external sources. The debt office has to evaluate international market opportunities for debt reduction and debt conversion. These offices also have to alert the economic authorities to the implications, the potential impacts, of alternative scenarios on the quality of external debt. What we heard at the end of this morning's session about simulation exercises with the data that the World Bank has available can help with these scenario simulations. Support from the World Bank in this regard can be very useful, very important, particularly for those countries that don't have their own diagnostic capability.

This kind of analysis tests the implications of different modes or methods of external financing with different baskets of currencies, different interest rates, and so on. In the IDB, we are aware that the credits we're making available as combinations of currencies at exchange rates available in the international monetary system entail exchange risks for the recipient countries. These risks may distort the original evaluations of the various projects for which the credits were originally contemplated.

We view this with great concern, all the more so because the problems of achieving a world balance in commerce, finance, and trade will not be easily solved in the short term. Japan, for example, has emerged as, and will probably continue to be for many years, a country with a balance of payments surplus. One has to bear in mind that the currency of reference for Latin America's external debt is the U.S. dollar. Then one realizes that the yen-dollar relationship will be very costly for the Latin American countries, because the World Bank is seeking to buy more and more money from the yen region. This will have a negative impact on the Latin American countries; recycling the surplus from a currency that is appreciating means that the cost of borrowing for the Latin American countries, or for any recipient country in the dollar area, will become more expensive.

There is another area to which I should like to refer, in light of my own experience over the last twenty years. External debt is not an "independent variable." Although I am not being very innovative in saying so, nonetheless, the so-called external debt in almost all Latin American countries has turned into an internal debt problem as well. It's not only a balance of payments problem but also a domestic fiscal problem. I don't want to look at the situation in the individual countries. But with the best will in the world, and even with great political support in certain instances, private nonguaranteed debt was converted into public debt without any concomitant transfer of productive capacity from the private to the public sector in exchange. The fiscal impact of this has been substantial. It has become one of the factors in self-generating fiscal deficits in the developing countries. This is a very drastic situation in many of the Latin American countries. The IMF is quite conversant with this phenomenon. I think a considerable effort must be made in the debt management offices in particular, to link their work with that of public finance

administrations and with those responsible for fiscal income and expenditure.

There is a second impact of the external debt problem on the domestic area. The financing of the fiscal deficit, this transfer of resources to pay for the debt servicing burden, means not only competition on the fiscal side for domestic savings but also excessive monetary expansion. So the inflationary cycle in these countries is also affected. The result is a whole chain of perverse events for the Latin American economies, which were trying to stabilize their inflation. We are all aware of these things, but I think we need forecasts and projections of what the implications may be. To either collect private savings or generate forced savings as a result of inflation, so that the country's fiscal administration can comply with its external obligations, will require a tremendous effort.

The Latin American countries must generate domestic savings, and do so under the best possible circumstances for reactivating investment. In the period from 1977 through 1979, the internal growth to investment ratio in the Latin American region was 27–28 percent. It fell to just 15–16 percent in the last three years. The current ratio just barely covers the depreciation margins for investment, bearing in mind that two phenomena have increased this margin: the pace of technological progress and the productive output of Latin America. These different economies have faced heightened external competition. Although this is a good thing in many ways, it also entails the need to renovate and renew productive capacity and infrastructure. One of the roles of the external debt offices should be a continuing analysis of the financing requirements of their individual countries, based on the desired economic growth rate—the rate required to mop up unemployment, for example. These analyses should also bear in mind technological change, which has to be incorporated into the overall economic picture. They should take into account structural changes that may be occurring, including more open attitudes towards external trade, which means enhanced competition, and so on.

So, as I said, the external debt is not an isolated variable. We all have to make an abiding effort to improve the quality, the coverage, and the timeliness of statistics and data. But let me appeal to you not to confuse the means and the end. The main responsibility of these debt offices is to contribute to a clarification, an understanding, of the impact of external finance on the development of the national economy. If you have a persuasive analysis of the impact of external financing and the cost of that external borrowing in the overall economic development, then we would be able to cut part of the vicious circle.

We've heard that the debt offices don't have the necessary resources, they don't get their message across to the authorities higher up or even to the lower level of the Ministries. They're not being harkened to; they're not being listened to. To be very frank, it may be because the kinds of analysis that we're providing from these debt offices are not the ones that our authorities are really looking for. In a period of epidemic, you need not only people who count how many are dying and how many are sick, you also need medicine. We have to make the effort necessary to expand our horizon and provide the medicine. We must improve our questions, create better simulations, so that we can better shape and guide economic policy in general. Thank you very much.

DISCUSSION SESSION

Mr. Stillson: Thank you very much for that. I think that was a very useful statement. We began a little bit this morning, and I think we should come back in our more general discussion, to what is the purpose behind all of this activity we're engaged in. Clearly, the purpose is not simply to count the beans, but to improve the economic development and to make sure that the debt crisis doesn't happen again. As a sort of amateur historian, I find it a fascinating counterfactual problem to wonder, if the debt systems that are now being put in place had been in place in 1975, whether the debt crisis would have occurred, or at least would it have occurred with the severity that in fact happened in the late 1970s and early 1980s.

Although this interesting point is of course totally academic, it is still rather interesting and very serious. One really has to worry whether what we are doing now will result in the kind of improved policies that will prevent it from reoccurring. I doubt there is anybody here who has not heard that one of the reasons for debt

reduction is to get countries back to markets on a more normal creditor–debtor basis. Well, if the criterion for a normal creditor–debtor relation is what occurred in the later 1970s and early 1980s, I am not sure that's a desirable outcome. But presumably something better can happen in the future.

Mr. Espinosa: Let me just add something that might be of interest to the people here. The IDB has a portfolio, which we call an operative window, of technical assistance that will illustrate what our activities entail. In 1988, the IDB supplied US$57 million in technical assistance. Yet, this figure is less than our our available resources. I don't know if it's a symptom of the crisis afflicting the region, but there is also a problem of lack of demand, and of formulation of demands, for technical assistance.

One area within the IDB's technical assistance window that is not being used but has a great deal of potential is for intra–regional cooperation. The Bank's aim is to mobilize, to harness, the experience some Latin American countries have acquired in different institutional areas—analysis, methods and so on—in the field of development and make it available for use by other. Many times, various problems prevent us from supplying the technical assistance that might be needed. If countries helped each other, this would allow for the mobilization of the key actors in these different fields of know–how, institutional development, and so on. Countries that have had successful development in these fields could provide these benefits to countries that are still facing these problems and need the knowledge. The IDB pays for the mobilization of these people in one country. They are sent out on a short–term basis to other Latin American countries individually and in groups. The country of origin of these experts pays their salaries and maintains their positions. The host country does not have to absorb costs here, except for any counterpart funds for the follow–through of the technical cooperation that they receive. The IDB pays, as I said, for the mobilization costs of these people. In other words, this is a very low cost program, and yet the potential in certain aspects of development, including external debt where we've seen that experience and skills do exist, can and should be mobilized. I wouldn't go so far as to commit myself, I'd be going out a little bit on a branch, but I believe we, the IDB, are or could be active in assisting in this kind of effort.

In addition to this intra–regional cooperation, we can fund other kinds of technical cooperation from outside the region, directed towards Latin America. One thing to bear in mind, which is very important because of the way the IDB operates, the way its board operates, is that requests for technical cooperation and technical assistance must be set forth and justified by the country that wants to receive it. It's not an activity that we in the IDB can provide as a service. We can help draw up requests when countries want this kind of technical assistance from outside the region. This means not only mobilizing experts but funding the equipment cost as well. So I would draw the attention of my Latin American colleagues here to the fact that there is a source of funding for technical assistance that is at your service, but which you have not used as extensively in the past as you might have.

23 Concluding Panel Discussion: STRENGTHENING DEBT MANAGEMENT

Speakers: *Richard Stillson, IMF*
Christina Holmgren, UNITAR
Roxana Silva, Bolivia
Looi Woon Leng, Malaysia
Hugh Dowsett, IBRD
David Hunsberger, IBRD
Jorge Espinosa Carranza, IDB
Michele Robinson, Jamaica
Abdelhamid Triki, Tunisia
Vincent Churnside, Jamaica
Jorge Alamo, Chile
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Sanjivi Sundar, Commonwealth Secretariat
Fernand Nkouka, Congo
Juan Jose Illingworth, SINFO–Q
Enrique Cosio–Pascal, UNCTAD
Mubenga Mukadi, Zaire
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Participants from BCEAO, Malaysia, Morocco, Pakistan, and Poland
Unidentified participants

Mr. Stillson: Mr Espinosa's last comments are actually a useful lead into our next topic, which I think can be combined with two subjects that were originally planned for two different panels. At least in my mind, they are strongly connected. The key topic is how to strengthen the debt management units, or the various institutional arrangements, that are developing or have been developed in most of the countries represented here. How can people within these units be trained? And within that context, what is the best use for technical assistance?

Clearly, a great deal of technical assistance has been well utilized in setting up computer systems, in installing them, in establishing debt inventories, in verifying them, and more or less in getting the operation off the ground. Possibly a more difficult aspect, at least by my reading of what has been said in the last three days, is maintaining and sustaining the operation, in terms of both the institutional arrangements and the data base maintainance. Perhaps we could convene as a panel of the whole. What I will do—since I'm not from the World Bank, it's very easy for me to do—is to ask the country delegates, who are the customers of this technical assistance, to start by saying what has worked. I would like you to address not just technical assistance to establish a computer system, because we've had many success stories of this sort. But what has worked in terms of institution building? How do consultants fit into the process of building and maintaining institutions for debt management? How can this be improved from your point of view? Where can international financial institutions and other providers of technical assistance help most effectively to keep your units functioning, expanding, and doing the job that you would like them to do, as well as continuing to do the job that they're already doing?

Who is brave enough to give the first comment? The participant from UNITAR, would you like to start off? That would be good; yes, please.

Ms. Holmgren: I have prepared two parts on the training aspects of technical assistance. The first part describes how we in the UNDP mission have seen the training and staff policy problems. The second part of my presentation will deal with how UNITAR has conceptualized a training program. I think that some of the training issues have been quite extensively discussed before, so I will give a short introduction on how we've seen it and try to present as succinct a view as I can.

There are about five main problems that we have seen. The first is the well known problem of staff turnover, which is closely linked with the second problem: the low salary level. Third, we have also noticed a lack of training institutions on the national, subregional, or regional level, as well as a lack of staff training policies within the different debt units, whether they are within the ministry of finance or the central bank. Fourth, the differences in quality of training provided within the ministry of finance and the central bank appear linked to the frequent rivalry between these institutions. Fifth and last is the isolation among debtor countries in an area where there is great potential for exchanges of experience.

I will start with the problem of staff turnover. This is due not only to the low salary level, which is especially the case within the ministry of finance, as central bank staff usually benefit from higher salaries and better equipment. It is also due in some cases to lack of motivation, as staff may be removed from posts because of office restructurings. We heard a particularly interesting and striking example of this from the Bolivian delegation yesterday. Furthermore, and this is important, employment in the debt units is often considered as a stepping stone to better paid and more interesting jobs, usually in the private sector. The main reason for this lies in the training opportunities offered in the public sector agencies. We heard explicitly from a country we visited that some of the staff in the ministry of finance had applied for their jobs only because these jobs were considered prestigious and because they will be given the opportunity to be trained often abroad. Once they come back, they will be considered attractive candidates for the private sector.

This staff turnover problem seemed to be present to a lesser or greater extent in all countries we visited. However, when I had the opportunity to pay a short visit to Malaysia, I was very surprised and impressed with the solution this country offers, especially as we had not previously heard of any comprehensive solution to this problem. There is an arrangement—I think it is even legally codified (maybe we can hear more about this from the Malaysia delegation)—between the Negara Bank and the private banks. The banks are obliged to pay a six-month salary equivalent to a special fund if they employ Negara Bank officials. This special fund is aimed at compensating for the training costs to the Central Bank. It should be noted also that the salary in question is not the one in the Central Bank but one in the private sector. To my knowledge, though I may be corrected, the results up to now have been very low staff turnover.

I don't suggest that all countries should adopt this solution, but there are alternatives to it. One could, for example, include an obligation for the trainees to stay for a certain period of time at their posts and to train their successors. This solution has already been discussed in informal meetings, and even more formal ones, where an argument against this solution has been made on the grounds that it would constitute a so-called "slavery." I would just point out two examples where this sort of arrangement has been implemented. First, we have the example in France where the state will pay a salary to students in certain fields if they commit themselves to work in a specific state department for a specific time. This arrangement is working very well. Second, I was told that in Ethiopia some time ago, and perhaps still, the brightest students in the last year of their university studies were hired by the government, which undertook to send them for a master's degree abroad after two years if the student agreed to come back and stay in the position for another three years. I was told that many stayed not only for another three years but in some cases for a much longer time.

I will now turn to the second problem, the low salary level. In one visited country, the salary level was so low that even if the staff were physically present in their offices during the normal working hours, they were not efficient during that time. Instead, they would start working afterwards in order to be paid for overtime. This apparently was the only way to receive salaries that would cover their minimum expenses. We mentioned yesterday solutions found in several countries that we visited, namely the hiring of better paid staff by UNDP local offices. Even though this constitutes a good solution to this problem, it will not by itself solve the problem in the longer run. Furthermore, I am wondering whether there may not be a risk that this arrangement will be resented by the other staff members.

Third, we have the lack of training opportunities within the countries or at the regional or subregional level. This is particularly true in the case of Africa. The absence of business schools is to a great extent linked to the rapid staff turnover within the ministry of finance or the central bank, because the private sector cannot recruit its staff from graduates of business schools or universities. In addition, we have only found two countries where the central bank was endowed with a training department. The first country, which is in Asia, has already reached a fairly advanced stage of general economic development. The training department in question had some 400 people, who circulated questionnaires to other central bank units to gain a clear idea of the training needs and the fields in which staff members thought training was necessary. The second country was a small, landlocked, African developing country where the training department of the central bank had established a long list of training needs. In my view, this second example is positive, since it illustrates an emerging awareness on the part of the poorest countries.

I would like furthermore to draw a connection between the lack of both a comprehensive staff policy and training, which was more or less the rule in most of the countries we visited, and the cost–benefit issue raised yesterday by Mr. Hunsberger concerning computers. The same analysis can be applied to investments in both computer systems and training. Just to mention one example, a highly specialized expert in portfolio management, to mention one example, with a salary of perhaps US$100,000 a year, could save a typical debtor country several times the amount of this salary. This issue deserves special attention. It may prove useful to undertake a study of the possibilities, to sensitize decisionmakers to opportunities in this area. I don't raise this issue by myself or simply in following yesterday's discussion; such a study was actually proposed by one of the officials we met during our Latin American trip.

Fourth, I mentioned the difference in quality of training between the ministry of finance and the central bank. Generally speaking, the central bank benefits from higher salaries, better equipment and facilities, and higher prestige. It is easier for it to undertake a staff training policy. This is also true on the regional level, as central bank staff have better opportunities to attend training courses organized by institutes serving the central banks. There are several examples of this joint training, such as the SEACEN [Southeast Asian Central Banks Research and Training Center] located in Kuala Lumpur. Courses are intended for the members of eight Southeast Asian central banks. The program of the course is decided by the members at the Annual Meeting of the Board. (Maybe we can hear more details about that from the Malaysian Delegation.) However, we have not encountered a single regional training institute intended for ministry of finance officials. This situation is unfortunate, especially as it does not contribute to reducing the traditional rivalry between the ministry of finance and the central bank. The latter will tend not to rely upon the figures provided by the ministry of finance's staff; instead it will produce its own figures, which leads to duplication of work. This duplication of effort must by all means be avoided, given the cost and the limited resources available.

Fifth and last, there is a great interest on the part of the debtor countries in sharing each other's experiences. This is a form of training. We have especially felt there was a great isolation among the debtor countries in Africa where neighbors are not familiar with each other's debt management experiences. They have, for example, language problems that occur to a lesser degree in Asia, where English is often used as a common spoken language, and that are absent in Latin America.

Many debt management areas, such as the use of computers and financial engineering, arouse interest in sharing experiences, but the fields of loan negotiation and debt renegotiations attract the most attention. In this regard, a high level official of the planning ministry of an Asian country was very eager to hear about successful Latin American debt renegotiations, such as those that took place in Mexico. She then compared the absence of any exchange of views between debtor countries with the frequent and regular meetings on the creditor side, be it only within the Paris Club. An undersecretary of the ministry of finance from the same country expressed his difficulties in becoming knowledgeable about the functioning of financial mechanisms in the industrialized countries, as very little literature concerning, for example, export credit agencies, was available to him. It seemed to us that this whole issue, which I have only briefly reviewed, offers a very wide range of potential. I would just like to add that the experience of more advanced debtor countries is probably of greater benefit to less advanced debtor countries than traditional technical assistance. This ends the first part of my presentation on training issues.

I will give just a short description of UNITAR's involvement in the debt management field. I would like to give some details about this because UNITAR is a newcomer in this field. First, what we do focuses on training; we are not supplying any computer hardware or anything of this kind, only training. Secondly, during the conception of this program we have enjoyed the cooperation of many institutions, more or less all of which are represented at this conference. It is our intention to avoid duplicating what has already been done or is currently being done. We would like to have the target countries benefit from other's long-standing experience, to avoid waste in this field.

To give a brief background for our project, we started with a feasibility study in association with UNCTAD, which was addressed to the sub–Saharan countries. We assessed the needs of the sub–Saharan countries based on their replies to questionnaires we sent them. An evaluation was made to determine which fields they considered to be of highest priority. We have also prepared some concrete training proposals they could

implement. One proposal is a seminar intended for lawyers. A second is a teaching curriculum, which in the longer term is intended to be integrated on either the regional or national level in the African training institutions. We have also prepared proposals on the establishment of a resource center.

All these proposals were submitted for critical discussion to a meeting of higher-level experts that we organized two years ago. This meeting was attended by debt managers from sub-Saharan countries and by institutions including the World Bank, UNCTAD, the Commonwealth Secretariat, and others. After receiving comments and evaluations on these proposals from the meeting's participants, we compiled into one document all the proposals. This document came out in print just a few weeks ago.

This proposal stage was the first level, the conceptual framework. We are just now starting operations in the field with two programs. The first is a training program intended for the members of the East African Development Bank, which serves Kenya, Tanzania, and Uganda. We have three to four training seminars, which are intended to be implemented between October [1989?] and March 1991. The first one, which will last a couple of days, is intended to sensitize high-level decisionmakers to debt management issues. The next two are intended for Tanzania and Uganda on a separate basis. The content of the program is not yet determined and will depend upon a visit we will pay to those countries to better assess their needs. We also are setting up a resource center whose main function will be to disseminate information on what is actually going on, especially in the field of technical assistance. We are preparing a newsletter, for distribution on a regular basis, that will advertise all the technical assistance seminars that are organized by the World Bank and other organizations. We are also setting up a documentation center and preparing, in the long term, to set up a consultation forum intended to avoid duplication of efforts among the involved agencies. That is all for the moment. Thank you.

Mr. Stillson: Thank you very much. That sounds like a useful start to a big program. Perhaps the delegate from Malaysia could explain a bit on the special fund [mentioned by Ms. Holmgren] and how Malaysia is attracting and keeping people in the debt monitoring unit.

Ms. Leng [?]: This fund was set up by the Central Bank mainly because a lot of tension was arising between the commercial banks, the finance companies, and the merchant banks. It is not only for the Central Bank staff. Anyone employing a staff member from another financial institution who earns more than about US$550 per month must pay into the fund, and the fund was set up for training of staff.

Regarding the SEACEN, this training center serves the central banks of its eight member countries, namely, Malaysia, Singapore, Thailand, the Philippines, Indonesia, Nepal, Burma, and Sri Lanka. This Center was formed in the summer of 1972 or 1973. It provides training courses ranging from one to six weeks and also organizes seminars. The courses are decided by the governors at their annual conference, held every year in January.

Ms. Silva: I would like to make a comment in connection with what was said by the representative from the IDB. It is true that the majority of the Latin American countries have not availed themselves of the resources as much as they might have. Nonetheless, it must be borne in mind that there is a tremendous lack of information concerning the training courses and the kinds of assistance that are available. It would be very useful and valuable to have more publicity, more advertising or more "marketing," regarding the courses that are available. We could exchange our impressions regarding some of the ones that have been attended and have more widespread dissemination of information about them. Another issue with these courses is that one does not know where to apply to attend one or when the courses will take place.

I feel that sometimes people are sent from the ministries or the banks to attend these courses who are not the most suitable or appropriate [to make use of them]. I think something should be done to avoid such a high level of "entropy," if you will. It is really what I would call disinformation, and we have to improve the situation. Thank you.

Mr. Stillson: I've certainly run across examples of exactly what Ms. Silva was describing. Still there seem to be two aspects in what has been discussed that compete or conflict a bit. Maybe some delegates can describe how they have succeeded in bringing them together. One element is that training is necessary because debt monitoring and the staff in debt monitoring units are highly specialized. The contrasting element is that this training in debt management becomes a method of

getting a job outside the debt monitoring unit. I think the representative from UNITAR mentioned that one attraction of an initial job in a debt monitoring unit is that individuals can get training that increases their marketability. Therefore, they leave before the profit from the training is received by the debt office. Surely, therein lies a problem. Certainly in some of the African countries I worked with, training becomes a very substantial perquisite and indeed may be valued more highly than salaries in some cases. The possibility of training in Europe or the United States is extremely highly valued both in and of itself and as a stepping stone. Perhaps some country delegations have had this problem and have dealt with it more successfully. In Malaysia, you have some methods: your special fund and a regional training unit. How do you handle this apparent conflict between these two?

Ms. Leng: The training center is not actually meant for external debt management; it is more for commercial banking and central banking. We have organized some courses on debt management, some seminars with resource persons from the IMF. I think we have had three or four seminars [on debt management], and they were taught mainly by personnel from IMF. We also organized a financial programming course, very similar to the one given by the IMF institute, also with resource persons from the IMF. We just had one in Manila. We hold the course not only in our Central Bank; it is rotated among the eight countries.

Mr. Stillson: But have you had people attend this course, and then immediately get a job at a commercial bank?

Ms. Leng: Not really. As you say, even before we introduced this six–month funds, there was also an informal understanding between the commercial banks and the central bank that they are not supposed to pinch the staff of the central bank. Turnover is not very high, but we do have some turnover.

Second Participant from Malaysia: Mr. Chairman, this is not directly related to the banking sector, but the Malaysian government does face this problem of staff pinching by the private sector. What we have introduced is that anyone who goes for training, and this includes work on a master's or doctorate degree, is committed under contract to serve the government for a certain number of years. Should the person decide to leave, he has to pay the government quite a lot of money. This is quite a deterrent. Perhaps this idea may be adopted by other countries in a modified manner. It certainly has worked well in Malaysia. Thank you.

Mr. Stillson: That is an interesting point. Yes, Ms. Silva?

Ms. Silva: It may be that this kind of approach is one of the most reasonable to give incentives to the staff. But if, in the past, staff have some idea of the benefit that can be derived from these courses, it would be much more reasonable to have a list, in advance, of the courses to be offered. Then you know which will be really useful and you can plan for them. There may be a course offered in the next month on a very appealing topic. But five months from now, there may be a much more useful course. It might be better to opt for the second one. We should have a list, or at least some way of knowing in advance what courses will be available, so that you can best organize your time and go to the one that would be the most beneficial.

Mr. Stillson: Yes, that is certainly sensible. Perhaps UNITAR and the World Bank could play a role in simply coordinating and advertising what is available, when, and what the purpose is.

Ms. Holmgren: Yes, in fact we are planning to do that in our newsletter. We have already had extensive discussions with the World Bank and other institutions for this. The idea is to give an exhaustive list of all the training activities. So this answers the need, but only for sub–Saharan Africa. Our project is limited to sub–Saharan Africa; maybe the World Bank or IDB could coordinate for the Latin American countries in some way.

Mr. Hunsberger: I just wanted to ask Ms. Holmgren two things: First, would it be possible for everyone on our attendance list to get a sample copy of your newsletter? And second, we have you down in the program as being from UNITAR, but we never spelled it out. Maybe some people don't know what the letters stand for.

Ms. Holmgren: UNITAR stands for United Nations Institute for Training and Research.

I would most welcome an article from one of the participants, especially a country delegation, that would summarize this conference, so we could include it in our first newsletter.

Mr. Dowsett: I would like to make the point that the multilateral organizations in particular, and in some cases some governments as well, who are running training courses do not communicate among themselves sufficiently. I have frequently only heard about courses being run by other multilateral organizations when I'm

visiting a country and people there tell me, "Oh, did you know this organization has a seminar coming up?" I think there tends to be communication between the educational branches of the organizations, such as the Economic Development Institute of the World Bank and the Institute of the IMF. They may hear about these events, but frequently I don't think the information is circulated to the departments directly concerned with the particular topics. I wonder whether we can use a forum such as this to agree that when we are holding something, we will try to make sure [news of] it goes to everybody concerned.

Mr. Hunsberger: In a lighter vein, Hugh, I learn most of what I know about the World Bank when I'm in South America or Africa.

Mr. Stillson: Yes, I guess the Fund is also to blame, because we have a substantial training program that probably does not get well advertised.

Mr. Espinosa: I'll be very brief. Since this forum is taking place, we can avail ourselves of it to improve communication. At least for the Latin American sphere, I will undertake here and now, on the basis of those who are from Latin America giving me your addresses, to send you a copy of materials organized on two occasions in the 1980s by the IDB. We organized a seminar for the attorneys and the external debt negotiators, in which we dealt with all the legal aspects relating to loan contracts, and so on. This involved not only negotiating with the international organizations, which have fairly straightforward procedures, but also how to negotiate on a legal basis with the private banking community. We also dealt with the whole procurement issue, how you go about organizing the bidding procedure, and so on. A number of the main external debt negotiators from Latin America did attend those two earlier seminars we organized.

We in fact have resources that are earmarked for technical cooperation, that is, specific funding for an additional seminar. We have the money available and authorized by the executive directors. I suggest that [IDB could fund a seminar] if you feel, on the basis of all the changes and developments that are taking place in connection with, for example, debt swaps, conversions, and renegotiation activities, that you do need a training course. Or let's not say just training, but a kind of seminar for exchanging experience, for trading your different kinds of experience. Mexico, for example, has developed a wealth of experience and has been innovative to a very large extent, in respect of loan agreements. The lawyers and negotiators from other countries could benefit from that, too. So we have the instrument available; we have the resources that are already earmarked. You have to make the request. We can't go out and market this product; you have to ask us. In a way, I'm doing informal marketing right here, but you have to put forward the formal request.

The Inter-American Development Bank has representation or an office in each of its member countries. So that means you don't even have to write to Washington. In the case of Bolivia, for example, you can get in touch with our Resident Representative in Bolivia and explain your needs, your concerns, and we'll have to see how we can work out a reply to it. But unless you signify your interest or your needs, and there is a commitment on the part of the national government to go forward with this sort of thing, the IDB can't impose its product upon you. We have to get the request coming from you.

Unidentified Participant #1: Let me make one additional suggestion in connection with these courses or seminars. This is something that has already been organized by other bodies. The idea is to organize sessions where you can exchange experience. This results in a sort of training course as well. For example, you can select certain broad topical issues that we're having to grapple with. I think at the present time, for example, debt management and the computerization of debt management itself are certainly very topical. I think there could be a get-together that would make it possible to disseminate information on what we're doing. Other firms, other countries, could be informed of what is being done in a given country. There could be a competition, a sort of a contest with a jury appointed, and the competition would be for all those who have been working in the field, let's say, of debt management. The prize winners and the other contestants would be invited to attend a sort of seminar or whatever. I think that this would give a great deal of incentive. It could be very useful, and all the different parties involved could get together.

Mr. Stillson: That's a good idea, that's the idea. Yes, please.

Unidentified Participant #2: Thank you for giving me the floor, sir. I am very pleased to be here among these distinguished participants because I feel we're learning a great deal. I am a bit surprised that there are so few sub-Saharan African countries represented around the

table because we are all caught up in the same rat race. The UNITAR training cycle, for example, is something that I've just learned about right now, as I listened to you. And yet it's apparently been afloat for quite a while.

I think that the fact that you are stressing training is very important to us because this is something we woefully lack. Frequently, our people have learned on the job. They've had very little formal training; they pick things up as they go along. If every two years or so, we could have this sort of stock-taking exercise, a kind of seminar, I think this would be very useful. We hear what has been done in other countries, and then we can pass on the information as well. I think training is absolutely critical where, in fact, you need not only training but also information. If this information could circulate on a regional basis, it could be very useful to all of us.

I look around this table, and I've listened to so many Latin American countries. There are many more Latin American countries represented here than African countries. Actually, they are farther from Europe than we are, but it's also perhaps because our countries on the African continent are so debt-strapped that they couldn't afford to come. But I think it is extremely useful when we can glean so much information from hearing what others have been doing. I'd also like to say it's all well and good to talk about training, but there are also problems of technical assistance. I don't know whether this is going to be broached as well. Anyway, I'd like to have the opportunity to take the floor when we get on to technical assistance. Thank you.

Mr. Stillson: Yes, indeed, this is the time—the participant from Jamaica?

Ms. Robinson: Thank you very much. I noted that the representative from UNITAR mentioned salaries as a factor in staff turnover. However, I think it would be very difficult to convince the authorities to increase compensation to debt managers as a separate entity within an organization. If I might use our own experience in Jamaica and poke a little at the IMF at the same time, I am sure my colleagues in the central bank, for instance in the Economic Program Department, would be quite concerned if debt managers were to be compensated for saving the country a few millions, when they could equally argue at their end that by satisfying performance criteria set by the IMF, they are ensuring that adequate financing from the IMF continues to come into the country. So within an organization, how do you select one category of staff to be compensated more than another? For instance in our situation, the IMF imposes wage guidelines. How does one get around that? It seems to me that training might be an avenue whereby, depending on the degree of training that officers in the debt unit receive, [their salary level could be raised].

For instance, prior to our unit being computerized, and so on, it was a very small debt unit. The staff were at a lower professional level. Training has provided an incentive—thanks also to the prodding of the Commonwealth Secretariat—to improve the level within the organizational structure of the department itself. New professionals now enter at a higher level, and they get a higher level of compensation. This attracts staff inwards rather than outwards. So even though it might be difficult to just request better salaries, through training and thereby elevating the office within the organization, it might be possible to attract and retain staff. Thank you.

Mr. Dowsett: There is a situation mentioned earlier by the representative from UNITAR that has come up a number of times. It concerns the difference between the central bank and the debt office. On Monday, I believe, the question also came up of the level of a debt office within the country and the way in which that debt office is viewed by higher authorities. These issues are very much tied together. If the debt office is viewed seriously by the government, it has a better chance of being able to pay its staff better. If you can provide the same level of training within the ministry of finance, if that's where your debt office is, as you can within the central bank, you're going to finish up with better people, if you can keep them. So these issues are very much tied together. There are various solutions if, again, we can reach the people who can make recommendations and who can accept them.

To give a small example, I was in one country where the debt office was losing a key person because he'd been offered another job, but he was vacillating. He wasn't sure whether he really wanted to move. He liked his work in the debt office, but this other position, which was also within the government, would pay much better. The solution they found was very simple. He had been called a debt officer. They changed his title to senior economist; he went up three levels or so in the hierarchy and was paid accordingly, so didn't have to move.

But it comes back to this question of convincing the officials within the country that the debt office is important, that the staff in the debt office must be trained the same way as staff are in the central bank (or to the same levels), and they must get adequate compensation.

Here again is the point I made this morning. I think it's up to the multilateral organizations as well to try to get this point across to governments.

Mr. Stillson: I think that's certainly the case. With respect to the IMF, I've now had several people come up to me and say, "You've talked about higher wages, and yet the IMF seems to harp constantly on lower wages." I guess the IMF does worry about the Government deficit a lot, and clearly that's important. Whether keeping down wages is the best way to keep down the government deficit is the question that missions discuss with country authorities. It is not always the case that when one worries about a substantial fiscal problem, one worries about holding down the level of wages. In one example of a program that I negotiated in Mozambique, the authorities there were startled when I suggested that wages of government employees should be substantially increased, much more than they were thinking of, and that possibly the number of government employees should be reduced. We had some results that came out rather like that, in fact. Despite very substantial devaluations, increases in controlled prices, and the like, the real salary of government employees rose rather than declined, while the number of government employees substantially declined.

The point of this, as we mentioned, is that these people pay their way. If it is true that government debt officers are worth far more than their salaries, and by paying people more you keep them where they're able to shave a few basis points off your interest cost, then raising the salaries is a way to reduce the government deficit. If the arithmetic is anything like what David Hunsberger described, you reduce the deficit a lot. It's a little hard to convince country authorities and IMF missions that this is the case. But it is a kind of case that can be made and should be made. When the case is made that way, it is much more effective.

We've had a couple of suggestions here, and I'd like to get some other views on them. There was one suggestion by the Malaysian delegate that you can get people to stay after training by writing a contract with them. I'm not sure the Malaysian approach, where they literally fine them if they leave, would be legal in the United States. But perhaps one could do it in another way; you might withhold some of their salary for a certain amount of time. If they leave before that time, they don't get the withheld amount. This is a method that I'm sure would be legal in most countries. So this would combine the attributes of using training as a lure, but a lure not only to get people to accept jobs but also to stay on the job for a certain amount of time. I was wondering if there are any views on that or on other tricks or ways of getting people to stay. Yes, please.

Mr. Triki: I would like to make my own contribution to this very valuable discussion on training. Training requires considerable resources, and my first point is that most countries have two or three different units dealing with external debt. That means even more resources are needed for the training activity. So I would ask the following question. Might it be useful to set up some sort of independent agency or office dealing with external debt? This would certainly streamline administrative procedures. If you have a unit within a given ministry that deals only with external debt and you want to pay these people better than the other people in the ministry, this will create problems. In our country, we found a solution not only for debt management but also to keep officials on the job in other spheres as well. We set up certain institutes, which are a sort of extension of the ministries but are separate from them, to keep good people not only for the debt field but in other fields as well. This approach could aid in establishing an independent, autonomous, office for debt management, which would also be advantageous.

Secondly, we've heard that people who are specialists in debt management frequently leave for the private sector. This demonstrates that there is a need for specialists in this field, a need within the ministries but also within the banks. This could have a positive spin–off effect because many companies are also seeking external financing. You need increased training not only for the people who will be in the private banking sector but also for those in different big companies. So perhaps at the national level, or at a sub–regional or regional level, a training institute could be set up that would specialize in training experts in debt management and financial engineering. At the national level, for example, you could have international experts plus academics who would be part of that institute. They would come to give short–term training courses. Or you could have a continuing program that would train people not only for the government service but also for working in banks and for companies, because all this will lead to very smooth management in the banking area.

Mr. Hunsberger: Some of us who work mostly in South America or in other regions [outside Africa] may not be

aware that much of French West Africa has already achieved [what Mr. Triki has described] through the concept of the Caisse Autonome d'Amortissement. In Congo, it's the Caisse Congolaise d'Amortissement; in Zaire it's the OGEDEP [Office de Gestion de la Dette Publique]. These are autonomous debt management bodies with independent funding that escape the salary levels of the ministry. Right now in Cameroon it's a difficult problem. They have created a Caisse Autonome, the autonomous debt service, but it hasn't yet pulled out of the Ministry of Finance; they're still trapped with low salaries and poor training opportunities. The main argument, which the World Bank is supporting, for the completion of this change is that the Cameroon Debt Office can then have higher salaries and can begin to have professional training opportunities that it now lacks. So these ideas of autonomous institutions for debt management are already history in much of French West Africa. I think only Senegal among the West African states lacks it. It's a very interesting concept that might be attempted in other parts of the world. I have seen nothing like it in Latin America or in North Africa. But it's interesting to see how it works.

Mr. Dowsett: I'd like to add something to that just very briefly, unless the Polish delegation would like to speak instead. Recently in Poland, there has been set up something very similar in concept to the Caisse Autonome, in that it is an autonomous body responsible for debt. However, they have gone one step further with what I found a very interesting approach. Not only does it have its own budget in the administrative sense that the Caisse Autonome in French West Africa has. It also can be an independent profit center. They have budget that they can use for their own investments as a means of raising money. I find the possibilities in this to be very interesting. This new body presumably can go into financial engineering with its own money. It has a lot of possibilities for attracting and retaining [staff] because it can also pay the higher salaries, as is normal with an autonomous body. But it has a lot of possibilities for attracting people who can be in the forefront of the debt business.

Participant from Morocco: I'll be very quick. Let me just develop an idea that enlarges on the statement of our Tunisian colleague, as far as training people on debt management. I think that we are very much affected by this. We're in the midst of it so to speak; we work in this. And the initiative has got to come from us. Moreover, let me say in the case of Morocco, where there is no training center for debt management, it's the university that does that job. Recently, the IMF organized a seminar along with the Ministry of Finance, and here nearly all of the staff, all of the "gray matter" in this field within Morocco, attended and made a contribution that I would say was just as important as the others. They provided us with a lot of interesting ideas just as important as the contribution from external participants.

If we don't take the trouble to set up these training events, I don't think that others should do it for us. Another idea that works on the same lines: this is the case that I am most familiar with in my experience at the Ministry of Finance. [It concerns] the transfer of people to manage debt from the public to the private sector: inter–sector transfers. People leave the ministries and go to universities, where they have very attractive positions proposed to them with attractive salaries. Once again [this is] the eternal problem in the public sector, where one is often attracted to move elsewhere.

There's another factor that still discourages civil servants. This is nothing new to you. Within the administration there is a certain way of working. We work regularly, perhaps not as intensively as in the private sector, and people think that, comparing things, it might be worthwhile to stay in the public sector for that reason. That's all I have to say.

Mr. Stillson: Perhaps the Polish delegate wanted to say something?

Participant from Poland: Thank you very much, Mr. Chairman. As of the first of this month, Poland has set up the new organization mentioned by Mr. Dowsett. I think it is too early to talk about their activity; They are not fully fledged yet.

Coming back to the problem of staff, I think that it's not only a question of how to attract good staff but also how to stabilize it. The question this raises is, "Can they be competitive toward the private market?" Everybody knows that any kind of training increases not only expectations of people, but also their so–called market value. Thank you.

Participant from Pakistan: The IMF has a training program, but I think there are no debt management courses in the program brochure. I would like to propose that the IMF should have at least two or three programs a year on debt management, so that all the debtor countries may avail themselves of this opportunity.

Mr. Stillson: I will certainly pass that suggestion to Tony Lanyi, who runs the IMF Institute program. I think it's a good suggestion; actually, we've made it before, but of course they have all sorts of pressures. Still, this is important, and I think one of the things this conference can do is put some force behind our suggestion. You see, not only can we provide force for you, but you can provide force for us.

The World Bank has been holding seminars on debt management, and we do participate in that. Still, I think within the IMF Institute program there is a possibility of expanding.

Are there other speakers on this? It seems to be a lively and interesting conversation. Yes, please.

Participant from the BCEAO: Thank you, Chairman. Earlier, you stated that we should set up bodies, autonomous bodies, to do debt management. As I mentioned earlier, we have an organization that covers seven different countries, four of which had autonomous institutions like the ones you've mentioned, while three countries have the appropriate departments in their ministries. The Bank's statutes state that the central bank may manage the public debt of those seven countries, training people, providing equipment, and it's not really a problem of salaries now. Many times there's a problem of information that's not forthcoming to the central bank here, information which is necessary for us to carry out that role. We are in a situation where they didn't want to give us information, and each country set up their own autonomous body. Whereas, on a bank level we have a training center. And that training center was operational and was training staff, the appropriate staff to handle public debt and to work for state banks and private banks.

Obviously, we can organize, and we already have organized, seminars on debt management with the support of the World Bank. (That was in 1983.) With our training center, we can also provide refresher training, new training, and further training for people from these autonomous bodies. But we want to go further than that. In the central bank, the salaries are relatively higher than in these autonomous institutions. We are prepared to detach people from the central bank to go out and work with these different institutions. But to do that these national organizations would have to train their personnel to be able to work with the central bank efficiently and to be able to avail themselves of structures.

A last observation: as my colleague from the Congo stated, I have to say that as concerns Western Africa, there were no countries that were invited. In 1985, Cote d'Ivoire was invited, but this time no countries from West Africa. I don't know why not; we've got debt problems like everyone. Among the seven countries, six have gone into the Paris Club; the seventh one is in no better shape. So there are debt problems which are quite manifest, and I don't know why no country from West Africa was invited. Thank you, Mr. Chairman.

Mr. Hunsberger: It's always a difficult political question, how to best place invitations to conferences like this. Let me say we started by dividing up evenly among all the regions and selecting the countries we thought would most benefit from, or would have most to offer to, a conference of this kind. When we placed the invitations, three-quarters of them were accepted, but in some cases it seems the countries that could not accept were disproportionately within some regions. So the representation here is not exactly even [among all regions]. In 1985, we had fewer Latin American participants, while this time there are fewer sub-Saharan African [participants], but we attempted in both conferences to even [the representation from all] regions fairly well.

Unfortunately, in a conference room of this size we only could invite a little over twenty countries, while there are 110 who would be interested. So we had to make some difficult choices. I apologize if you feel they were not fairly made, but we do pay attention to these issues of regional distribution. Some countries, like Mozambique and others, were invited but at the last minute could not come.

Participant from Ecuador: I have just one short comment, along the same lines we've already heard, on the topic of salaries made by people working on debt management. To allude to what's happening in Ecuador, my country, there is a job there called the Director of Debt Information. I think this person really doesn't make a lot [of salary]. The authorities who negotiate [the country's external] debt have solved the problem by contracting out [debt management work] to a private enterprise. Although this has its disadvantages, for them it has at least two advantages. (1) Being independent people, the contractors are not involved in any kind of a political situation, which might be a hindrance to compiling data, for example. This is something which typically happens; people safeguard their data. (2) A

private enterprise can have people working on two or three shifts per day. Public functionaries and civil servants don't work the same way. So this is a roundabout way of solving the problem we dealt with a little in the panel yesterday on this topic. Thank you.

Mr. Stillson: Government budgeting is always very mysterious. I think Ecuador is not the only country which resolves problems of not being able to pay people enough by going out and hiring outsiders for a great deal more than you would have to pay people within the government to do the same job. This affects, by the way, the international organizations just as badly. Yes, please.

Mr. Nkouka: Thank you Chairman. I take the floor once again because we've been speaking a lot on the problem of salaries, and in our countries this is a very crucial problem. You yourself are a member of the IMF, and for two years the IMF has frozen salaries in our good country. You know what kind of a problem this creates. We have our own autonomous institution, the Caisse Autonome, but it's insignificant in relation to what occurs at a public [institutional] level [in our country and in some of our neighboring countries]. This is a problem for us; many times when IMF missions come to our countries and try to identify the global debt of the country, they never see the problems that the Caisse Autonomes face. I would invite you to come and look at these salaries and the problems we have in our countries, to look at the disparities in salaries that exist. Then you might be able to understand how it happens that people can say functionaries don't do their jobs, that they're lazy, and so on.

Another problem I see concerns cooperation among the central banks. In other countries, such as the countries from Latin America, there is a kind of entente between their debt management offices and their central banks, even a complicity. This does not exist, unfortunately, in our countries. The other central banks are represented here, but the central bank of central Africa is not. You see, that already speaks volumes. As the representative of the BCEAO stated, perhaps invitations weren't forthcoming, but many times the banks have the means to attend these meetings because they do have our money in their hands.

Mr. Hunsberger: The other central bank was also invited but was unable to send a representative.

Mr. Stillson: Again, I would urge country delegations in dealing with IMF missions, if you can make a legitimate argument that raising salaries reduces the government deficits, that's not a silly argument if you make it in a sensible and quantitative way. Certainly, it seems a perfectly plausible argument to me. I would make it in the United States, to some degree, which is my own country. Although I think our deficit is far too high, I think government salaries in the United States are far too low and the relationship is probably inverse.

If there are no other comments directly on this, I would suggest we take a very short break, come back, and then we can wrap up. I would like to bring in the effect of technical assistance and the use of consultants, particularly as it pertains to sustaining the institutional effort that is going on in the countries. Then perhaps we could have a relatively short wrap–up session. But the length of the coffee break will, of course, determine how early we get out. So perhaps we can make it a short coffee break. Thank you.

Ms. Holmgren: Let me just say something very briefly along the same lines as the Moroccans and Tunisians. A very direct response to the Congolese delegation; this is a problem that we've had in organizing training seminars often. It's very difficult to target the debt managers in the countries. And this is one of the reasons for which we were not able to send out invitations for the conference we had two years ago. We had to send them out to the resident representatives of the UNDP, and only in a few countries were we able to send out direct invitations. Also, there is the problem of the rapid velocity of personnel turnover. Concerning the invitations for these sessions, I think it would be nice to have a nominal list of people who are actually managing the debt in the countries and a brief resume of their functions.

[The panel discussion continued after the break, as follows.]

Mr. Stillson: The delegate from Jamaica.

Mr. Churnside: Thank you very much, Mr. Chairman. This afternoon we spent quite some time discussing the matter of training. However, there are a number of elements that I observed were excluded from the discussion. For example, the character of this training, the nature of the training, and what has been the experience of debt managers who have gone to training courses.

My experience has been that persons who have more expertise in debt management are persons who have had long exposure, who have been working in the field for a number of years. I've never come across anybody who claimed to be really experienced in debt

management and who was really trained through some formal course. In terms of the nature of the training, I am wondering if our colleagues in Chile, for example, who have had quite a bit of experience, would be prepared to have members from other countries come along and work there for a month. I invite some response to this issue. Thank you.

Mr. Stillson: I think that's a very good suggestion. Mr. Alamo, you have just been asked a question. Mr. Churnside, would you like to repeat your comment to Mr. Alamo.

Mr. Churnside: Yes, the question was, from my experience in terms of training, I've never come across anyone who has said, "I am very experienced in debt management because I've been formally trained." My experience has been that it is persons who have been exposed to this sort of work for a number of years, rather than someone who has attended a lecture to be trained. I'm asking whether a country like Chile or other Latin American countries that have gotten a tremendous amount of experience in debt management would consider having individuals from other countries come by and work in their debt office for a month, or something like that, as an exchange program. In this way, their experience can be passed on, because I find that expertise is built up through on-the-job situations rather than in a formal classroom.

Mr. Alamo: I would draw a distinction between two types of learning experiences in respect of debt management. The first has to do with international terminology. For that, all you have to do is learn, for example, the manual used by the World Bank to explain its reporting system. You can look at the IMF manual for its reports, and the IDB as well. That's one aspect.

But there's a second aspect, which is the more serious one. You have to be conversant with the domestic regulations of each country and with how the external debt is generated within a given country. Examples of the latter may include suppliers' credits and multilateral credits, such as the World Bank credits. Where do you get the information on all these different kinds of borrowing? Our problem was this more difficult one. We had to have economists working with us who can understand the different formats, and so on. But when we asked them for the information, it was very hard to trace how this information was to be secured. In Chile, this resulted in something rather curious. A person who worked in the debt office was very well prepared to work in the international sphere of a [commercial] bank. One had to learn all the standards of the Central Bank, the exchange standards, and so on. To know where to get the debt information, this knowledge was very useful. There is also foreign investment in Chile, which also involves external indebtedness. So you must be familiar with investment standards and rules. And then there are the debt-equity swap operations. Here again, you must be familiar with the rules of the game, you must understand how this is taking place, to get the information and to collect the data.

A debt officer must be familiar with all these different rules in the different fields involved. It is essential to start with an awareness of the reality of the country, where you have to go to get specific data and information. Then you have to be conversant with international terminology. And then you have the mechanical aspect: how do you incorporate all this knowledge into a system, a debt management system? The user may have very good ideas, but if you don't have proper training for the actual EDP aspect, and if you don't have someone who is familiar with the necessary software, you are not going to get very far either. So there are so many aspects, there are various aspects involved in running a good debt office.

Does that reply, more or less, to your question?

Mr. Churnside: Yes, thank you.

Mr. Stillson: I'd like to raise another aspect of this issue. It directly affects the international organizations that are giving technical assistance, but I think really the responses should come from the countries. Almost every one of our organizations' technical assistance includes, at least on paper, and for the most part in reality as well, a very substantial element of training. And I don't think I've ever seen a consultant in a country whose terms of reference have not said that he is to train a counterpart. My question is, "Has this been effective?" Has it been effective in terms of both getting local people to be able to do the job and replacing the outside assistance? In other words, the consultants and the technical assistants of the international institutions such as the World Bank, the IDB, the Commonwealth Secretariat, and UNCTAD all have training as a major aspect of their programs. Has it been effective? Does it allow an institution to be self-sustaining when the consultants go away and the money runs out? As we said earlier, do these people leave an institution that will continue to function and reproduce itself as staff turn over? This is your chance to really

complain now; I think you should get your licks in. Yes please, Jamaica.

Ms. Robinson: In Jamaica's situation, we had the benefit of a resident advisor. He was initially contracted to be with the staff of the bank for one year. Eventually, he was with the bank for 18 months. Now, one must appreciate that there are different levels of training. Therefore, in answering the question, I look at the experience in our bank and what happened at various levels. The first level was one of familiarizing our staff with the loan agreements, etc., to obtain the information needed to fill out data entry sheets, and so on. Given, as I mentioned earlier, that our staff had no experience at all and were in fact just high school graduates, I would say that the impact of training at this level was significant. They were able to complete the exercise successfully.

On the other level, on the professional level, I think it's a bit more difficult. I think it comes back to the point that my colleague, Mr. Churnside, was raising, in that it's a mix in terms of training. There's a certain amount of expertise, of training, that one gains from associating with a consultant. But I think a lot of it must come through on-the-job experience. That practical experience can't be gained in a year or two. For instance, even though the resident advisor who worked with us had a large amount of expertise in his own field, even when he transferred that knowledge to us, for us to be able to carry it out required quite a lengthy period of doing it ourselves. So the transfer of expertise can only carry up to a point. I think after that, you have to rely to a large extent on what happens on the job.

Mr. Stillson: Most of the terms of reference that I've seen for consultants include what is called a counterpart person, somebody from the local institution who is supposed to work with the consultant. In the case of Jamaica, was there such a person, and was this person able to take over the job of the consultant when the consultant left?

Ms. Robinson: To some extent.

Mr. Stillson: Are there other experiences with these consultants and with counterpart persons? Yes please.

Participant from Malaysia: We do not have many consultants in Malaysia, but in the case of the few with whom I have worked, the counterpart did not seem to be getting the full benefit of the consultant's stay for a number of reasons. The main reason is that the local officers who are supposed to work with the consultant are [already] full-time officers who have specific schedules or work to be carried out. They are so embroiled and engrossed in their day-to-day work that they don't have time to study how the consultants, the advisors, do their work. By the time the consultant leaves, the local officer is still in the same situation. So perhaps the World Bank or the IMF, when they draw up terms of reference, should take this point into account. In other words, the local officer must be 100 percent—or are at least close to that—working with the consultant, so the counterpart can benefit from the consultant's expertise. Otherwise it will be quite a futile effort. Thank you.

Mr. Stillson: I absolutely agree with what you said.

Mr. Hunsberger: I have worked on both sides of this picture. Five years ago, I was in the private sector as a consultant working in South America, and I have a different view from some of my other World Bank colleagues on what is the appropriate way to handle this. In some respects, the terms of reference are the key, as you said. But I have seen the countries being too passive and too relaxed, and accepting very frail or very inadequate terms of reference. Also on the consultant's side, there should be terms of reference for the government's duties as well; this is usually forgotten. How many times has a consultant worked with a country, only to find his counterparts have been transferred away towards the end of his stay? Or how many times has he been told, for example, I'm sorry your counterparts are too busy, we have them preparing Paris Club, we have them preparing renegotiations? I see some private sector heads nodding around the room. Sometimes the government cannot, for perfectly good reasons, fulfill its own commitments. But then the blame always seems to fall back on the consultant on the other side.

I would urge the consultants to insist upon, and make public, the government's duties to provide reasonable counterparts, to provide equipment, to provide staffing. In a North African country, the resident advisor sits in a building long blocks away from most of the operations. Well, maybe we should specify that the location of the consultant's office has to be an appropriate place. There are a number of things, but I don't feel that much of the blame that falls on the consultants, the World Bank, and the IMF is appropriate. I would urge the countries to look a little more to themselves, as to whether they could more fully commit the resources and more fully honor their original understanding of placing good people with the consultants and teaming up that

way. We missed our chance to have our intended panel on private sector consultants. But if, in the very short hour that remains, some of the private sector people wanted to just put in one or two minutes, that might be welcome. Mr. Kalderen, you had your hand up. Did you want to say something on that score?

Mr. Kalderen: Yes, certainly. I've turned into a private consultant quite recently, but my experience goes much further back. Particularly in debt management and other areas where governments are hard pressed, it's a matter of high-level policy; they need very qualified advice quickly before Paris Club meetings, and so forth. I am speaking in fact about governors of central banks and ministers of finance. They tend to use the consultants as their private advisors, if not as the people who actually draft many of the policy statements. So the consultants work hand-in-glove with the top level officials rather than training counterparts. It's very difficult for the consultant to decline orders to work like that, particularly when he or she sees that this is very urgent for the country. It's the best way of using the consultant's time, in terms of benefits to the country, at least in the short term. So this is one dilemma that appears quite frequently in consultancy on debt management.

Unidentified Participant #3: Thank you, Chairman. Let me make a few comments on technical assistance, not particularly as it relates to debt but in a more general way, although this does apply to debt. You've pointed out that most of the terms of reference of technical assistance have standard components— training certain steps and so on—and this is really where the problem comes in. We don't have a precise prior analysis of the different functions to be carried out and of the role of the nationals as well. We do not do this in the most efficient way to bolster the sustainability of this undertaking. Sustainability is really what we are seeking: once the technical assistance has been concluded and the activity is there, to be able to continue without further assistance.

But what do we see? Most of the time, technical assistance displaces nationals. This is the case especially for long-term experts who are resident and who just by the force of things displace the nationals. We also see the case, perhaps not in a debt department but within the ministry of finance, where nationals who would have the capacities, if they are trained to fulfill these tasks, are not trained because international assistance makes it easier to put a long-term expert or several consultants at the service of the government, instead of training nationals. So that is the first problem: the lack of an institutional analysis of existing human resources, either in the debt department or more broadly in the ministry of finance, central bank, and so on. What are the human resources available?

Secondly, what are the roles to be carried out? Suppose a country needs an analysis for the next Paris Club meeting. And suppose this is an urgent analysis, and there are no nationals to help prepare it. I don't think that we should be ashamed to say that, and to set forth in the terms of reference for the consultants that this is the situation, and that there was no prior analysis. But we should not say that the consultants will also be carrying out training on this and that topic, because they are not going to do it. They will be caught up in the operational urgencies of the affair. That is something to be fully identified: are we talking about a technology transfer, or are we talking about training, or about process consultancy? Or are we seeking more to build the institution? This is something, in my opinion, which is not very well addressed and is usually, in most documents, reduced to just a training requirement. In other words, we send out a few nationals with grants, or through whatever means, for training. Then we congratulate ourselves on doing institutional training, but we haven't really done that. It's something much more complex.

As was pointed out earlier, there are problems such as the salary levels, promotion, and career paths, all of which must be examined. We must look at the relations of the institution and the other governmental institutions that are all going to be working together. We have to look at the recurring costs of the institution. So it seems to me that we have a large task before us in defining all of these things. This must be done each time that we set forth terms of references for our consultants or experts.

Several times we have heard about counterpart efforts or funds. It is something that's very much in fashion now in international circles. But I don't know if this truly exists. Perhaps we can have a counterpart of someone, insofar as there is a mechanical execution of a task. But what about the counterpart of a department director or manager? Is the concept the same on both sides, because the idea here is an idea of sharing and of equivalence? So to sum up, I think all this at least raises a counter-question on technical assistance and points to a need to re-examine it, so that it will be more efficient. Thank you.

Mr. Alamo: I've been listening and like many others have had ideas coming to me. Let me just say that there's local knowledge that leads us to see how we can pick up information from its source, insofar as external debt is concerned. There's a very valuable bit of experience that we saw in the marketplace: how things are done there. If you want to automate a registry, just because you are doing something in a certain way doesn't mean it's being done well. There are different stages that have to be gone through, and through all this experience we have seen how to improve systems. We can compare this knowledge with the systems in other countries and quickly see whether we're on the right or wrong path and what can be done to improve things. We think it's an excellent idea to exchange personnel with other countries. For example, I spent three days in Brazil. Day after day, I saw how things were done, how information was collected, how it was processed, and what kind of equipment they had, and I learned a lot. It was a very useful exchange. We've had people visit us from different Central American countries. For example, just now in a meeting in the corridor we were talking about syndicated loans and certain problems that were part of that. In other words, there's a lot of exchange of experience here which is very useful.

We have looked at the private sector and, to be frank, usually external advisors or consultants are lacking in something. Usually they have excellent ideas and excellent skills, but they are not familiar with the country's regulations, the requirements in that area. If the computer system is designed just to fit their criteria, it is not going to be able to do much. Just producing statistical information to support the central bank's work won't be enough. We looked at a private system [for debt management], and we saw that so many modifications would have to be made to it that it wasn't worth buying; we should continue with what we had. In respect of writing reports, for example, we asked, "How often do you report?" They said, "Whenever people ask us for information." Now the fact is that they really had no clear idea of what kind of reports had to be sent to the central bank, for example.

We had projections for payments, done on a yearly basis, and we were considering reporting on a daily basis, as someone here mentioned. This was not just for debt but also for the reserve needs of the banks. We found that it was very useful to have an idea of this on a monthly basis, to see what the level of our reserves was, and so on. If we can have this on a daily basis, we will have a very clear and detailed idea of where we are going to be by the end of the month, especially when we have to, for control reasons, come out with quarterly reports. So we're dealing more with statistics here, statistics that can help us identify the external debt. But even this is not enough. As I said, my 17 years in the department have been used not just to deal with statistics; I've learned that there are many other uses to which our information can be put.

I would suggest that training, more than technical assistance, is imparted by an institution like the World Bank. I don't think it is that familiar, pardon the expression, with the internal workings of each country. I believe more in professional interchange between different departments or in technical seminars that deal with specific topics. For example, consider the problems of registering syndicated loans in each country, what kind of reports they generate, and so on. I think training should be on a much more pragmatic level.

Mr. Sundar: What David Hunsberger said about the problems faced by private consultants is also often faced by international agencies, like our own, in providing technical assistance. It is important to draw up terms of reference for what the provider should do. It is equally important to draw up terms of reference for what a government should do. But that alone does not solve the problem. What Mr. Chapelier said is equally true; there are all kinds of problems involved, and we can't just look at one segment or the other.

For instance, when we start a project in the Commonwealth Secretariat, we don't see it as a statistical compilation project of building up a data base. We do all that Mr. Alamo has said is necessary to start a useful project. We first look at the situation in a country. We have the advantage that all the countries that are in the Commonwealth have a more or less similar legal framework and more or less similar arrangements in regard to macroeconomic and financial management. As an aid group, they have similar borrowing and other practices. Even so, we research into a country's institutional framework, into the laws that apply to contracting and monitoring of debt. We look at who is responsible for what, and we look at how data flows. Then we look at what Mr. Chapelier said was important; we look at the existing staff in a country to see what that staff is capable of, what skills exist and what skills are lacking. We orient our training program to transfer those skills which are lacking.

Even so, there are enormous problems. In November, we ran a training program for some countries, and we paid for two people to come from one sub–Saharan country. The day after this six–week training program was over, one trainee was sent off to an 18–month degree program in a European country. After six weeks of investment in his training, we lost him.

Of the 30 projects we are implementing, we have had resident advisors, or what you called a consultant, in only six. Jamaica was one of them. In all the other countries, we have implemented the projects not through consultants or long–term advisors but by building up capabilities in the national staff. In fact, some of the senior people in the governments we've dealt with have quite correctly and clearly told us that, even if the projects take more time, they would rather do it through their own national staff than have a long–term resident advisor placed, because they want capabilities to develop there. But in all these cases, it has so happened that even when capabilities have built up, people have been transferred, not for well–considered reasons but just in the course of bureaucratic shuffling. Where we've had resident advisors, there have been countries that tended to treat them as line functionaries rather than as advisors. Instead of using them to absorb skills, they have been given regular line functions in a debt management unit and asked to do the work that a national ought to be doing.

The Commonwealth Secretariat does not have the financial clout that the Bank and the IMF have, but it has some degree of what I may call a "moral clout," together with access to people in government. It has a certain persuasive capability because we're all members of one family. We've used this facility to the extent possible in persuading senior people to understand the importance of allowing skills to develop in a country. But I think the only solution is that there has to be, at some time, the awareness on the part of senior–level people—the governors of the central bank and the minister of finance—that debt management is an important function and that capabilities to discharge this function effectively have to be developed within the country. There equally must be a recognition on the part of providers of technical assistance that they cannot expect to discharge this function for an indefinite time and continue being paid for it. Their aim must be to transfer the skills to the country.

In fact, I thought the most flattering remark that was made about the Commonwealth Secretariat came from the Jamaicans yesterday, when they said that they used us twice for assisting them in the Paris Club and the third time said, "Thank you very much, we're going on such and such a date; we'll keep you informed." I think that was the greatest compliment paid to us. I think this is how technical assistance should be organized: to develop in the receivers a commitment to absorb it and use it to the extent possible, to develop in the providers a commitment to give it and then stand by to support whenever support is needed, but allow the receivers to walk on their own.

Mr. Stillson: I think that probably everybody would agree that that is the objective. It doesn't always seem to be achieved. Yes please.

Mr. Nkouka: Thank you, Mr. Chairman, for giving me the floor for a second time. I realize that I'm being very talkative today. Many people have spoken here on training and technical assistance, consultants, and so on. Sometimes they see these problems from their own perspective, from their side. Let me talk about the user's side, the indigenous or national side, if you will.

Often I wonder what the recruitment criteria for technical assistance are, because in our countries we see many strange things. We need people who have the skill and know–how that we lack, for the transfer of their knowledge. It's also true that there are nationals who just cannot pass muster. But when you look at what we have to live with in our countries, there are things that are not correct, not acceptable. Let me give you the example of my own country, where I live and work. When we need a technical assistant, we might turn to the IMF or the World Bank. Then one morning an assistant shows up, and that's great. We open the door; we work together for a while. And then suddenly one morning, we realize that he doesn't know more than we do in the field we're working in. I have been working on debt management for nearly five years now. I was trained as a computer expert, and the mechanisms here are very complicated. It comes step by step; it comes slowly. But we might have a technical assistant who isn't as familiar with it as I am.

When this happens with a technical assistant, we begin asking ourselves questions. Is it maybe even sabotage? Really, because we've got someone who is not even familiar with the field. The person who is sent to us comes with a statement saying that he fills all the criteria. Well, what happens? The technical assistant is there; the contract has been signed for a year or two. Five years later, when you're doing statistics, he's still there. I think we have got to bring these matters up. So, ladies and

gentlemen, you can see that the problem of technical assistance is a crucial one.

I don't dare go into further meanders because we don't really have the time, but there are problems of a similar nature. For example, in respect of technical assistance, we are not actually [contracting] with these people [as individuals], since we are dealing with the World Bank or the IMF. That's what they represent. So now I think that it's up to you.

Mr. Illingworth: I share the opinion of those who previously said that one of the biggest contributions to technical assistance is to establish clear terms of reference for the different bodies that are involved in managing debt. Let me just say that I think [David Hunsberger's paper, "How to Computerize a Debt Office," included in Volume 2] is the most important paper here, without prejudice to the others. It deals with the different phases of putting a debt management office into operation. There's one chapter here dealing with systems auditing, if I remember. In this session we have see that there are many prestigious international institutions, each of which has its own style, solutions, and even sometimes its own equipment, for the computerization of debt management. I'd be interested in learning from the World Bank people who drew up this note if they've carried out systems auditing for debt management systems. It seemed very interesting and important. I think that we might even use this to improve the quality of technical assistance that the different agencies provide.

On the previous two days, the conference chairman asked us to talk about successful cases of system installation. Of course, this left implicit that there are many failures. I think it would be important for those countries who are receiving technical assistance to also hear about the auditing of these systems from different agencies, perhaps from an institution that has a greater measure of independence than others.

Mr. Hunsberger: Let me respond first to my colleague from the Congo, [Mr. Nkouka]. I visited the Congo last December, and it was a very difficult situation. The World Bank had not done an adequate job of controlling what was happening there. But let me remind us all that this is a partnership between the World Bank and the countries, between any source of financing, be it the UNDP or the IMF. The terms of reference for these consultants are offered by the World Bank, but when the money involved in hiring technical assistance is from a loan or a credit from the World Bank or a grant from UNDP, if I'm not mistaken, the final selection of the consultant rests with the government, not with us. When the consultant is not adequate or lacks the proper qualifications, we are at fault if our short list, or our recommended list, or our approval process, somehow went wrong and we didn't put good consultants at the disposal of the country. However, not only is the final selection the job of the country itself but there ought to be performance measures in the terms of reference so that, if the consultant is failing, if the consultant is inadequate, the contract can be terminated early. I would ask my friend Mr. Nkouka, if the consultant is there five years later, whose fault is that? Is it our fault, or is it because you still want him or take him five years in a row?

We share the responsibility here. Yes, we have made a lot of mistakes; sometimes we are not as careful as we could be. But I would urge the countries present to be more resistant, to refuse bad service and turn away the consultants with whom you are not happy. If you review the curriculum vitae or if you have a consultant come who is unable to perform the duties, there ought to be in the contract some way to stop that consultant and change him or her. It has happened in some countries. Anyway, this is one thought on the question from Congo. On the question of auditing or another point, I will give the floor to Hugh Dowsett.

Mr. Dowsett: I just wanted to add a point. David said that if the countries accept somebody for five years, then they must accept considerable part of the blame, or that was the implication. I've seen a number of situations where countries, for one reason or another, found it difficult to terminate a contract directly. Perhaps for political reasons or for other reasons, they do not want to go through this process. I would urge countries, particularly in those sort of circumstances, to get in touch with the World Bank.

This comes back to the question of the audit. We do conduct audits; we conduct audits of what consultants are doing within the countries. If we are invited to go to a country, and we find that the consultants are not doing an adequate job, we can then recommend to the country that they terminate that contract. Sometimes this is what the country needs, to have somebody from the outside, who does not have any political implication in it, be able to say, "You should get rid of him." Maybe that's what the country wants; maybe it's not. The final decision is still theirs, but at least if we have done an audit and have said

that this is our opinion, then the people directly involved can say, "This is what the World Bank said, having conducted that audit, and we would like to go along with it." I think it can make it much easier if you use us in this role.

Mr. Stillson: The IMF also provides technical assistants, and I can certainly understand that it is sometimes difficult to fire them, particularly if you are working with them on a day–to–day basis. I would back up what Hugh said; perhaps an easy way to do this is to contact Washington directly and say, "There is some problem," or request an IMF mission. Frequently a mission chief comes by who has no personal relationship with the technical assistants that have been hired. He can be pulled aside and told, "We do have some problems here." Certainly, I think countries should do that, because technical assistants are frequently paid from the country's money, whether in the form of a credit or a loan. It's not all grants. So you should feel not only free but obligated to make your own decisions and to make sure that the people who are supposed to be helping you are in fact doing that.

I'd like to raise one point that is exactly on this issue, which was raised by Lars Kaldern and seconded by others. Also, I want to come back to Jorge Alamo's point. One thing that I've noticed personally is exactly what Mr. Kalderen described: technical assistants can be "seconded," so to speak, by central bank governors, by ministers of finance or permanent secretaries, and drawn away from what their terms of reference might state. Or, if that was their job—and our Central Banking Department in particular actually does hire advisors for governors—there still should be a mechanism whereby there is a local counterpart who sits in on every meeting, who is part of the process, even if the process is to write up the country's negotiating position for a Paris Club or an IMF mission. This counterpart is a very important part of the process. Even if somebody cannot be arranged locally that might have the international qualifications of the technical assistant who was hired, simply by being part of every meeting, by being part of the process of working up whatever it is that the technical assistant is doing, a learning process takes place. I was wondering if there are any experiences from the countries where either this has happened or it's been very difficult for one reason or other to make this happen.

Another aspect is what Mr. Alamo suggested. Perhaps we're choosing the wrong technical assistants. Maybe there should be more inter–regional technical assistants, more people from Chile being technical assistants in Bolivia. Or, rather than choosing somebody from the staff of the international organization or from an American or European university, maybe we should have somebody from the debt office of another country performing the technical assistance within the region. Are there any comments about these points?

Mr. Cosio–Pascal: I have some comments on that point which relate to the earlier involvement of UNCTAD with the Paris Club and the creation of DMFAS. My first experience in that business was when UNCTAD started to attend Paris Club meetings on a regular basis, subsequent to Resolution 222 (XXI), which was approved by the Board in September 1980. In principle, UNCTAD attended mainly to help the country present its case, taking into account long–term economic development. Economists in the different countries learned very quickly how to present their cases; now we don't need to do that anymore. In an indirect way, the Paris Club Secretariat helped a lot by giving such short–term relief that the countries had to come back to the Paris Club on an almost yearly basis.

One of the most impressive cases of our experience was Madagascar. At this time, the governor of the central bank was a very intelligent person, who, I understand, is now the Ambassador to the United States. He created a very good negotiating team at that time in the early 1980s.

Another case was Nicaragua. For that case, we hired through UNDP a private consultant of a small firm. In parallel, there was an extremely good negotiator who developed at this time. He was a national who had a key post in the government until he withdrew from the government. He was an extremely good negotiator. You may remember that an interest cap was included in that agreement. For the first time, it was an agreed that [if LIBOR exceeded 7 percent, the amount above 7 percent would] be capitalized; only the 7 percent would be paid [according to the schedule]. It was presented as a very good agreement, which it was to some extent. At the time, Nicaragua had a powerful negotiation team. The director of my division at UNCTAD thought that Nicaragua could get even more than they did under the agreement that was finally reached. But the private consultant was unable to go for it, because he had to keep his standing with his colleagues in New York. He was really unable to serve in a staff capacity in this situation.

We had an experience with Liberia in which, instead of hiring a private consultant, we hired a good negotiator for another developing country. He did a wonderful job presenting the case to the banks in New York. This experience was by far more fruitful finally than the one we had with Nicaragua previously. Maybe it was just a random event; we don't necessarily have these conditions in every case.

When I asked for the floor, I was also thinking about the need for quality control in technical assistance. I don't know whether you want us to reflect on that comment now or if you want me to keep that for later on.

Mr. Stillson: Perhaps you could delay that point for just a minute, because I'd like to hear from some *countries.* I mean, what we're talking about is whether these people are helping the countries. It is really great to hear that there are some success stories. But I don't think that they are all success stories. We've heard from the delegation from Congo, who has said that there are some problems. Are there any other country delegations who would either like to say what their experience has been with regard to the help which technical assistance has given them, particularly in the sense of making sure that local people are able to carry on, or that have some suggestions as to how it could be improved? And then, Enrique, we can come back to the more general question of the quality of technical assistance.

We have shy country delegations? How about Zaire? Zaire has had a lot of technical assistance. Has it all been positive?

Mr. Mukadi: When you are talking about debt management, we had one expert from the World Bank who spent four years with us. When you raise this whole question of technical assistance, you have to bear in mind the human dimension and the mentality which prevails in a country. I remember, for example, at the beginning we had a genuine exchange of ideas, but that didn't continue because the technical assistance consultant became an advisor to the General–Directorate level. So the local counterpart, who was at a fairly good level and who wanted to learn and to advance, just couldn't get any farther. The local counterpart tried to understand everything that the technical assistance consultant was doing, but once this technical consultant rose to a higher level, to the General–Directorate level, the local counterpart couldn't follow along with him. He wasn't entitled to do so.

This raises a problem in connection with an audit as well. It seems to me that technical assistance should not just involve sending a consultant who would work with the nationals, spend four or five years there, and then go back to his host organization or wherever. The audit should be carried out by some other agency or body, an independent one. There should also be an auditing process to assess whether there is a satisfactory technical assistance contribution. There should be some appraisal of performance. You can't ask the direct "beneficiaries," that is to say, the technical experts who are in the debt management office, because it is difficult for them. It's a very delicate matter for them to assess the degree of satisfaction they have received from technical assistance. Frequently, these people are not at the policymaking level. Nor can they necessarily even expect that they are going to be listened to by their government authorities. So the local counterpart who is supposed to be benefiting from technical assistance may not have made any headway really, or not really benefited for some reason or another, but the government authorities for political reasons may reach conclusions that are quite flattering to the technical assistance staff or the assistant who was sent, even though he didn't measure up to expectations in reality. So I think you do need an audit, which could conceivably be an outside audit. This is something that should be further explored.

Mr. Stillson: Are there other country delegations? I think this is probably fairly important. What about Pakistan? Pakistan is just starting. . . oh, they've left. Are there others? Morocco?

Participant from Morocco: As far as Morocco is concerned, we don't have a great deal to say because up until now we haven't actually used technical assistance for debt management. So I can't really assess whether there has been positive or negative contribution in this connection.

We did embark on a World Bank project with technical assistance to deal with the methodology and approach to debt management, because sometimes the debt office has to contend with certain problems that haven't been properly identified. We wanted a working methodology, and we felt that somebody coming from the outside, a technical assistance person, would be able to identify the problems and set up a plan of action that would enable us to improve our debt management capability. This is the way we had envisaged technical assistance, namely, to identify a set of steps that could be

taken to improve methodology. The people on the job on a day–by–day basis don't have that perspective from the outside. We felt that someone from the outside would have an overview, would be able to get the full picture and identify the steps necessary to improve our methodology.

Mr. Stillson: Are there other country delegations who'd like to either share their experience or make a suggestion as to how it could be improved, based on their experience? No?

Yes, Mr. Hunsberger.

Mr. Hunsberger: I felt there was some unfinished business with regard to my colleague from the Congo. After we had that dialogue, I sensed that he had another idea to present but was not doing it. Perhaps the World Bank has some greater responsibility in quality control here, and perhaps you would like to suggest to us how we could do a better job in auditing and controlling the level of assistance to avoid difficulties. By the way, I congratulate the Congo for having recently decided to terminate a consultancy arrangement that was not working properly. Perhaps you would like to say some more on that point.

Mr. Nkouka: Well, no, I don't think I have anything else to add, actually. Thank you very much for this display of interest. But there may be other delegations who want to add their ideas. They may feel rather timid, but I wanted to describe some of the problems we'd encountered.

Mr. Churnside: I'd like to share a brief and interesting experience. Prior to the Commonwealth Secretariat (Technical Assistance Group] coming to the Bank of Jamaica to assist us in setting up our debt management system, we had a consultant for something like two years. Nothing was produced. At about the time that the Commonwealth Secretariat [team] arrived, we at the bank decided to terminate the contract. It was actually terminated, but the person went on to the Accountant–General's department and continued to work there. He was at the Bank of Jamaica for another two or three years, and I don't know what he has produced up to now. So you can see the difficulty that exists in dismissing consultants. That's all within the framework of the Ministry of Finance.

Mr. Dowsett: I'll just make another comment here. And this is nothing to do with the Congo, even though I was recently there. This recollection is of a country that is not represented here, where I was called to audit the work of a consultant. Unfortunately, it was rather late. This consultant had also been in place for several years. He had trained no counterpart. What do you do? Obviously, we needed to terminate his contract, because effectively he was not doing anything at that point. Do you terminate his contract immediately and leave nothing, or do you try to extend his contract or give him a fixed term in which to train a counterpart? It can sometimes be a very difficult situation when a consultant has been in a place for an extended period.

Going back to this point of calling us in for audits, I think it should be done on a fairly frequent basis. Certainly don't leave it for years before you have somebody from outside looking at a situation you may think is not in your best interests.

Mr. Mosengo: Thank you for giving me the floor, Mr. Chairman. I would like to reply to what Mr. Dowsett has just said. You said that we could get in touch with you to get this audit procedure under way. But when my colleague took the floor earlier, he explained that we don't have, at our level, the decisionmaking power. We're supposed to be the recipients of this technical assistance, the beneficiaries thereof. It's difficult for us to get our opinion across. Also, we're not the ones who make the decisions. For example, we can't get in touch directly with the World Bank.

Mr. Dowsett: Mr. Mosengo and I have been in contact for about eight years now. My feeling is that if Zaire had faced a situation like this, where they had a consultant in place, the people with whom that consultant was working, such as Mr. Mosengo, could have approached me directly. I mean, it didn't happen in that case, but just to give you an example.

I think all of you have some sort of contact at the World Bank. You know people at the World Bank. Certainly you know us. There is a way now, now that you know us, even if you didn't before, whereby you could let us know quietly that you don't think things are right. We can take it through channels, and it won't be apparent where it started. But at least through our regional departments [in the Operations Complex], we could try to find out what the situation is.

Mr. Stillson: I'd like to add that in my own view, just speaking as a person who has worked in African countries in particular, I don't think that terms of reference are written strongly enough or are followed up well enough. It is too easy for a technical assistant to become a line operator, or to be virtually absorbed into

the administration of a central bank, or to be absorbed by a very high level policymaker whose concerns are always somehow the most important thing of the moment. I think that the comments of the delegation of Zaire are very important in this respect. The people who know best what is going wrong are not generally the decisionmakers. In some of the countries that I have worked in, people at the working level have found it very difficult to contact an IMF or World Bank staff member personally. After all, they may be undercutting their boss or their boss's boss, or maybe even someone more levels up than that. It is sometimes difficult, for various reasons, for these bosses to take the initiative.

I think more initiative should be taken by the donating agency to ensure that all the purposes of the technical assistance are actually being achieved. Without this initiative, the situation that does exist in many countries, where the technical assistants are being used by the very highest levels, will probably continue.

The time is getting late. Lars Kalderen, you had your hand up, but I also wanted to ask if you would, as our "gray eminence," sum up what you think the conference has achieved, or at least some aspects that enlightened us—possibly but not only in regard to the points suggested by Mr. Husain at the beginning of the conference. I think your comments would be particularly welcome as a summing up.

Mr. Kalderen: Thank you, with pleasure but some trepidation, because there have been so many important things said through these three days. I venture to say that the most important thing is that we have all come together here for three days and talked freely about everything that is of interest to debt managers around the world. I believe, as you know, that all the technical assistance in the world, in the traditional sense, cannot substitute for contacts between professionals who are facing the same problems and who learn a lot from talking to each other, from listening to the experiences of others, and from formulating their own views. Such contacts are very helpful and something that you seldom get the opportunity to do in such a demanding way as when you meet with your colleagues in a professional conference of this kind.

"Technical assistance in the future," or whatever one wants to call it, is really a transfer of knowledge, a strengthening of inputs into the workings of a debt management system. It should contain a maximum amount of the spontaneous transfer that comes about when debt managers get together. Our colleague from Chile expressed this in the idea of being able to visit a neighboring country, spend three days with the debt managers there, put all kinds of questions to them, and learn a lot from just watching. Then the visitor can go back and see to what extent this can be used in his or her own country. I think that is an excellent way of transmitting knowledge. It should be encouraged. You can be sure that this is one of the main recommendations of the report that we are submitting to the United Nations Development Program.

A lot more could be done to facilitate this interchange at the technical level. We know there is apprehension among politicians that international relations will be unnecessarily complicated even further by debtors having, at a political level, the kind of cooperation that creditors have regarded as their birthright for many years. While we don't care too much about the political side, we do care about more contacts at the technical level on substantive issues, which now in debt management are really very demanding. These issues require a high degree of competence and theoretical knowledge, not just in the area of computers and systems—well enough there— but also in financial engineering, liability management, and a whole range of subdisciplines, which have become much more clearly defined in the four years since we last met in 1985. So, more of "getting together" is one important lesson, I think, from this conference: the usefulness of discussing common problems.

Then we can go back to some of the statements made here about technical assistance and the role of consultants. I'd like to take up what our friend from Morocco said. The first thing you expect from a consultant is to help you define what your problems really are. He or she should be somebody from the outside who can come and say, "I think that you should do this, that, and the other." Maybe these are conclusions which have already been reached, but they are reinforced by a consultant saying this is the way it should be, if the person is a professional with wide experience. If that advice is then taken at the top management level, of course it reinforces the conviction of the professionals even further. It can make an uncertain situation considerably clearer.

As I understand it, this role is now undertaken by a fair number of international institutions: the World Bank, the Commonwealth Secretariat, and UNCTAD.

Whatever is happening to technical assistance, this role should be very much in the forefront. The shaping and improvement of debt offices will be something that governments will find quite painful. It implies changes in priorities, perhaps the creation of new bodies, such as debt offices outside the ministry of finance. And it will encounter resistance not just among staff categories already there but just as much among other agencies of the government, and even from the private sector if the government wants a closer, tighter, rein on international borrowings and so forth. So in this regard the backing from an international community is important.

I think the role would be further strengthened if—as I understand, the Commonwealth Secretariat already works—this identification process is undertaken by consultants who have practical experience as debt managers in their own countries. In other words the resource base for technical assistance of this kind should primarily be debt office staff or people with previous experience in that capacity. I think the ability to identify with debt managers is that much greater if you had that experience personally. But I may be prejudiced, having worked as a debt manager. Still, there's something that makes you identify with people who have the same background and experience.

We have discussed a number of items or issues that were raised by the conference chairman on Monday morning. The first of these was, "What is the proper role of external technical assistance?" How should it be shaped? What should it contain? What has worked and what has not? I think we have been discussing this for the past hour or so, and it should not be necessary to repeat it, except that I made some notes in comment on what I heard from the represenatives of debt offices in developing countries.

Perhaps one more thing should be stressed: the fact that the government itself must ultimately be responsible for the shaping of a technical assistance project and who is engaged in it. This area has shown great change over the past year. External debt management is five to ten years old in its present shape; when it comes to all these technological devices and financial engineering, it's only perhaps three years. That is about as long as we have had a real market for international swaps. Building up debt offices takes a long time. Many times it's a matter of trial and error. You make a false start; you have to start again. There's a lot of turnover of staff. Therefore, technical assistance to my mind should be given with great flexibility on the part of the donor and with a large amount of decisionmaking, perhaps not on a day–to–day basis but definitely on a short–term basis, in the hands of the government. I realize there are problems here, and the government doesn't perhaps always care, doesn't look ahead to the long–term needs of building an institution. But that can be solved, I hope, by dialogue. It's really the government itself that knows best or should know best in this area, by giving the insights necessary to take the decision.

We had a very wide–ranging discussion about the role of staffing, recruitment training, the position of debt offices in government, its authority and powers, and access to decisionmakers by debt managers. It will be interesting to have that part of the conference proceedings put together as a discussion paper pretty early, not just waiting to have all the proceedings in nine months' time. Because these are essential issues. Unless they are tackled energetically by governments, any amount of technical assistance will be useless because it is at best a short–term remedy. But it's in the hands of the government to decide on the priorities and the arrangements that would make a debt office function properly. That includes solving these problems—of course with the good advice of senior colleagues in debt management in the international organizations.

I would not be the right person to summarize what came out of the discussions about information systems. Others may volunteer that. I think we agreed generally that this whole area is now much closer to an acceptable solution than was the case four years ago. Correspondingly it's the problems upstream and downnstream from the operation of the computer system itself that have taken on great prominence. Still, of course, this is an area where technological innovation and some new entries into the market may create a new situation. By and large, I get the impression that the systems now operating in several countries and being installed in others have reached a high degree of maturity. It appears possible to train debt managers to operate them satisfactorily. Still, only in a few cases are they actually used to provide background material for high level decisionmaking. That, hopefully, will be [more often] the case when we meet next time, three years from now or whenever.

Practical demonstrations are still needed of how debt managers have saved millions or billions dollars for their countries by the intelligent use of information

coming out of these beautiful systems. This particular area should receive increased attention on the part of the World Bank and the IMF, assisted by debt managers. I'm sure we could all look around and find some saving, some usefulness to the national economy or the public exchequer from successful debt management, or perhaps from tougher negotiations on the basis of better information than one would have had if the system were not there. Evidence of this sort should be assembled in a short handbook of success stories in debt management, which one could then put under the noses of decisionmakers who doubt the value of all this.

We did not talk in detail about the chairman's issue concerning domestic and external debt and how one should manage these two together. I think that really merits a seminar on its own. Domestic debt is an alternative to foreign debt for many governments, and perhaps it is an option being forced upon them because of the drying up of external resources. The development of a domestic financial market for government borrowings should include a fair number of instruments that have been tried internationally. Therefore, there are benefits from having domestic debt managers working closely with the external debt managers. The two roles should not be filled by the same person because, after all, their jobs are different; the contacts that they have with the markets are different. But they should be closely located in a building, and perhaps share computer systems that will benefit both. They should probably serve the same permanent secretary or ministry of finance, but they should work under different directors.

This is an area where we could spend a lot of time discussing technicalities. It's worth doing, though, in light of this increased reliance that governments must put on domestic debt because of the drying up of external finance and because of budgetary deficits that cannot be financed in any other way than by raising domestic funds. It's much better to finance the debt over the long term, through bond issues in a stable and growing capital market, than to do so by borrowing for the short term in the banking system. That goes almost without saying. But in many countries there isn't the kind of domestic capital market that will allow the government to do any reasonable long-term funding.

Other points made during the initial statement by the chairman are worth repeating. As he noted, the location of a debt office is a question which often comes up. I think he made the point quite well, and it has been borne out in our discussions since, that this question isn't all that important. In any government, there are a number of functions—you may count to five or eight or whatever number—that necessarily will be distributed among more than one unit of the government. So you would have several government units working in debt management. However you split up the cake, the need remains for a good communication system connecting these units. They must be able to cooperate and share information. They must be made to report to the same central unit. That central unit should have access to the highest decisionmakers. Rather than fighting about where functions should be performed, more effort should be devoted to creating this system for flow of information and the spread of recent policy decisions by the government. And I think nobody gainsaid what was stated by the Chairman on this point.

One point that has come up very briefly but I think is very important is that technical assistance must be better coordinated. There are now so many donors; in most countries there have probably been, particularly if you count up over a five-year period, half a dozen donors, each bringing some advisors, some short-term consultancies, a lot of training opportunities, which they do not disclose to each other. The government ministries and central banks may not even tell each other about them, because there is rivalry among these places for opportunities to go for three weeks to London, or the United States, or Paris. One idea is, of course, that a centrally placed donor agency like the UNDP, which runs these roundtables of technical assistance donors, should be the locus of information about training opportunities. We will certainly recommend that in our report to the UNDP. The network of resident representatives, with some back-stopping from headquarters in New York, should be sufficiently knowledgeable about debt management problems and technical assistance for debt management to fill this coordinating role in the field. Regardless of constitutional considerations favoring the United Nations, the World Bank will probably be the institution that knows the most. If the World Bank and the IMF are allowed to cooperate as beautifully as we have been told here in this conference, then surely your combined knowledge will be greater than anybody else's, bar the UNDP. So the three of you together should know everything that goes on, including things on the bilateral side. Try to encourage the bilaterals to get together in the DAC (Development Assistance Committee of the

OECD) here in Paris, at some subsequent point of time, to meet and discuss debt management systems, preferably based on the report that will be available for all to read in a month or two.

But again, it's really up to the government itself to arrange for this coordination, to see to it that there's not competitive rivalry among ministries to get these trainee scholarships, and so on. There must be a rather critical eye on the part of top management as to the contents of these training opportunities. Of course they are perquisites; of course you must use them to get staff to stay on. In many cases, they are almost the only thing you can do for your people. If you cannot pay them nicely, you can at least let them go away on a training trip. But one must weigh these things against the need to keep people on the job and have the debt office run properly. Also, if the contents of the training look rather thin, then say so to the providers. Give them some feedback. Those who go on training should at least draft a few pages on return, telling frankly how good or bad it was, how it could be improved, and whether it is something for the government to consider using again.

One interesting point that came up in the Jamaica presentation was whether the institutional framework should be put in place before you introduce the system. I think this points to one major problem in a situation where so much is still floating around and you don't quite know what you want to do. Not until you introduce this system, not until you try to bring order into chaos, do you really know what the problems are. So maybe some of the failures in the systems installation, technical assistance, and government efforts have just been the necessary steps on the road to a more appropriate arrangement, a more appropriate system that you could not have devised beforehand, because you only knew the problems by trying to start the system. Seen this way, debt management in the early stages is very much a research and development activity, and much of the money and effort spent are a necessary investment in getting to know what it's really all about. Then we shouldn't be too worried about the false starts, the money lost, and even the time lost. After all, we gained a lot of necessary useful knowledge that wasn't there before, and without which we could not fashion systems that do work.

Well, Mr. Chairman, I kept fairly substantial notes, but I haven't had time to go through them. It would take another hour, I think, to do justice to them, and it's certainly quite late. I may have covered at least some of the essential points from the chairman's initial statement. I suggest that you throw the floor open for a few more minutes and let others supplement what I said. Thank you.

Mr. Stillson: Thank you very much. I thought you were rather complete, and it was a good summary statement. Still, I agree that others may have a few final comments. As one personal comment, I think this conference should not escape an auditing from all the participants. Certainly, you should send your very frank comments about the usefulness of such a conference to the World Bank. I'll take it upon myself as an IMF staff member to say that, at least in my experience, the World Bank is reasonably honest with itself in terms of this sort of thing.

Ms. Silva: I think it would be very useful to know in advance when a meeting or an event is going to take place. I'd like to ask when we're going to meet again, so as to have an opportunity to exchange our experience once again during the intervening period.

Mr. Stillson: I cannot answer that.

Mr. Hunsberger: I'll attempt to answer that. The World Bank takes great interest in these issues. These meetings can be arranged as often as they bubble up to the consciousness of the Bank as being useful and necessary. I can say that in the past couple of years, it was felt that we didn't know enough new from 1985, not enough evolution had occurred. But finally this year, the feeling was that, yes, the time is right. New developments have occurred; new versions of software, new thinking about technical assistance, and in particular the UNDP study just now being completed, gave us an opportunity to do it again. But it very much depends on the demand from the countries. You have more influence than you may realize. We look as if we're a remote agency on a hillside, which doesn't listen. In fact, the voices and the pressures coming from the member countries have an extraordinarily strong influence on how our programs take shape. Your letters and comments will have a lot to do with when the next conference can occur.

I'd like to say I've learned a great deal from this conference. Having now organized two of these, I compliment you all for the intellectual wisdom you bring me. As we were reflecting on the last two hours of conversation, one thought occurred to me, triggered by the comments from Congo and Zaire. Perhaps we providers of technical assistance think too much of *the* government, when in fact there are many different faces of the government. The point made here by you was that

the negotiations for technical assistance and the terms of reference are crafted at one level of government, but a different government is the one that actually receives and works with the technical assistants. Perhaps we [in the international institutions] should be more sensitive to this and not assume that the fault, or the blame, or the responsibility, of the government is with a single entity. Perhaps we should be more sensitive to the difficulties and inabilities of the operational level, where the actual work is done at technical assistance, in influencing their own government colleagues at the higher level where these deals are cut and the contracts are signed. This is one of the things I take from this conference that is a new idea for me, and I thank you for bringing it to my attention.

I want to say personally that I appreciate very much the work you have done, you country delegates. You are all, in my eyes, very patriotic for taking the sacrifice in salary that you all do. Almost everyone in this room could double or treble his or her salary if you were not working for your government. But you take these sacrifices in a patriotic duty to your countries and with a great deal of loyalty, and I salute you for that. I also want to say, speaking for myself and for my colleagues here, that this is a labor of love for us as well. Working with you and seeing these countries prosper and sometimes suffer, but at least working together with us, gives us great satisfaction on the donor side. We have the pleasure of working with you. I will close with that and turn the microphone open to others for final comments.

Mr. Stillson: Is there anybody else who would like to make a final comment. I'm afraid, Enrique [Cosio–Pascal], I did not return to you once when I said I would. But if you would like to comment.... Yes, please.

Unidentified Participant #4: I'm just taking the floor to request something that is missing in the list of participants. We don't have the addresses, particularly for the international organizations. I would like to know how to get in touch with UNITAR, for example, and have their address.

Mr. Hunsberger: As soon as we produce the proceedings report, we will put in, as best we can, the detailed addresses of participants. In the meantime, I think you can perhaps use contacts in the room to find these addresses. We will also try to provide them to you directly through the World Bank.

Mr. Kalderen: A point of order. There are in the World Bank, in the Treasurer's Department, lists of names, addresses, even functions performed by individuals, and of course, telex and telefax numbers and so forth, for a fair number of debt offices around the world who participate in the Government Borrowers' Forum. This forum, which meets twice annually, consists of sovereign borrowers who tap the international financial markets, including the commercial markets. I think some of you here are participating in that forum. Others may wish to do so, who have the credentials, which consist of a fair amount of participation in these markets. You should get in touch with Mr. Eccles of the Treasurer's department, who can arrange for you to be put on the list. You can then swap these addresses and data and get into a network that already exists among such sovereign borrowers. Thank you.

Mr. Dowsett: I'd just like to thank all the participants. I've enjoyed this conference enormously. I've met a lot of old colleagues, met some new ones, and I hope to continue dialogues with you all. I would also like to thank the interpreters and the staff of our Paris office.

As you know, this is the second conference that David Hunsberger has put on. He talked about our enjoyment working with the countries. As many of you also know, David will shortly be leaving the World Bank. I hope we can find someone else as capable to organize another conference for us.

Mr. Valantin: I'd like to make a very quick, somewhat contradictory, statement. You'll have to forgive me. During the conference, we've talked about debt systems, and we've learned that there's much more to the debt management system than just the computer system. In fact, often we use this terminology in a very ambiguous and vague way. There has been a great deal of progress in the last couple of years. I think the timing is about right, because between the last conference and this one, I think we've reached a point where we really have something to show now.

But I don't think we should get complacent about the technology and about the state that we've reached. Systems get obsolete very quickly. With the technology changing, with financial management changing, we can't just sit back on our laurels and say well, we've solved the problem now, let's just forget about it. The upstream and downstream problems are extremely important, but I don't think we should forget that the support in continuing expansion of these systems requires a lot of

effort and a lot of resources. Computers seem to do wonderful things, but there's a lot that goes on behind the scenes to make them do that. So I think that we've solved the systems problems, but the systems problems are not solved. That's my contradictory closing remark. Thank you.

Mr. Stillson: I think this is the first time an IMF representative has joined this conference. I've been very pleased to be part of it. I've learned a great deal. I hope I have made some new friends, certainly some new acquaintances, and I think it's been a very useful expenditure of our time. So I would like to thank the World Bank and all of the participants and adjourn the conference. Thank you very much.

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