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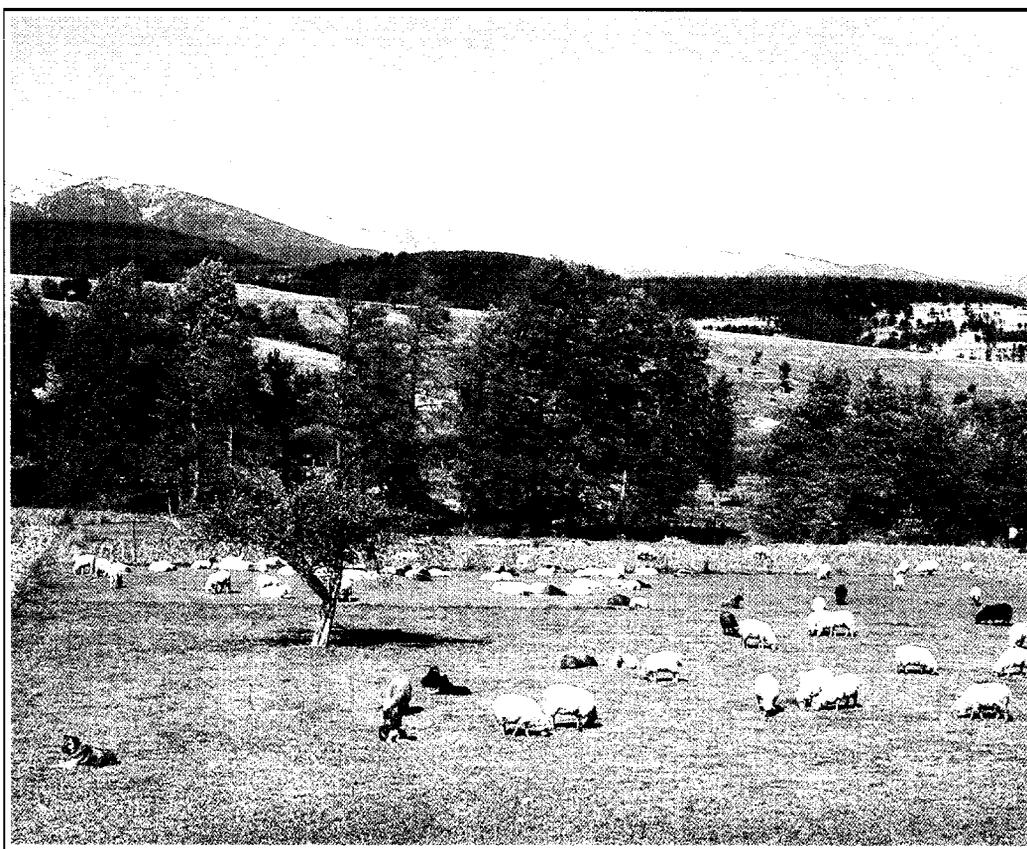
WORLD BANK TECHNICAL PAPER NO. 481

*Europe and Central Asia Environmentally and Socially Sustainable
Development Series*

WTP-481
JULY 2000

Food and Agriculture in Bulgaria

The Challenge of Preparing for EU Accession



*Csaba Csaki
John Nash
Achim Fock
Holger Kray*

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*The World Bank
Washington, D.C.*

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First printing July 2000
1 2 3 4 04 03 02 01 00

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ISBN: 0-8213-4793-4
ISSN: 0253-7494

Cover photo: "Serenity" by Boyko Kavel.

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Library of Congress Cataloging-in-Publication Data has been applied for.

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FOREWORD

Although becoming a member of the European Union has been accorded highest priority by the Bulgarian Government, meeting this goal remains a challenge. Because of a slow initial start in transition in the early 1990s, in 1997 the current Government inherited an economy in disarray, and a set of agricultural policies that heavily taxed farmers and relied to a large extent on planning mechanisms, that in important respects, differed little from those used under socialism. Privatization of state-owned assets and land restitution and titling had almost stalled. The macroeconomic situation was hyperinflationary. The financial system had collapsed. In short, Bulgaria's progress in the transition from socialism had virtually ground to a halt, and the economy was far from meeting the EU's most fundamental pre-requisites for accession—that the country have a functioning market economy and that the productive sectors be able to compete in the unified market.

The Government moved decisively to reverse this situation. Because of its importance, the agricultural sector was accorded high priority in the comprehensive program of stabilization and structural adjustment. The World Bank has supported the agricultural policy reforms, both through a continuous program of technical assistance and an Agricultural Sector Adjustment Lending operation. Progress has been impressive in all the important areas. The sector still suffers from the legacy of the past, but markets are working and output is recovering. In some ways, Bulgaria's agricultural policy regime has improved from one of the worst of the candidate countries to one of the best.

Notwithstanding this progress, important challenges remain. The reform program needs to be completed. Appropriate agricultural and rural development strategies will be needed to address the problems of adjustment to EU agricultural policy and to EU rules, regulations, and standards. The integration with western European markets will generate many new opportunities and advantages, but it will also bring with it greater competition, posing challenges for Bulgarian agricultural and food producers to increase their efficiency. It will also affect consumers, in particular the poor, through changes in food prices and quality.

In agreement with the European Union, the World Bank is assisting its clients in preparing for the accession. Bulgaria's is the latest in a series of country economic memoranda (CEM) which have been carried out for six of the EU accession countries. These studies provide an overall review of the economies of the respective countries, assess their readiness for EU membership, and identify critical areas and concerns for further government attention in the accession process. Given the importance and sensitivity of the food and agricultural sector in the region, the review of the sector is one of the major components in these studies. This volume is a background paper for the rural development section of the CEM for Bulgaria. It presents an overview of the food and agricultural sector and its status in the preparations for EU accession.

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ABSTRACT

This report reviews the recent history and current state of Bulgarian agriculture and agro-industry. It examines the status of the sectoral reforms program, including reforms affecting pricing and trade, rural finance, land markets, and agro-industry, with emphasis on evaluating its progress toward meeting the criteria for EU accession. It highlights the tremendous advances made recently, and also suggests an agenda for prioritizing and tackling the remaining obstacles. It analyzes several strategies for adoption of the EU Common Agricultural Policy, and recommends that in the near future Bulgaria focus on putting in place the institutions of the CAP, while deferring any attempts to mimic the support policies, which are in any case a moving target. And importantly, it recommends that Bulgaria focus on measures aimed at meeting the basic criteria for accession -- a functioning and competitive market economy -- which will require continued progress in the structural reform program, and on making sure that the SAPARD investments enhance the market orientation of the economy, rather than picking winners. The report is intended for agricultural scientists, public officials, politicians, agricultural and agro-industrial leaders, economic researchers and others interested in the transformation of agriculture in the transition economies and in issues pertaining to accession of Central and East European candidate countries to the European Union.

ACKNOWLEDGEMENTS

This study was prepared as a contribution to the Country Economic Memorandum for Bulgaria focused on EU accession. The preparation of the CEM has been managed by Leila Zlaoui, Senior Country Economist for Bulgaria. The study was compiled on the basis of information and findings assembled with the assistance of the Bulgarian Ministry of Agriculture, Forestry and Agrarian Reforms, during a mission to Bulgaria in September 1999. All assistance and support received from Bulgarian counterparts is gratefully acknowledged. The study was written by Csaba Csaki, John Nash, Achim Fock (ECSSD), and Holger Kray (Consultant). Background information was provided by Christian Boese and Esther Winterhof, of ASA Consulting, Bonn, Germany. A recent FAO study and an EU Assessment on Bulgarian agriculture were used as reference materials. The authors also wish to thank the World Bank's Resident Mission in Sofia, Bulgaria, especially Ms. Andriana Sukova-Tocheva, for their support of this study. Alan Zuschlag and Christin Cogley provided editorial assistance in the finalization of this paper.

CURRENCY

BGN 1 = BGL 1000 = USD 0.54 = DEM 1 0.51 = 1 EURO

Weights and Measures

METRIC SYSTEM

Acronyms

APK	agro-industrial complex
ASAL	Agriculture Sector Adjustment Loan
BGL	Bulgarian Leva
BGN	Bulgarian Leva (new)
BSI	Bulgarian Standardization Institute
BVCI	Border Veterinary Control Inspectorate
CAP	Common Agricultural Policy
CEEC	Central and Eastern European Countries
CEFTA	Central European Free Trade Association
CEM	Country Economic Memorandum
CIS	Commonwealth of Independent States
CICSC	Chief Inspectorate for Certification and Seed Control
CMEA	Council for Mutual Economic Assistance
CN	Combined Nomenclature
COM	Common Organization of Markets
CPI	Consumer Price Index
CSE	Consumer Subsidy Equivalent
CSM	Committee on Standardization and Metrology
DEM	Deutsche Mark
DSM	Divergence Separation Module
EAA	Economic Accounts for Agriculture
EAGGF	European Agricultural Guarantee and Guidance Funds
EIB	European Investment Bank
ERDF	European Regional Development Fund
ERP	Effective Rate of Protection
ESF	European Social Fund
EU	European Union
FADN	Farm Accountancy Data Network
FAO	Food and Agriculture Organization of the United Nations
GAO	Gross agricultural output
GATT	General Agreement on Tariffs and Trade
GDP	gross domestic product
GNP	Gross national product
GOB	Government of Bulgaria
GSP	Generalized System of Preferences

HACCP	Hazard Analysis Critical Control Point
HEI	Hygienic-Epidemiological Inspectorate
IACS	Integrated Administration Control System
ISPA	Instrument for Structural Policies for Pre-Accession
LFA	Less favored areas
LOUAL	Law on Ownership and Use of Agricultural Land
MAFAR	Ministry of Agriculture, Forestry and Agrarian Reform
MFN	Most Favored Nation
MRTDB	Ministry of Regional Territorial Development
MJLEI	Ministry of Justice and Legal Eurointegration
NAAS	National Agricultural Advisory Service
n.a.	not available
NAC	Nominal Assistance Coefficient
NASRS	National Animal Selection and Reproduction Service
NGGFCI	National Grain and Grain Feed Control Inspectorate
NPAA	National Programme for the Adoption of the Acquis
NPPQAS	National Service for Plant Protection, Quarantine and Agrochemistry
NRP	Nominal Rate of Protection
NVS	National Veterinary Service
o.w.	of which
OECD	Organization for Economic Co-operation and Development
PHARE	Pologne, Hongrie Assistance pour la Restructuration Économique
PHCS	Public Health Control Service)
PMRCA	Private Mutual Rural Credit Associations
PPI	Producer Price Index
PSE	Producer Subsidy Equivalent
SAPARD	Special Assistance Programme for Agriculture and Rural Development
SFA	State Fund Agriculture
SFI	State Fisheries Inspectorate
SRA	State Reserve Agency
SSC	State Sanitary Control
SVSI	State Veterinary and Sanitary Inspection
USD	US dollar
VAT	value added tax
WTO	World Trade Organization
ZH	Zarneni Hrani (grain marketing agency)

EXECUTIVE SUMMARY

Agriculture traditionally played a significant role in the Bulgarian economy. Before this decade, Bulgaria was a major exporter of fresh and processed fruits and vegetables inside the Eastern Block. The process of reforms and transition to a market-based agriculture has been a rather difficult and painful period for the Bulgarian food and agriculture sector. Due to the specific procedures used to privatize state assets and reconstitute assets into private ownership, the relative instability of the overall economy until 1997, and the crisis in the Russian market, there has been more disruption in the farming sector in Bulgaria than has occurred in many other Central and Eastern European countries. Since 1997, the government has made rapid progress in implementing a wide-ranging reform program. But because the reform program had made such limited progress before 1997, a number of important components of the transition are still unfinished and Bulgarian food products are not very competitive on the international market.

It is essential that the full completion of the remaining tasks of transition take place before Bulgaria becomes a member of the European Union. The highest priority should be given to actions that will result in a market-driven sectoral restructuring, rather than giving financial support in ways that would perpetuate existing inefficient structures. These policies should support the completion of land reform, the consolidation of farming and agro-processing enterprises, and the development of a market-conforming institutional framework. This will improve the sector's competitiveness, which is a critical prerequisite for accession. Bulgaria must further adjust its agricultural policy to conform to the CAP at the time of its accession, but the transition strategy for this must be one that also maximizes the benefit to the agricultural sector and the economy as a whole. This implies that adjustment of trade and pricing policy to harmonize with the CAP should be deferred as long as possible.

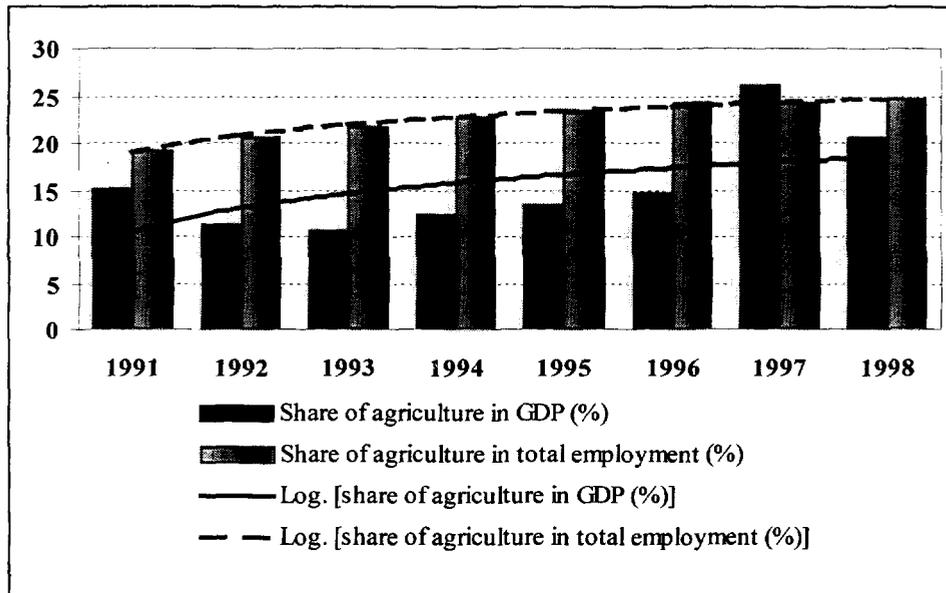
AGRICULTURE IN THE ECONOMY AND SECTORAL PERFORMANCE

The importance of the Bulgarian agricultural sector in the overall economy has remained high throughout the transition, when compared to other CEECs. It is also important to note that, in contrast to Bulgaria, the share of food and agriculture has declined as a percentage of overall GDP in the most advanced transition countries, such as Hungary, the Czech Republic, and Poland. The sector's share in GDP through the mid-1990s (about 13% between 1991 and 1996) has been second only to that of the sector in Romania (20%). This climbed sharply in 1997 (26% growth) and 1998 (21%) (**Figure 1**).

By European standards, agricultural employment in Bulgaria is very high, and only ranks behind Romania and Poland in percentage of the workforce employed in agriculture. Another notable phenomenon is that, in comparison to the more advanced CEEC economies, Bulgaria has experienced an increase in the share of agriculture in total employment during the transition. During the economy-wide decline since 1991, and especially the crisis in 1996-97, the significance of agriculture has increased in two ways. First, while the rest of the economy continued to decline in 1997, agriculture grew, due to

a large extent to favorable growing conditions for grains. Second, agriculture has served as a safety net to absorb some of the labor that has been released from other sectors. Thus its share in employment has grown every year between 1991 and the crisis year 1997, when it reached 24.3% (**Figure 1**). It is the only sector in Bulgaria in which employment actually grew continuously over this period. Currently (1998), agriculture employs 24.7% of the population directly, and about 32% of the population lives in rural areas.

Figure 1: Share of Agriculture in GDP and in Total Employment, 1991-1998



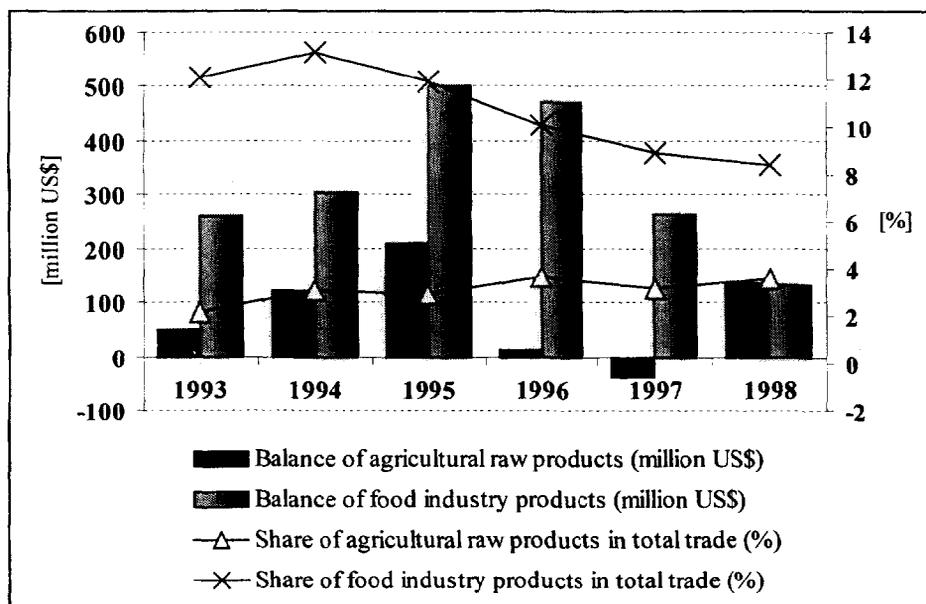
Source: NSI, 1999; European Commission, 1998.

Food and agriculture are essential components of Bulgaria's foreign trade. In the early 90s agriculture contributed 20-25% to total exports. In 1998 the share of agriculture (including food) in exports was 16.4%, which ranked Bulgaria first among the CEE countries. At the same time, agricultural and food products among imports amounted to only 8-10% (**Figure 2**). The most important export products are currently wine, tobacco, fresh and processed fruit and vegetables. The CIS is still the predominant destination for Bulgarian exports, but the role of the EU and OECD countries is increasing. On the import side, the OECD countries and the EU supply most of the imported goods to Bulgaria.

As a result of changes during transition, agricultural production has declined both in terms of output and yields of main products. The main crops are cereals, vegetables, tobacco, and their yields (with the exception of tobacco) declined during the 1990s by 40% to 60%. Output of the major livestock products (meat, dairy and eggs), declined even more than crop production. In 1997, according to official FAO figures, overall agricultural production was only about 55% of its 1989 level. The performance of the food and agricultural sector shows a rather erratic pattern behind the overall declining tendencies. Crop production has fluctuated, especially when viewed on an annual basis.

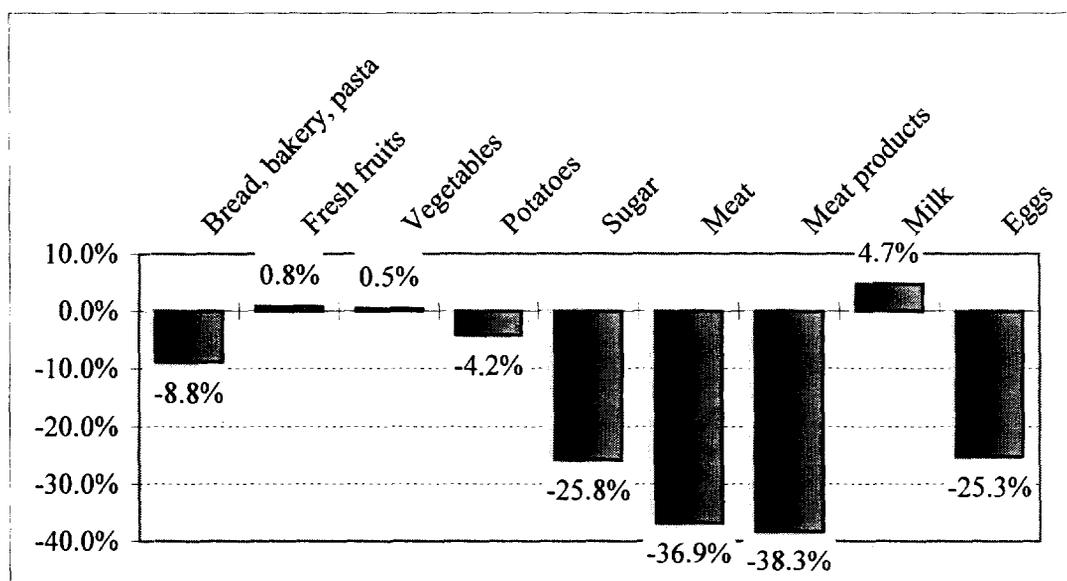
The relative importance of crop and livestock production has been changing continuously, but in general crop sector has maintained its dominance.

Figure 2: Foreign Trade with Agricultural and Food Products, Balances and Shares, 1993-1998



Source: NSI, 1998 and 1999; European Commission, 1998.

This fall in agricultural production has had a number of causes. As the heavy subsidies to fertilizer were reduced, and the purchasing power of farmers fell, fertilizer use declined precipitously from close to 800,000 tons total in 1989 to less than 200,000 tons in 1996. Mechanization also declined, although not so dramatically. On the livestock side, the effects of subsidy removal were exacerbated by the fact that the privatization process put many animals in the hands of farmers who were ill-equipped to care for them, resulting in a rapid reduction in the herd. The adverse effects of these internally generated supply-side disruptions were magnified by sharp drops in demand for agricultural products. These were due to declines in both domestic and external demand. First, the per capita consumption of major food and agricultural products, especially meat consumption, declined significantly (**Figure 3**) as the purchasing power of the population declined.

Figure 3: Change in Per Capita Food Consumption: 1989-98

Source: NSI, 1998 and 1999, European Commission, 1998.

Second, agricultural exports plummeted at the beginning of the 1990s, as the traditional trading relations within the CMEA disintegrated. As a whole in 1991, exports were about 21% of their 1989 value, and exports to the former CMEA markets fell from 79% of the total in 1989, to 57% of the sharply diminished total in 1991. While exports have begun to recover, the share to former CMEA economies has continued to decline. Bulgaria has been particularly hard hit by the collapse of the Russian market after the financial crisis. Given the strong ruble devaluation and floating exchange rate regime, which makes imports very expensive in Russia now, it is doubtful that Bulgarian exports will be competitive in this market in the foreseeable future. On the whole, however, Bulgaria has been the only CEEC other than Hungary able to maintain a net agricultural exporting position. The total positive balance of food and agricultural trade amounts to about US \$300 to US \$400 million annually (Figure 2).

STATUS OF SECTORAL REFORMS

After the collapse of the socialist system, the new government introduced a sweeping program of economic reform. This program included the transformation of agriculture based on the principles of ownership of land and other agricultural property. The aim was to create a market-oriented and internationally competitive agricultural sector. The reforms have made great progress, although several major tasks remain unfinished. The most important implemented reform measures generally fall into three categories:

- the creation of a macro-framework and incentive system for producers, processors, and traders consistent with the requirements of a market-based food and agriculture system;

- the privatization of the major means of production, both in primary agricultural production and in agro-processing and input supply; and
- the changes in institutions and regulations to enhance the functioning of markets.

Each of these is discussed below.

Market Conforming Policy Framework with Limited Government Intervention

Pricing and Trade Policy

Bulgaria's trade regime was characterized by tremendous instability after 1991, when import and export licensing requirements were removed for most products (with significant exceptions, especially in agriculture) and private and state trading organizations were allowed to import and export without special permission. This early liberalization notwithstanding, non-tariff trade policy measures were used intermittently by government until 1998. Unstable policies especially affected grains, oilseeds and their derivative products. From December 1995 to September 1997, basic regulations governing licensing exemptions and bans were changed no fewer than 25 times. This created severe impediments to market entry and investment, with private firms understandably viewing any favorable policy change as temporary.

As direct control mechanisms used under central planning were reduced during the 1990s, there was a tendency to use trade policy for very detailed, short-term intervention aimed at micro-managing domestic supplies and prices. Instruments for implementation of this policy included automatic and non-automatic licenses (import and export); export quotas, taxes and bans; minimum import and export prices; and duty free import quotas.

Pricing and trade policy during the transition was driven by a preoccupation with providing low-priced domestically produced food for the urban population. The mechanism for implementing this policy—the “material balances” approach—in some important respects resembled that of central planning. Prices of important food products were set by the Government. Domestic consumption was estimated, and at a time when the forthcoming harvest could be forecast, the projected domestic consumption was compared to the quantity to be harvested. Any excess of supply over consumption was considered surplus to be sold abroad. Export licenses could then be issued up to this quantity. If it appeared that there would be a deficit that would need to be met with relatively high-cost imports, the government would sometimes issue licenses for duty-free imports within a quota equal to the size of the projected deficit. Trade controls were reinforced by price controls. While the formal price control apparatus went through a number of changes (in products covered, as well as in mechanics of operation) between 1989 and 1996, the goal was always to keep food prices low, and so agricultural products were always among the products covered. Products which were not expected to be in short supply were monitored through the “automatic licensing” regime, which was less burdensome than the “non-automatic licensing,” but which nonetheless served as the means by which the government would collect information to decide if or when products should be transferred back to the non-automatic licensing regime.

Producer prices of the major crops were held by this system at levels far below those that could have been received in a liberal trading environment. A World Bank mission conservatively estimated that price and export controls and taxes on wheat alone cost farmers US \$457 million in the 3-year period from 1994-96. The large gap between world and domestic prices also generated huge incentives to evade the export controls, and led to extensive corruption and illegal exports.

Since the 1996 crisis, however, the Government has made steady progress in liberalizing trade in agricultural products. All licensing requirements (automatic and non-automatic) for exports and imports of agricultural products and livestock have now been removed¹. The Government has also discontinued the practice of allowing duty-free imports within quotas of food items projected by the “material balances” calculations to be in temporary short supply. Elimination of the automatic licensing regime is significant because it lends credibility to the Government’s commitment not to undertake ad hoc interventions as in the past. Without the information from the license applications, the Government will not be able to monitor *ex ante*² trade in these items. This will in turn reduce the ability—and temptation—to micro-manage. This credible commitment will reassure farmers and traders that they can make decisions based on market fundamentals, without worrying about ad hoc changes in trade policy.

The export taxes that were imposed on grains and oilseeds when they were removed from the non-automatic licensing regime have now been phased out. In addition, other long-standing export taxes (wool, hides and skins and live animals) have been removed. Thus, no export taxes remain on agricultural products, consistent with the Government’s commitment to develop an open, export-oriented economy. The Government has also abolished the contract pricing system, which was the last vestige of price controls, so prices are now freely determined between buyers and sellers in the market.

In addition, the government has taken steps to expand farmers’ access to imported inputs. One such step is the reduction of the tariff on fertilizer imports (formerly 40%) to 35% in 1999. Fertilizer imports, 249,000 tons in 1992, fell to around 33,000 tons in 1995 and 39,000 tons in 1996. While there are inconsistent data on total fertilizer use, it is clear that use has fallen significantly during the 1990s. Fertilizer prices in Bulgaria have been very high. While there are multiple causes of the high price of fertilizer and reductions in its use and imports, the 40% tariff—intended to protect domestic manufactureres—has certainly been a contributing factor, so its reduction will provide significant benefits for farmers. The government has also committed itself to further reductions in the tariff to 25% in January 2001 and 20% in 2002. The government is also expanding farmers’ choices of seed varieties by adopting the EU’s Common Catalog of Seeds. Any variety approved for use in any EU country is automatically incorporated into Bulgaria’s list of

¹ It makes sense to maintain controls on wood exports as a conservation measure for a natural resource with uncertain ownership rights until clear ownership is established or a stumpage fee system can be put in place.

² Of course, the Government will still receive the same statistical information on trade flows on these items as it receives for other products from Customs data.

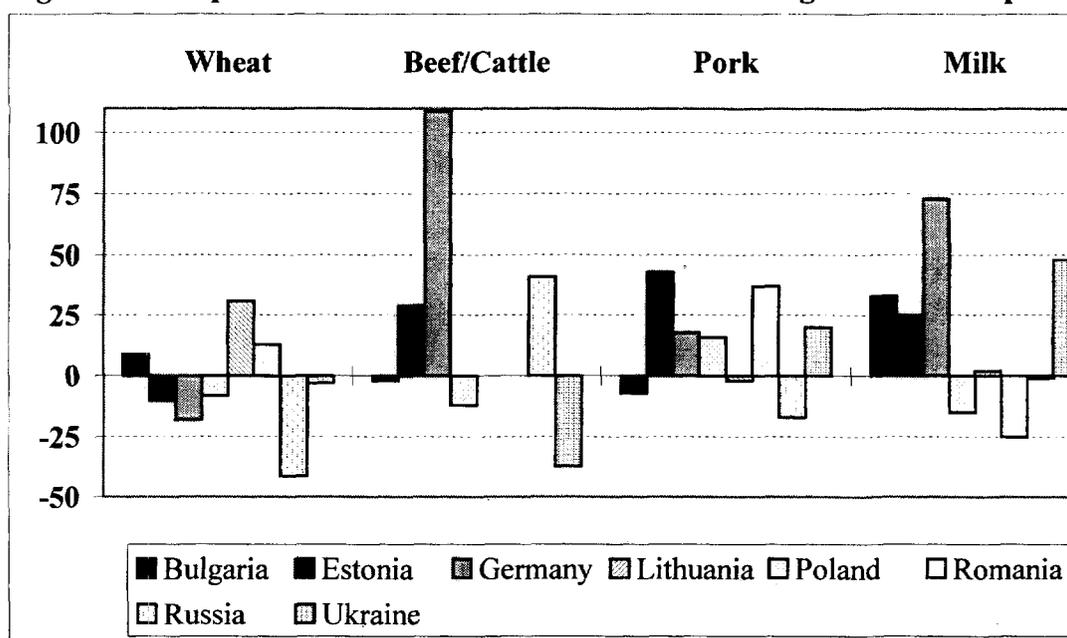
varieties allowed to be imported. This action has already been put in place by ministerial decree and will be made permanent by the new seed law, which is currently before Parliament.

Bulgaria joined the World Trade Organization on January 1, 1997. Its levels of bound tariffs on agricultural products are, in general, rather high relative to those of other CEECs and those of developed countries, including the EU, according to an Organization for Economic Cooperation and Development (OECD) evaluation of bound tariff rates. Applied Bulgarian agricultural tariffs are high in comparison to those on industrial imports, though close to those in the EU. For primary agricultural production, current tariffs on an import weighted basis are 24%, or twice the level obtaining for industrial tariffs. (This is higher than the Czech and Slovak Republics and Slovenia, though lower than Hungary, Poland, and Romania.) The highest protection among primary products is afforded to meats (especially poultry), vegetables and fruit. Among processed food products, protection is very high for vinegar, dairy products, fermented beverages and alcohol, frozen and preserved vegetables, meat preparation, sugar, chocolate, and vegetable oils. The tariff schedule shows a strong cascading pattern, with higher tariffs on finished and processed products than on primary products. One implication of cascading is the higher protection it affords to domestic processors, relative to primary producers.

However, for the most important primary products, the level of import tariffs is not relevant, since Bulgaria is self-sufficient or an exporter. The actual prices producers receive is for most products closely aligned with world market prices, more so than in other transition economies, or the EU. A product-by-product comparison of world prices with domestic prices shows a nominal protection rate of only 2% averaged across crops and livestock products, and an average effective rate of protection³ of only 4% (**Table 2** and **Figures 4 and 5**). A few products, including milk, show high rates of protection.

³ The nominal rate of protection compares domestic output (product) prices to world prices of the same products. The effective rate of protection compares value-added at domestic prices to what the value-added would be if producers paid world prices for inputs and received world prices for their products.

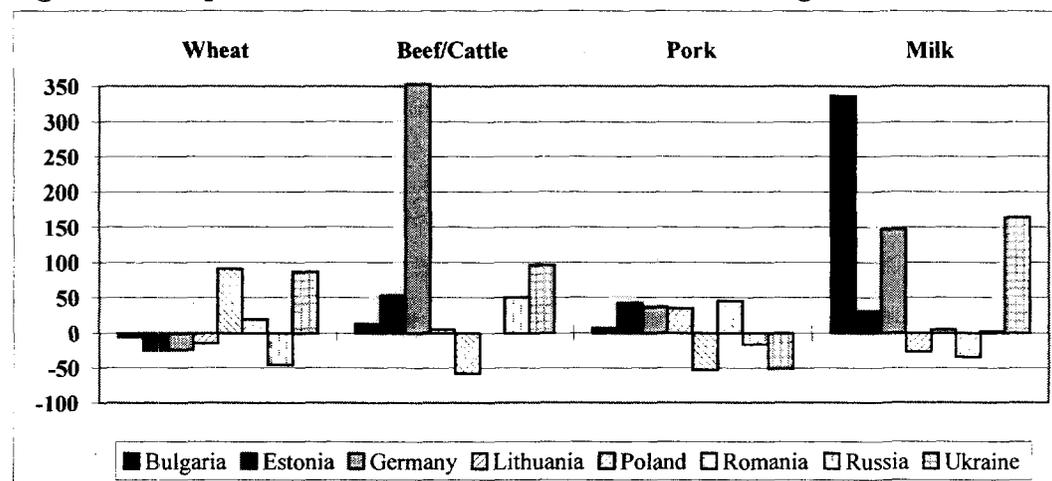
Figure 4: Comparison of Nominal Protection of Selected Agricultural Outputs



Note: Results for Bulgaria: 1998, other results: 1997

Source: Valdes (ed.), 1999; Csaki, Valdes, and Fock, 1998; Valdes and Kray, 1999; own calculations.

Figure 5: Comparison of Effective Protection of Selected Agricultural Activities



Note: Results for Bulgaria: 1998, other results: 1997

Source: Valdes (ed.), 1999; Csaki, Valdes, and Fock, 1998; Valdes and Kray, 1999; own calculations.

Remaining Interventions

Compared to most other CEEC economies, the Government of Bulgaria has a very limited intervention program in agriculture. There are, however, two ways in which the government intervenes that may impede the transition to a competitive market economy. One is its direct involvement in the tobacco sub-sector. Tobacco is a sensitive crop for Bulgaria because of the number of farmers employed in its cultivation, the tolerance of tobacco for less fertile lands, and the share of tobacco in exports. A State body—the Tobacco Fund—registers all tobacco growers and supports the registered tobacco producers by paying a cash premium and providing tobacco seeds free of charge. The premium is set as a percent of the minimum purchase price. The value of the premium is approved by the Council of Ministers. The aim of the policy of support is to regulate the quantities produced according to the domestic and international demand as well as the implementation of the social policy in the regions where tobacco growing is the main source of income. Production quotas are allocated to growers by municipalities. Tobacco processing and marketing are handled by a state-owned holding company, Bulgartabac. This company is in the process of privatization. Along with this privatization, the Government needs to develop a plan to withdraw from direct intervention in this subsector, and allow prices and production to be more market-determined.

The second type of problematic government intervention is the directed, subsidized credit program of the State Fund Agriculture (SFA). It was established in 1995 based on the Law on Support of Agricultural Producers and began operating in early 1996. SFA is a legal entity with its own budget, which is subject to annual approval by the Council of Ministers of the Republic of Bulgaria upon proposal of the Minister of Agriculture, Forestry and Agrarian Reform.

The SFA's main activity has been to provide funds directly to farmers, using commercial banks as agents. The amount lent has been substantial (up to 2-4% of agricultural GDP). The types of schemes financed vary from year to year, but they have included a seasonal credit facility financing inputs for wheat, maize and sunflower production (with a 50% interest subsidy); direct subsidies per unit area for the same crops; and 70% interest subsidies on special investment loans approved by a council of experts under the SFA. The SFA budget for 2000 includes BGN 50 million (\$27.8 million) for long-term investment loans and BGN 34.5 million (\$19.2 million) for short-term credit.

Some of these schemes have been distortive not only through their interest subsidies, but also due to other regulations set by the program. For example, wheat producers receiving credit under the input-financing scheme at planting were obliged to sell wheat to mainly state connected companies designated by the SFA, at contract prices negotiated before planting. This requirement limited development of a wheat market still heavily influenced by the marketing agency Zarneni Hrani and state millers. A 260 billion leva loan guarantee scheme in 1997 was designed to guarantee loans extended by commercial banks to purchasers of the wheat crop. The state served as ultimate guarantor of loans to purchase from farmers at the official guaranteed price. Along with this

scheme, the government also introduced a high official purchase price and an export tax. While a large number of commercial banks were involved in intermediation of the loans to purchase the crop, final borrowers were limited to Zarneni Hrani and another twenty state purchasing companies and mills. This allocation pattern was an additional blow to development of a competitive wheat market, since it effectively excluded the private trade. In the aftermath of this scheme, banks are still reluctant to make any loans for purchase of harvest.

The SFA's short-term loans are not in the long-run interest of farmers. First, the regulations and requirements are quite specific. Besides the transaction costs involved in the administration of such scheme, it is also distortive by favoring certain groups of farmers and certain crops over others, supporting the role of existing input suppliers, etc. Moreover, specific regulations also give incentives to farmers to change their production activities in a way that is not in line with improving the sector's overall net income/welfare contribution. Second, the short-term loans are competing with potential credit lines of commercial banks. Banks might generally be interested in short-term lending, which is relatively less risky than long-term credit in unknown markets and for unknown clients. However, they will continue to channel their own money to urban areas or even abroad, as long as they have to compete with subsidized credits. In recognition of these problems, the Government has committed itself to phasing out these short-term credit lines. This is an important step in the reform program.

In addition to the short-term credits, the SFA also has a number of longer-term investment credit lines. Recently, another instrument was approved for guarantees to commercial banks for credits extended to agricultural producers for the purchase of land. The maximum amount for such a credit is 100,000 BGN, covering up to 90% of the amount of the requested credit over a maximum maturity period of 60 months. This guarantee is the collateral for the commercial bank that gives the loan, while the SFA takes physical collateral in the amount of 130% of the guaranteed amount.

Evaluation of the net impact of long-term credit on credit access of farmers is more difficult than for short-term credits, since banks are making very few long-term loans, even in sectors where there is no crowding out by state lending. This indicates that the SFA credit is not as likely to crowd out the private sector in this market. Furthermore, some important steps have been undertaken to reform the SFA's investment program (including requiring annual repayments of at least principal, rather than lengthy grace periods) so that the adverse effect on the credit market is minimized. Nonetheless, most SFA programs do not serve the objective of encouraging commercial banks to start lending to agriculture.

For these reasons, and to bring policy into conformity with the EU, the investment program of SFA also needs to be further reformed. The state should focus on technical assistance to ensure that alternative private financial agents will fill the gap as the SFA's programs are reduced. The Government needs to develop a strategy to promote alternative private financial mechanisms, such as equipment leasing, mortgage credit, and

other long-term credit sources common in developed markets. A concrete reform agenda for SFA is suggested below.

The agenda in rural financial policy must not exclude the small-holders, who will continue to constitute a substantial part of the rural sector for some time, though their numbers will dwindle as land consolidation proceeds. For these farmers, credit co-ops appear to be a more feasible source of credit than commercial banks. However, credit co-ops have their own shortcomings in many countries (having to do, among other things, with lack of incentives to exercise sufficient caution in lending to members), and the legislative framework needs to be designed with care to avoid these problems in Bulgaria. Thus, the rural finance policy agenda should be a two-track one: ensure that there are no barriers to the emergence of a commercial credit sector based on commercial banking, while at the same time putting in place an appropriate legal framework for co-ops to service the small-scale farmers. This should be supplemented by actions to encourage development of alternative types of credit normally available to farmers in developed market economies, including through input suppliers, upstream processors and equipment leasing companies.

Incomplete Transition in the Farming Sector

Bulgaria began the transformation of its agricultural sector early on in the reform process. The country opted for physical restitution of expropriated property, including agricultural land, as well as the distribution of collective farm assets among the members. The initial phase of restitution and restructuring and privatization of large-scale collective and state farms is nearly completed. The outcome of this process has been a very fragmented structure of land ownership with a mixed and still evolving farming structure dominated by a large number of small private family farms, and the successors of former collective enterprises.

The period of land reform has been rather difficult and painful for the Bulgarian food and agriculture sector. Due to the specific procedures used to privatize state assets and reconstitute private ownership, the relative instability of the overall economy, and the crisis in the Russian market, there has been more disruption in the farming sector in Bulgaria than has occurred in many other Central and Eastern European countries. Several important components of land reform and farm restructuring are still unfinished, such as full land privatization and farm restructuring; creation of functioning land and lease markets; and conditions for farm consolidation. These all must be completed to achieve a viable farming structure under EU conditions.

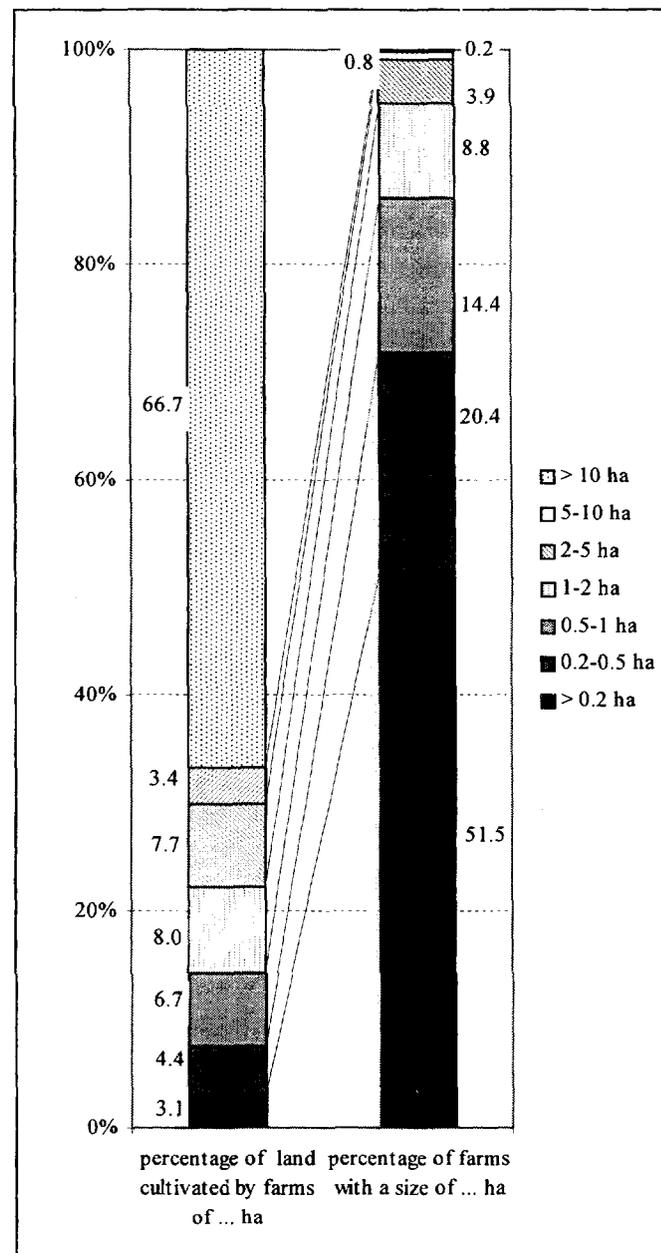
The settlement of land ownership issues in Bulgaria was undertaken within the land restitution process and the privatization of the state farms. The process of land restitution started in 1991, and was based on the Law on Ownership and Use of Farm Land (LOUFL). The implementation, which is being managed by the Municipal Land Commissions, operating under MAFAR, started with the registration of claims (including a decision by the MLC regarding the recognition of ownership claims), the re-establishment of ownership based on old boundaries or through agreement on a

reallocation plan, and finished with a certification which could be used to register ownership.

Restoring former ownership rights to the status of fifty years ago, when neither the corresponding structures of production, nor proper records of the previous boundaries exist, is a costly, labor-intensive, and complicated exercise. Restoration of the old boundaries has been impossible in most cases. The attempt to provide an acceptable replacement for the claimants often ended in a court debate. The task is further complicated by the fact that the original ownership is restituted in the first phase to the initial owner. Most of these owners are deceased and have a variety of heirs, which results in time-consuming inheritance debates. The restitution process has been further complicated and delayed by the frequent amendments to the LOUFL, which has been amended 15 times since its inception. It is not surprising that the restitution of private land ownership, which began in 1991, is still not fully implemented.

The current government has put a high priority on the completion of land restitution. Among other actions, it has increased resources devoted to this effort and has eliminated the fee for issuance of notarial deeds. It has also eliminated all taxes on land transactions. These steps have paid off in an acceleration of the process, so that by the end of 1999, 95% of land subject to restitution was returned to the original owners, although critical

Figure 6: Structure of the Private Agricultural Enterprises According to the Size of Their Arable Land



Source: NSI

ownership issues, as well as proper titling, are far from resolved. About 39% of the land subject to restitution has been titled, either through a formal titling process or through a decision of the Land Committees, which (under amendments to the law of 1999) have the power of notary deeds. However, much of this land must still be divided among heirs before it is titled to individual owners. The completed restitution will result in a rather fragmented ownership. After the completion of the process, Bulgarian agricultural land will be owned by around 3 million (or by some extreme estimates 5 million) people. Looking retrospectively at the process of restitution in Bulgaria, the complicated process itself, and the changing political attitudes toward restitution, resulted in a much lengthier and disruptive land settlement process than occurred in most other Central European countries, which did not try to return land to the original owners but rather used other forms of compensation.

Bulgaria's current farming structure, which is highly dichotomized, requires further restructuring. On the one hand are individual private farms which dominate land use. Inside the category of individual farms there are a large number of small subsistence farms belonging to mostly older people. Over half the farms have a size less than 0.2 ha. (Fig. 6.) On the other hand, there is a smaller, but significant number of commercial farms that are managed by younger and more educated people. Only 4.1% of farms are over 5 ha, but these comprise over 70% of the arable land area in agriculture.

Considered from the point of view of organizational type, about one-third of agricultural land was still used by relatively large-scale, often private, nominally restructured collective farms in 1997. There are a significant number of commercially and non-commercially oriented so-called "private cooperatives" and a few private agricultural companies. On the other hand, hundreds of thousands of small farmers and other private farming organizations cultivate about 45% of agricultural land. About 20% of agricultural land, mainly pastures, is still in the hands of the state and local municipalities (Table 1). Over 94% of arable land was in the hands of private farmers and cooperatives, and only 6% was in state and municipal government use. By some estimates, about one quarter of the agricultural land has remained uncultivated altogether in the various farming categories.

Table 1: Farm and Land Use Structures (1997)

Farm Type	No. of Units	Land Size ('000 ha)	Average Size (ha)	Share of Agric. Land (%)	Arable Land* (%)	Pastures* (%)
State & municipal	493	1,259.2	2,554.2	20.3	5.7	70.1
Cooperative	3,475	2,158.6	621	34.8	42.4	13.6
Individual & farm companies	1,778,495	2,785.2	1.6	44.9	51.9	16.3
Total		6,203.0		100	100	100

Source: NSI. * 1996 figures.

Largely Privatized, but Internationally Non-Competitive Agroprocessing Industries

In the past, state enterprises have dominated Bulgaria's economy. The country has built up a sizable agro-processing industry to transform the surplus of Bulgarian

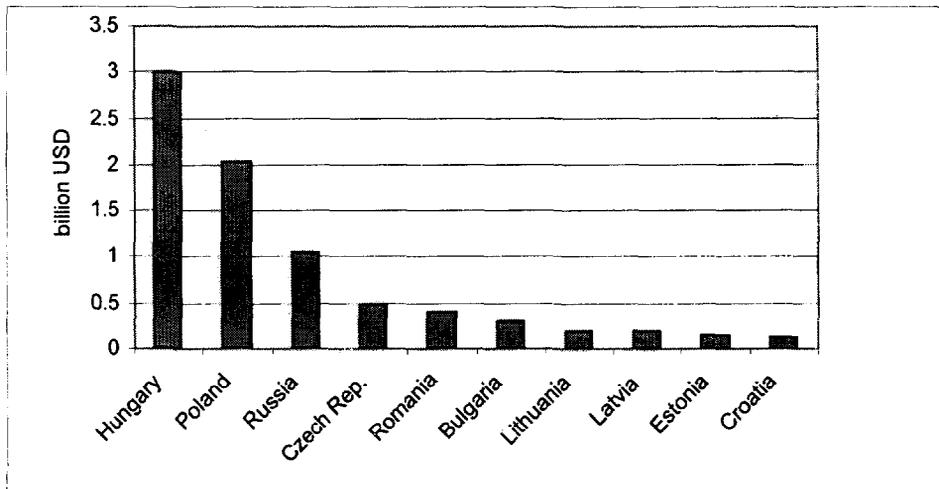
agriculture into products that can be exported. A range of state-owned food plants were established around each of the larger urban centers for processing the local agricultural production. These plants, in addition to satisfying domestic demand, produced goods for export, primarily to the Soviet Union and other markets in the socialist countries. As a result of this policy, a large over-capacity of agro-processing remains compared to the current output of primary agriculture. Lack of investments during the 1980s and 1990s has left most of these plants with outdated equipment; most of which is now in a poor state of repair and ill-equipped to meet the challenges of a competitive market. In many instances, the quality and range of products they are able to offer are poorly suited even for the less demanding Eastern European market. Unit costs of agricultural raw materials appear to be low in comparison with other countries. Notwithstanding these low raw materials prices, inefficiencies in processing and marketing often result in a finished product cost that is relatively high in relation to quality. Consequently, Bulgarian agro-processors have lost most of their markets, even inside the Eastern Bloc. At the same time, domestic food consumption has also decreased significantly. It is not surprising, therefore, that the utilization of current agro-processing facilities is at the level of 30-40% of technical capacity.

The privatization of the sector began in the early 1990s with the sale of the less politically sensitive enterprises. Progress in the government's overall privatization program was very slow until 1997. From 1992 to 1997 only 18% of long-term assets were privatized. (A firm is defined as privatized when at least 67% of its shares are privately owned.) The pace of privatization increased from 1997 onwards. Progress was still hampered by valuation procedures that sometimes led to the setting of unrealistic minimal bids, and by slow procedures for reducing these. Demand for the assets has been low partially because of the generally depressed state of the economy. The result of both these factors was that many agro-industrial assets did not attract bidders when put initially into the privatization program.

However, recent privatization policies introduced several changes in legislation and thereby addressed key issues of and obstacles to privatization. These include amendments to facilitate writing off the debts of companies, better division of responsibilities between the Privatization Agency and the branch ministries, limitations on the preferences given to management-employee buyouts, and changes in the treatment of investment vouchers. The result is very positive, and at the end of 1999 privatization in agro-processing is close to completion (as of September 30, 1999, 88.9% of the assets of the food industry were privatized).

Under the privatization process, an open, liberal policy has been applied toward foreign investors. Though there are no significant restrictions on foreign investments and there is a freedom to repatriate profits, the privatization process of agro-processing in Bulgaria has attracted relatively modest foreign investments. Bulgaria is lagging far behind other Central European countries in agri-food FDI (**Figure 7**).

Figure 7: Cumulative Stocks of Agri-Food FDI in Central and Eastern European Countries in 1997



Source: OECD.

With the exception of a relatively small number of domestic and foreign owned companies, the agro-processing industry shows signs of serious operational difficulties after privatization. A large number of companies were privatized without appropriate financial consolidation. The new owners, in many cases, lacked financial resources for investments and product improvement. There are significant difficulties with corporate governance, especially in companies owned by employees or investment funds. A significant number of enterprises are near bankruptcy. As a result, the inherited, oversized, technologically out-dated plants work with low level of capacity utilization and efficiency. This agro-processing industry is not able to be the engine of the agricultural development in the country.

AGENDA FOR CONTINUING SECTORAL REFORMS: CRITICAL ISSUES FOR EU ACCESSION

Proper Response to the Evolving CAP

One critical issue the government must decide is when and how to transition to the CAP. The task of evaluating policy options for Bulgaria on its way to EU accession would have been considerably easier if one could anticipate more precisely what EU agricultural policies will be at the time of Bulgaria's accession. A simulation approach was used to analyze the potential costs and benefits of the most relevant policy options for Bulgaria to consider for the pre-accession period. For the twelve activities selected for analysis (wheat, barley, maize, sunflower seeds, tomatoes, potatoes, grapes, milk, beef, pork, poultry, and eggs), the simulation approach identified and quantified the potential impact under each scenario on producers' value-added (farm income), consumers' real income, and on the state budget. **Table 2** and **Figure 8** provide a summary overview on

selected results. They have been obtained from simulations carried out for four different policy scenarios:

- Scenario A:* Maintenance of the current liberal trade and market policy (this scenario will also be referred to as '*base-period scenario*').
- Scenario B:* (Rapid) Partial adoption of current CAP, *without (Scenario B₁) or including (Scenario B₂)* compensatory payments
- Scenario C:* Adoption of CAP Agenda 2000, *without (Scenario C₁) or including (Scenario C₂)* compensatory payments. Under this scenario, Bulgaria rapidly adopts the final price levels projected in Agenda 2000 for output levels assumed to be eligible under future CAP regulations. In general, the Agenda 2000 regime includes support prices closer to world market levels.
- Scenario D:* Complete removal of current divergences from world prices.

Although **Table 2** abstracts from product specifics, it shows the main results of the analysis. First, it shows that the overall level of distortion in Bulgarian agriculture is currently low. Although the aggregated protection measures of 2% (NRP) and 4% (ERP) are partly caused by compensating effects of higher product specific rates of protection, they nevertheless indicate a policy and market environment, which is, from the overall welfare point of view, favorable compared to most other CEEC. Hence, a full elimination of all remaining distortions (Scenario D) has only little effects: value-added of producers decreases only marginally from Euro 565 million to Euro 544 million; expenditure on food by households would decrease from Euro 2,105 million to Euro 2,067 million.

Second, the results reveal that the effects of introducing EU agricultural price and market policies would have considerable effects on all economic agents involved. For the income of producers, the difference between whether direct per hectare and per animal subsidies will be applied to Bulgarian agriculture after EU accession is of greater importance than the difference between current CAP type and Agenda 2000 type policies. Quite interestingly, the most likely option, an adoption of Agenda 2000 policies, has only limited effect on Bulgarian agricultural producers, if no direct subsidies are implemented. Value-added increases only by 8% from Euro 564 million to Euro 608 million. However, transfer of direct payments imply an increase by 93% to Euro 1,093 million, a value which is even higher than that simulated for the current CAP option without direct subsidies (Scenario B₂). In general, cereal producers would benefit most from the introduction of EU type agricultural policies. Producers of milk and most other livestock products, on the other side, still need to invest considerably to improve efficiency and product quality before they can greatly benefit from EU accession.

In interpreting the results, it is important to remember that the higher value-added at domestic prices shown under the scenarios B and C are due only to the artificial increases in prices from the support policies, which represent transfers from consumers and taxpayers to producers, not actual increase in real production. True value-added (reflecting the value to society as a whole) does not change, and is reflected in **Table 2** in the row "VA at border equivalent prices."

Table 2: Summary of Simulation of Effects under Policy Scenarios

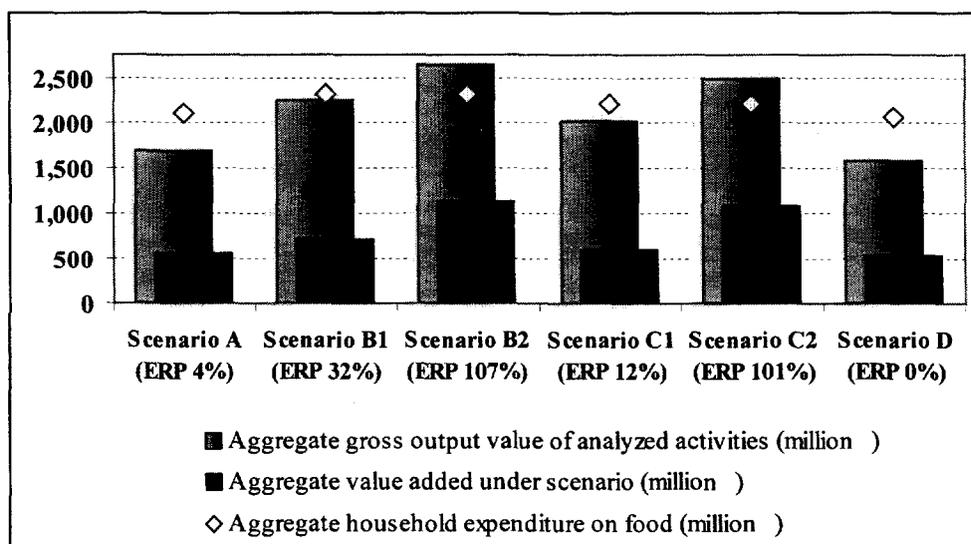
		Scenario					
		A	B ₁	B ₂	C ₁	C ₂	D
		Current policies	CAP, excl. dir. paym.	CAP, incl. dir. paym.	A2000, excl. dir. Paym.	A2000, incl. dir. paym.	Non-intervention
EU Agricultural Policy Effects on Agricultural Producers							
NRP, main products ^{a,b}	%	2.1	38.2	38.2	22.8	22.8	0.0
ERP ^{a,b}	%	3.9	31.8	107.0	11.7	100.8	0.0
Gross output value ^a	M€	1,687	2,242	2,652	2,006	2,491	1,575
VA at domestic prices ^a	M€	565	717	1,127	608	1,093	544
VA at border equiv. Prices ^a	M€	544	544	544	544	544	544
Change in VA at domestic prices ^a	M€	-	152	561	43	528	-21
EU Agricultural Policy Effects on Households							
Expenditure on food ^c	M€	2,105	2,312		2,210		2,067
Change in food expenditure ^c	M€	-	-207		-105		+38
Change in real income	%t	0.0	-5.1		-2.7		1.0
EU Agricultural Policy Effects on Taxpayers							
Change in expenditures	M€	-	-32		-22		-
Direct payments	M€	-	-	409	-	484	-
Other Transfers							
Structural Funds	M€	-		1897			-
Cohesion Fund	M€	-		372			-
Bulgaria's contribution to EU budget	M€	-		110			-

^a aggregate measurement for all analyzed products (incl. direct payments where applicable).

^b aggregate estimate is a weighted average of the product-wise indicators

^c including non-alcoholic beverages

Source: own calculations.

Figure 8: Selected Results of Simulations of Alternative Policy Scenarios

Source: own calculations.

While agricultural producers would gain from the implementation of EU type agricultural policies, consumers would clearly lose due to increased food prices. In the case of an adoption of the current CAP, households would face a loss in real income through rising food expenditures by 5.1% on average. Even under Agenda 2000 Scenario, food expenditure would increase from currently Euro 2,105 million to Euro 2,210 million, corresponding to a loss in real income of 2.7% on average. Due to their higher percentage of food expenditure, poor people are hit hardest by the increase of food prices.

Table 3: Impact of Scenarios on Poverty

	<i>Share of poverty in population</i>		<i>Number of poor citizens^a</i>	
	[%]		[million]	
	<i>Poverty line 1</i>	<i>Poverty line 2</i>	<i>Poverty line 1</i>	<i>Poverty line 2</i>
Current situation				
<i>Scenario A: Base-run</i>	20.0	36.0	1.66	2.98
	<i>Inelastic demand response</i>			
<i>Scenario B: Current CAP</i>	24.8	40.7	2.05	3.37
<i>Scenario C: Agenda 2000</i>	22.3	38.3	1.84	3.17
<i>Scenario D: Non-Intervention</i>	19.6	34.9	1.62	2.89
	<i>Elastic demand response</i>			
<i>Scenario B: Current CAP</i>	23.5	39.4	1.94	3.26
<i>Scenario C: Agenda 2000</i>	21.7	37.7	1.80	3.12
<i>Scenario D: Non-Intervention</i>	10.4	35.2	0.86	2.91

^a Total population 1998: 8,283,200.

Source: World Bank (1999b), own calculations.

According to the 1997 higher poverty measure approximately 3 million people of the total population (8.3 million) were assumed to be poor. Our results show that an introduction of CAP-type policies increases the extent of poverty.⁴ As expected, the increases in relative poverty are more pronounced under the Scenario B (Current CAP) than under Scenario C (Agenda 2000). Applying the higher poverty line, a rapid adoption of current CAP price support schemes would increase the share of poor inhabitants to 40.7% (compared to 36.0% at current, i.e. base-run, conditions), which corresponds to an absolute increase of 392,000 people. The introduction of Agenda 2000 price schemes would increase poverty by 190,000 people to 38.2%. Since consumers will be able to adjust their consumption patterns to the altered food prices over time, we also included the assumption of an elastic demand response to the analysis. As expected, the increase in poverty under this assumption is more moderate but still significant. Under the Current CAP, poverty would rise (by 282,000 people) to 39.4% and Agenda 2000 prices would translate to an increase (by 141,000 people) to 37.7% poor. Comparing the growth of poverty between the two 'poverty groupings' as established by the two different poverty lines (high and low), it is clear that the increases of poor people falling under the lower poverty line are more pronounced in both CAP-type scenarios. This clearly underlines the more negative impact on the 'very poor' parts of the population by CAP-type pricing policies.

⁴ The simulation results take into account only the impacts of food price changes, it does not account for further transfers to/from consumers in an EU integration environment.

A further removal of all distorting market influences (as simulated in Scenario D) would reduce the share of poor people to a different degrees. Assuming no demand response, the share of poverty would decline to 34.9%, when applying the higher poverty line. Using the lower poverty line, only a marginal decline in poverty would be realized. Under the assumptions of an elastic demand response, which is the more likely case, the share of poor population would decline to 35.2%, when applying the higher poverty line. In comparison the results for the lower poverty line are much more striking – here the extent of poverty would be reduced to 10.4% (from an initial 20%) or by 800,000 people (from an initial 1.7 m people). This result clearly indicates that the very poorest shares of the population would benefit most significantly by a removal of current distortions in the pricing of food products.

The third group of economic agents that would be affected by adoption of EU-like policies are taxpayers. First, they would face some additional costs due to reduced tariff revenues and the payment of export subsidies. However, under the baseline assumption the costs are relatively low. More importantly the state would have to pay the direct subsidies to producers – in case they would be implemented in Bulgaria before accession. This amounts to Euro 409 million and Euro 484 million for the current CAP and Agenda 2000 scenario, respectively. After accession, financial solidarity in the EU would transfer the financial burden from the national Bulgarian budget to the EU.

The scenarios discussed above are made under assumption that there is no response from producers and consumers in terms of how much to produce or consume, respectively. However, at least in the medium- to long-term, economic agents can and will decide to adjust their behavior according to price changes. This is modeled in sensitivity analyses based on simple assumptions for demand and supply elasticities. Clearly, under such condition, the benefits for producers from EU accession are considerably higher, the welfare losses for consumers are lower than those discussed above. The extra burden, e.g. due to increased eligibility for direct subsidies, the additional need for export subsidies, etc., would have to be borne by taxpayers. Second, administrative costs of EU policies are neglected, but can be expected to be quite substantial. Moreover, when interpreting the results, it should not be forgotten, that, even if due to financial solidarity, most of the fiscal burden will be paid by the EU, and not by Bulgarian taxpayers, inefficiencies through misallocation of resources caused by price distortion, would decrease overall benefits and increase overall costs to the Bulgarian economy.

In addition to the effects due to implementation of EU type agricultural policies, the analysis discusses additional transfers due to Bulgaria's EU accession. **Table 2** shows the estimated gains of Bulgaria from structural and cohesion funds based on the simplifying assumption that criteria similar to those applied for current EU members today would be extended to accession countries. This results in gross benefits of more than Euro 2 billion. However, these results are quite abstract, since Bulgaria, like any other accession country, cannot expect to get transfers above 4% of its GDP or roughly Euro 500 million. Bulgaria also would have to contribute to the EU budget. Estimates based on its current GDP and VAT show transfers from Bulgaria to the EU in the amount of Euro 110 million.

Bulgaria currently has an aggregate level of support for agricultural production which is quite low compared to the EU and to many of its regional neighbors. While this creates difficulties for farmers, it is part of a sensible macroeconomic policy framework which has been the cornerstone for Bulgaria's economic recovery from the depths of the 1996-97 crisis. In evaluating the effects of this policy, it should also be kept in mind that in the past, some farmers—especially grain producers—were heavily discriminated against, as grain prices were kept artificially low by administered prices and export taxes and controls. These farmers are better off than before. It is also important to recognize that this current low level of support will ease the adjustment to the CAP framework, regardless of what the CAP policies are at the time of accession. Farmers will be able to adjust more easily to higher levels of support—if CAP levels indeed turn out to be higher at accession—than they would be able to adjust to lower levels, if support in Bulgaria were increased now, and then had to be reduced to harmonize with the CAP as it evolves in the pre-accession period. The low support levels will force Bulgarian farmers to try to increase their productive efficiency, but they will be able to do so only if given a proper institutional environment, a well-functioning overall economy, and access to investment resources.

But in any case, the high cost to consumers and taxpayers argues against an attempt to rapidly adopt CAP-like policies, as does the uncertainty regarding the CAP's eventual shape. Bulgaria's optimal agricultural policy strategy therefore may be to focus on efforts to: 1) complete the adjustment agenda to develop a functional market economy; 2) move to a second stage of institutional reform; and 3) structure its pre-accession strategy, including investments under the SAPARD program, to ensure that preparation is done properly and expediently, as well as using available funds to best advantage.

Trade and Pricing Policy

In a very short period of time, Bulgaria has progressed from one of the worst trade regimes in the region to one of the most open. A few actions are still needed to complete the reform program, including:

- Adhere to the announced schedule for reducing fertilizer tariffs (25% by January 2001 and 20% by January 2002).
- Pass laws to allow for automatic registration for seed varieties in the EU Common Catalogue (currently in Parliament).
- Revise sanitary, veterinary, and phytosanitary licensing requirements for imports and exports, and the associated fee structure to eliminate unnecessary inspections. It is clear that such requirements must be in place, but it appears that as they currently exist, they may place an unreasonable burden on importers, exporters, and even on some producers for the domestic market. A further review of these areas is needed to identify how the burden can be reduced while still maintaining the necessary inspections.

- Initiate reforms in the tobacco sector. This is the only product where the Government still significantly intervenes in ways that are not consistent with efficient private sector development.

In the medium term, Bulgaria will have to make decisions in regard to harmonization of its trade policy with that of the EU. In agriculture, this will revolve mainly around the question of when to adopt the trade measures (tariffs and export subsidies) of the CAP. The section of this report with detailed simulations of the results of different options for harmonizing with the CAP shows the costs and benefits to different groups of each option. One clear conclusion from that exercise is that rapid implementation of CAP mechanisms would have very high costs for both Bulgarian consumers and taxpayers. For this and other reasons, it would be difficult for Bulgaria to activate these mechanisms before accession. Instead, Bulgaria could place its emphasis on setting up institutions that will be required for CAP implementation, leaving the trade policy and price support measures until the time of accession.

Improvements in Rural Financial Policies

Availability of investment capital continues to be a constraint on the ability of agricultural and agro-industrial producers to restructure and improve competitiveness. While anecdotal evidence suggests that there may be some marginal improvements in credit access compared to past years, it is clearly not sufficient. Banks continue to demand high collateral (both because of the very stringent prudential regulations they face and because they view agriculture as a risky sector in which they have little expertise), and farmers continue to be reluctant to mortgage their homes, which is the only kind of collateral they have which banks currently consider acceptable. Investment credit lines of SFA are not used because banks are not willing to make what they consider small, high-risk loans for the small margin on these lines. The government should focus on getting farmers some liquidity for investment capital, but in a way that will attract, and not crowd out, lending by the commercial banks and other forms of financing. The priority actions should be:

- Adhere to announced timetable for phasing out SFA short-term credit lines.
- Shift emphasis from direct long-term credit to partial risk guarantees in SFA credit lines, at least on a pilot basis. This should require banks to put up their own capital and bear most of the risk of non-repayment to give them an incentive to carry out a careful assessment of each loan, while modestly reducing their risk exposure. The SFA should not place restrictions on what kind of producers are eligible for these loans; this should be left to the banks.
- Require that risk evaluation of investment projects supported by SFA be exclusively done by banks.
- Pass an appropriate law on Credit Coops.

- Consider allowing SFA funds to be channeled through Credit Coops on a pilot basis. This may require revising the supervisory requirements for Coops.
- Restructure SFA as the paying agency for SAPARD funds (currently underway).
- Consider a pilot program to test payment to banks of a fixed fee for SFA loans to first-time borrowers, the size of which would be the same no matter what the size of the loan. (This would cover their fixed costs and remove the current disincentive to even consider small loans to unknown borrowers). The loans should not have other subsidies (interest rate or guarantee).
- Improve legal environment for collateral in secured transactions and mortgages, including creation of appropriate legal instruments and registers to which potential lenders could refer to see if the collateral already has been used for collateral on another loan.
- Improve legal environment for equipment and machinery leasing.

Improvement in Irrigation Policy

Another important aspect of farmer support in Bulgaria is irrigation policy. The irrigation system has broken down to such an extent that only a small part is still useable. The Government, with Bank support, is developing a strategy that relies on the formation of Water Users' Organizations to invest in rehabilitation of the infrastructure. This will require that an appropriate legal framework be put into place, and that the Government then quickly proceed with the transfer of ownership of the on-farm and off-farm infrastructure to the WUOs following the European model.

Food Security and Cereals Marketing

Apart from general issues in wholesale and retail marketing, the cereals subsector has some unique problems, which are relics of its previous state-dominated structure. While Zarneni Hrani has been dismantled, the State Reserves Agency continues to make quite large purchases and sales. The Government has adopted some operating rules that seek to minimize the degree to which the State Reserves interferes with market development, but some further steps would be useful. What is needed is to:

- better define the operating rules for the State Reserves purchasing and sales so as to limit their impact on market prices, and make the impact more predictable;
- gradually reduce the overall size of the stocks;
- shift some storage to private facilities (thereby improving quality of storage and encouraging private warehouse development);
- eliminate in-kind grain loans.

Completion of Land Reform and Land Market Development

The Government has made great progress in restitution of land and issuing of Land Commission certificates with the legal status of titles, and in amending overly restrictive laws governing leasing and sale. However, there are still two critical sets of tasks to develop a well-functioning land market.

Completion of land privatization, creation of legal and institutional conditions for land markets and leasing. This involves:

- the creation of a modern land titling and cadastral system that closely links these two functions in a user-friendly way. In this regard, it should be emphasized that the current draft of the Land Cadastre and Registration Law, which has passed Parliament on first reading, will need substantial revision in order to serve as the basis for a lending project and a well-functioning system. The World Bank team is working with the Parliamentary commission to accomplish this;
- the speedy settlement of land ownership issues and the provision of proper proof of ownership which can facilitate a land mortgage market;
- the sale of remaining state-owned land;
- the acceptance of land ownership by individual foreign investors;
- focusing on and setting targets for individually titling parcels; and
- improving the system for collecting and disseminating information on land market prices and on land market transfer procedures to new landowners.

Conducive framework for farm consolidation. The further consolidation of the farming sector involves two major tasks.

- Consolidation of fragmented land ownership and consolidation of smaller farms. The creation of viable farming units can be accomplished by consolidating the current small farms. These objectives should be facilitated by appropriate government policies such as liberal land and leasing market regulations and promotion and support of land consolidation (e.g. by facilitating establishment of real estate service agencies to disseminate land market information).
- Further transformation of private cooperative farms. There are many indications that cooperative farms in their current state would not be able to cope with the competitive pressure of the EU environment. Their methods of operation and management and their handling of current resources all need to be adjusted to the principles of a market economy. In the medium term, strict profit motivation and hard budget constraints, as well as financial consolidation are essential. A further transformation involving the restructuring of ownership, management and labor is needed, and in many cases the splitting up and diversification of downstream activities is needed as well.

Government policies and legislation should facilitate, rather than obstruct, this process. At the same time, the bail-out of insolvent cooperatives through government support should be avoided.

Facilitating the creation of marketing and service cooperatives. In developed market economies, marketing and service activities represent the major framework of cooperation among farmers. Western-type marketing and service cooperatives are very rare in Bulgaria, however, they represent a very important instrument in increasing the efficiency and competitiveness of smaller farms. The creation and functioning of these cooperatives should be supported by appropriate legislation and technical assistance.

Privatization of remaining state farms. There are still a number of state owned agricultural enterprises. The privatization of these enterprises needs to be completed as soon as possible. Only the very small amount of farm land attached to research and extension offices should remain in state ownership.

Foreign ownership of agricultural land. In principle, membership in the EU would require that agricultural land markets be opened to competitive forces from anywhere within the Union. Although current Bulgarian law allows land ownership by foreign-owned companies registered in Bulgaria (which is a step in the right direction), agricultural land ownership by foreign individuals is a rather sensitive issue, as it is in other EU accession countries. (Other accession countries are proposing loan transition periods before their land markets are opened to foreigners.) It is feared that the opening of agricultural land markets could have a potentially very significant negative impact. Right now agricultural land prices are much lower in Bulgaria than within the EU, and the fear is that opening the markets would result in large parts of the countryside under foreign ownership. This fact could be recognized and Bulgaria might try to negotiate a grace period for the full liberalization of the agricultural land market, following the example of Austria. However, it is not clear that this is an appropriate strategy. It is doubtful that there would be a large shift in land ownership to foreigners (this negative conjecture has no basis in economic theory or experience elsewhere), and there are several positive effects that could be expected. While it is clear is that there would be a large jump in the price of land, at the higher price some land would be bought by foreigners, but probably much less than is feared. And this increase in land prices would be of significant benefit to Bulgarians. It would give land sellers much-needed cash; for other land owners, it would increase their wealth. For farmers, this would be especially beneficial by helping provide collateral to alleviate the current lack of liquidity. It could jump-start the land market, and it would be more consistent with the basic meaning of property rights in a free society.

Accelerated Technical and Technological Development of Agro-Processing

A working and efficient agroprocessing industry capable of producing products for domestic and international markets, and efficient rural services, are critical elements for the improvement of the agricultural sector in Bulgaria. Further actions are needed to create independent and private owners of agroprocessing who can efficiently control

management and bring in additional investments. Priority should be given to promotion of FDI and rural SME development. To achieve this, the following actions should be taken:

- complete privatization of all assets in the privatization programs of MAFAR and the Ministry of Industry, except those involved in court actions that prevent privatization (tobacco company assets under the Ministry of Trade and Tourism should also be included under a separate timetable);
- post-privatization programs, including the revision of initial commitments regarding production and employment, should facilitate the restructuring and consolidation of ownership in the newly privatized processing companies;
- the emergence of secondary markets for ownership of agroprocessing enterprises should be promoted and facilitated (by, for example, setting up a brokerage or clearinghouse until such time as the shares can be traded on a proper stock exchange) including the promotion of foreign investment;
- strictly enforced bankruptcy legislation should be used to consolidate the newly established private sector;
- the emergence of rural small and medium agroprocessing and service enterprises should be facilitated by improved registration procedures and advice; and
- licensing and inspection procedures should be reviewed to eliminate unnecessary costs for businesses.

Establishment of New Standards for Food and Agricultural Products

The quality of food products represents one of the major obstacles to increasing exports to western, and even eastern, markets. The control of food quality and safety, notwithstanding the significant progress made in recent years in Bulgaria, is still based on regulations originating in the 1970s and 1980s. While a great effort appears to have been made by the MAF in adjusting the whole set of laws concerning food quality, standards, etc., it appears that the enterprises themselves have not benefited from the information, training and assistance to adjust to this new concept of quality management. A substantial educational effort is needed in reference to the implementation of the new legal environment. In addition, the government should place high priority on an investment program to strengthen quality control and new food processing techniques incorporating technologies related to quality enhancement and environmental protection. The program could have two major components that would have to be consistent with each other: one for the private sector (agro-industry was recently made eligible for SFA investment credits, which could be used for this, as could SAPARD funds); and one for the financing of the restructured state agencies in office technology, information networks, laboratory building and equipment, etc.

The Institutional Challenge of EU Membership In Agriculture

According to the European Council in Copenhagen in June 1993, EU membership requires the institutional ability to fulfill all the obligations of membership. The new member countries, including Bulgaria, have to be able to implement all the rules and regulations (the '*acquis communautaire*') of the Union.

The establishment of the '*acquis communautaire*' requires the legal adoption of primary and secondary EU laws as well as the institutional setting for their execution. At the core of EU legislation are the four freedoms (free movement of goods, services, capital, persons). Bulgaria's liberal price and trade approach will assure no difficulties in adopting EU legislation concerning the abolishment of barriers with the EU. At the same time, Bulgaria will face considerable problems in establishing effective customs control for trade with third countries. Since some of its land borders will become EU borders at the point of accession (Yugoslavia is not an EU association country, Turkey will not participate in the current round of EU negotiations on accession) Bulgaria will have some difficulties in effectively protecting its long borders, especially ensuring adequate veterinary infrastructure to manage livestock inspections and control disease.

More important, there are many more requirements for the establishment of a common and well functioning market than to abolish internal barriers and protect the market at its borders. A wide range of institution building is necessary to meet the rules on competition and tax measures (competition law, establishment of anti-trust and state aid monitoring authorities), the opening up of public works, supply and service contracts, harmonization of the rules on intellectual property (including the European patent), harmonization of the rules on company law and accountancy, protection of personal data, transfer of proceedings and recognition of judgments. According to the Agenda 2000 assessment of Bulgaria, the main efforts have to be made in the fields of the process of approximation in the area of public procurement, of meeting all the requirements of the Public Procurement Directive, and in the fields of intellectual and industrial property.

In the area of food and agriculture, the most important issue for the free movement of agricultural products is the standardization and conformity assessment, as well as implementation and enforcement of veterinary and phyto-sanitary requirements, and protection of the EU external borders according to these requirements. In order to comply with these general requirements in the food and agricultural sector, legal harmonization, institutional development, and investments are equally needed. The fragmentation of livestock units and poor farm registration and animal identification systems are serious obstacles, especially because of the threat of the spread of exotic diseases from the Mideast, via Turkey. Great progress has been made in some areas, including the adoption of appropriate veterinary laws. But Bulgaria still has a long way to go in reaching full compliance with these requirements.

The information system, including the monitoring of developments in the sector, as well as changes in the markets, is another critical component of the institutional framework. The current needs of managing agricultural markets and the EU accession

specifically, require a speedy development of a modern, EU-conforming agricultural statistical information system. Some elements of the EU-conforming information system are already in place; however, the current situation is far from adequate. The information provided is not fully reliable and not up-to-date, resulting in delayed and inaccurate policy decisions. Immediate improvement is needed and can be achieved by the use of survey methods to get information on evolving farming structures and changes in the supply and demand situation.

The implementation of CAP requires an ability to oversee and manage all CAP instruments in a consistent manner and to be able to interact with Brussels to fully obtain all EU funds due to Bulgaria. In order to achieve this, eventually a controlling center, such as an intervention agency, must be established and made operational. It is essential that up-to-date information be available on the operation and status of the farming sector. This requires the establishment of a farm registry which would cover all farms and methods of production to clearly identify the beneficiaries of the various EU support programs. In addition, other information databases like an appropriate land register and cattle identification and registration systems, are also of vital importance to give MAFAR the ability to provide information for Eurostat.

All this cannot be achieved without considerable strengthening of the administrative structures. It is important to remember that Bulgaria is still in the first phase of this process. It cannot be overlooked that the administrative costs of implementing EU regulations in the field of agriculture are immense. The EU enlargement will mean a considerable increase in both the number of administrative staff and their education, in particular in the fields of EU legislation. One should also emphasize that a delay in institutional preparation in agriculture would lead, at a minimum, to a delay in obtaining CAP funds, but might also lead to a delay in the overall accession. But, at the same time, it must also be noted that in Bulgaria's current economic situation, there should be no rush to implement CAP-like support programs, particularly since it is very unclear what these programs will be like in the EU at the time of Bulgaria's accession. The focus should be on setting up the administrative infrastructure, rather than the beginning implementation.

Defining a National Rural Development Program and Effective SAPARD Implementation

The NARDP has correctly identified priority investments, which are consistent with the areas identified in this report that require such support to mitigate Bulgaria's main problems on its way to complete EU integration. The MAFAR has constructed an impressive rural development program that will serve as the framework for use of SAPARD funds. It is vitally important that these funds be used in the most cost-effective way possible to maximize their benefit in restructuring the sector. SAPARD is a program which is quite flexible. While this flexibility is on balance a positive characteristic of the SAPARD, it also creates the potential that SAPARD could be used for measures that are not optimal or not even conducive to market development. It will be important to design and implement the program in ways that allow market forces to decide the directions in which the rural economy evolves, rather than having the government "pick winners"

through excessive focus of support on narrowly defined sectors or economic actors that are selected ex ante. While the current draft rural development strategy and SAPARD investment plans were clearly drafted with this consideration in mind, and will allow considerable latitude for market forces to work, some consideration should be given to implementing the plans in ways that will set very broad eligibility criteria and allow self-selection of efficient producers and institutions as recipients of grants. For example, rather than setting the self-contribution at the minimum level of 50% (for income-generating activities), or setting different rates for different activities, consideration should be given to setting a uniform self-contribution rate within broad categories of recipients or activities. This level could be set at a level which would ration the available funds and ensure that they go to recipients who are more willing to put their own funds at risk, or could persuade a third party to put funds at risk. This would not eliminate the need to have a review process for grant applications, but would reduce frivolous applications. It would also allow more grants to be made. This rate could later be adjusted if it were found that demand for the funds were too low.

PRIORITIZING THE REFORMS

Table 4: Policy Priorities

Short-term actions (2000- early 2001)	Medium- to longer term actions (mid-2001 and beyond)
Pricing and Trade Policy	
<ul style="list-style-type: none"> • Pass law on automatic registration for seed varieties in the EU Common Catalogue. • Develop reform strategy for the tobacco sector. • Reduce fertilizer tariffs in accordance with schedule previously announced, or larger reduction for a “quick win” for farmers (Jan. 2001) 	<ul style="list-style-type: none"> • Adopt EU agricultural pricing and trade institutions without raising level of protection, until time of accession. • Liberalize tobacco sector policies, stop interventions, and compensate with targeted and time-limited direct income transfers. • Further reduce fertilizer tariffs (Jan. 2002)
Improvements in Rural Support and Financial Policies	
<ul style="list-style-type: none"> • Revise sanitary, veterinary, and phyto-sanitary licensing requirements for imports and exports, and the associated fee structure to eliminate unnecessary inspections 	

Short-term actions (2000- early 2001)	Medium- to longer term actions (mid-2001 and beyond)
<ul style="list-style-type: none"> • Continue reduction of SFA short-term credit lines. • Require that commercial banks exclusively carry out the risk evaluation of investment projects supported by SFA. • Pass and implement Law on Credit Coops, allowing coops to borrow from commercial banks to on-lend. Allow SFA funds to be channeled through Credit Coops, on pilot basis. • Pay banks a fixed fee for SFA loans, the size of which would be the same no matter what the size of the loan, on a pilot basis. • Pass law on WUAs, facilitating transfer of ownership of on-farm and off-farm irrigation infrastructure. 	<ul style="list-style-type: none"> • Shift emphasis from direct long-term credit to partial risk guarantees in SFA credit lines. • Improve legal environment for collateral in secured transactions and mortgages. • Improve legal environment for equipment and machinery leasing. • Fully restructure SFA as the paying agency for SAPARD funds. • Transfer ownership of infrastructure to Water Users' Associations (WUAs).
Food Security and Cereals Marketing	
<ul style="list-style-type: none"> • Better define the operating rules for the State Reserves purchasing and sales so as to limit their impact on market prices, and make the impact more predictable. • Eliminate in-kind grain loans. 	<ul style="list-style-type: none"> • Reduce the overall size of the stocks. • Shift some storage to private facilities.
Completion of Land Reform and Land Market Development	
<ul style="list-style-type: none"> • Privatize remaining state-owned land. • Pass Land Registration and Cadastre Law. • Focus on and set targets for individually titling parcels. • Facilitate speedy settlement of land ownership issues and the provision of proper proof of ownership to develop a land mortgage market. <ul style="list-style-type: none"> • Create a modern land titling and cadastral system. • Further transform private cooperative farms by strict enforcement of budget constraints and bankruptcy procedures. • Facilitate the creation of marketing and service cooperatives. • Improve system for collecting and disseminating information on land market prices and on land market transfer procedures to new landowners. 	<ul style="list-style-type: none"> • Consider accepting principle of land ownership by individual foreign investors.
Accelerated Technical and Technological Development of Agro-Processing	

Short-term actions (2000- early 2001)	Medium- to longer term actions (mid-2001 and beyond)
<ul style="list-style-type: none"> • Facilitate the emergence of rural small and medium agro-processing and service enterprises by improved registration procedures and advice. • Revise licensing and inspection procedures to eliminate unnecessary costs for businesses. • Complete privatization of all agro-industrial assets in the privatization programs of the MAF and Ministry of Industry, except those involved in court actions that prevent privatization. 	<ul style="list-style-type: none"> • Establish investment program for private sector and restructured state agencies to strengthen quality control and new food processing techniques incorporating technologies related to quality enhancement and environmental protection. • Carry out substantial education program for implementation of the new legal environment of standards for food and agricultural products.
<ul style="list-style-type: none"> • Liberally allow revision of initial commitments made during privatization process regarding production and employment to facilitate the restructuring and consolidation of ownership in the newly privatized processing companies. • Promote and facilitate the emergence of secondary markets for ownership of agro-processing enterprises, including the promotion of foreign investment, by supporting establishment of a clearinghouse for trading shares • Strictly enforce bankruptcy legislation to consolidate the newly established private sector. 	
Institutional Development for EU Accession	
	<ul style="list-style-type: none"> • Ensure adequate veterinary infrastructure to manage livestock inspections and control disease. • Strengthen standardization and conformity assessment, as well as implementation and enforcement of veterinary and phyto-sanitary requirements, and protection of the EU external borders according to these requirements. • Develop a modern, EU-conforming agricultural statistical information system, including establishment of a farm registry and other information databases like an appropriate land register and cattle identification and registration systems. • Strengthen administrative structures. • Strengthen efforts in the area of public procurement fields and intellectual property
<ul style="list-style-type: none"> • Use SAPARD funds in the most cost-effective way possible to minimize administrative “picking of winners” and maximize their benefit in restructuring the sector. 	

Prioritization of an action program is difficult for many reasons. All actions are important, and optimal sequencing depends not only on the benefits to be gained from each action, but also their difficulty of implementation. Even reforms with a modest pay-off should get high priority if they are quick and easy, whereas some with higher benefits might be deferred if they are time-consuming and costly in terms of administrative and political capital.

This table summarizes the mission's recommendations about sequencing and priorities of reforms, based on judgments of costs, benefits and feasibility. Clearly the Government is in a much better position to judge some of this, especially political feasibility. But this summary may be useful in laying out a short-term and medium-term agenda for consideration. The actions that stretch across the two columns are ongoing actions that should be started immediately, but will not be completed for some time. But the initiation of these should receive high priority.

Most actions that involve harmonization with EU standards or approximation of legislation are in the right column, indicating that they are not of the highest priority. This does not indicate that they are not important; clearly they are tasks that must be finished before accession. However, in the short-term, they should not be the government's main focus. Rather, the emphasis should be on more basic reforms to improve competitiveness.

I. SECTORAL PERFORMANCE: CURRENT AND FUTURE POLICIES

AGRICULTURE AND FOOD SECTOR IN THE ECONOMY AND SECTORAL PERFORMANCE

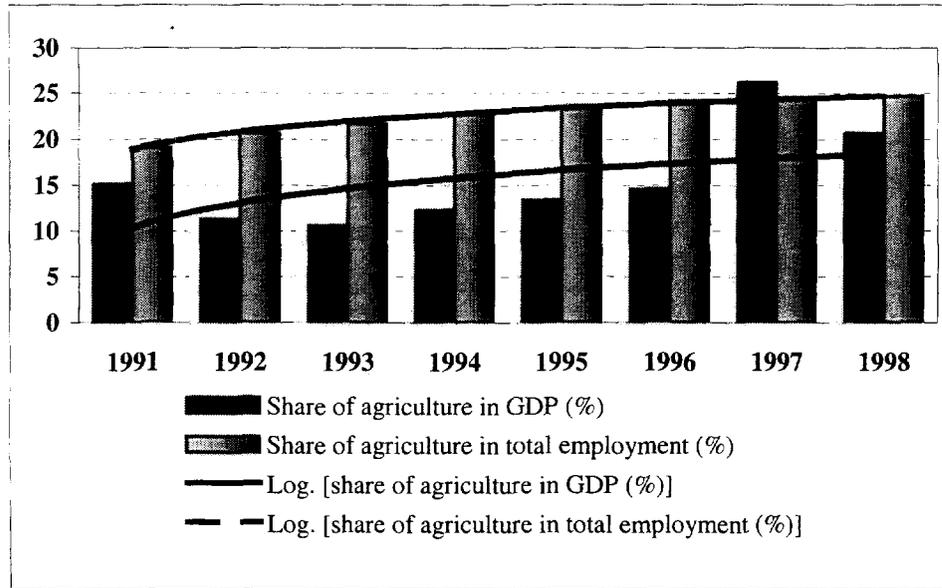
Bulgaria has good natural growing conditions on the two-thirds of its area that are not mountainous. It has fertile soils in the Danube and Maritsa Plains and on its coast. The climate is mild Continental in the north and Mediterranean in the south. Summer crops require irrigation, but water supply has not been a constraint in the past, since there are many rivers and lakes. Before World War II, Bulgarian agriculture was a diversified sector producing a wide range of raw and processed products for domestic consumption and export.

In the post-war period, the communist government's economic policy emphasized industry over agriculture, consistent with the role played by Bulgaria in the Council for Mutual Economic Assistance (CMEA) trade system. Nonetheless, agriculture continued to play a significant, though diminishing, role in the economy during the socialist period. To a greater extent than most other CEECs, agriculture in Bulgaria was organized in very large state-operated farms. It sometimes was presented as a model for other socialist countries, as per capita production and yields increased in the period 1950-80. In retrospect, and in common with other socialist economies, much of the growth was not due to improvement of total factor productivity, however, but to intensive use of other inputs, especially chemicals and fertilizers.

Bulgaria was, even more than other CEECs, integrated into the CMEA trading bloc. As in other socialist countries, trade deals—often barter—were arranged by a state trading agency which had a monopoly position. The country was a significant exporter of agricultural and agroindustrial products, although since exports in this sector (particularly tobacco and fruits and vegetables) were oriented largely toward the CMEA markets, neither price competitiveness nor quality mattered much. Once these markets broke down, Bulgarian exports were in a poor position to compete in the global economy. During the transition the sectoral performance deteriorated and today the sector remains in a precarious situation.

Agriculture in the Bulgarian Economy

The importance of the Bulgarian agricultural sector in the overall economy has remained high throughout the transition, when compared to other CEECs. It is also important to note that, contrary to Bulgaria, the share of food and agriculture has declined as a percentage of overall GDP in the most advanced transition countries, such as Hungary, the Czech Republic, and Poland. The sector's share in GDP through the mid-1990s (about 13% between 1991 and 1996) has been second only to that of the sector in Romania (20%). This climbed sharply in 1997 (26%) and 1998 (21%). (See **Figure 9**.)

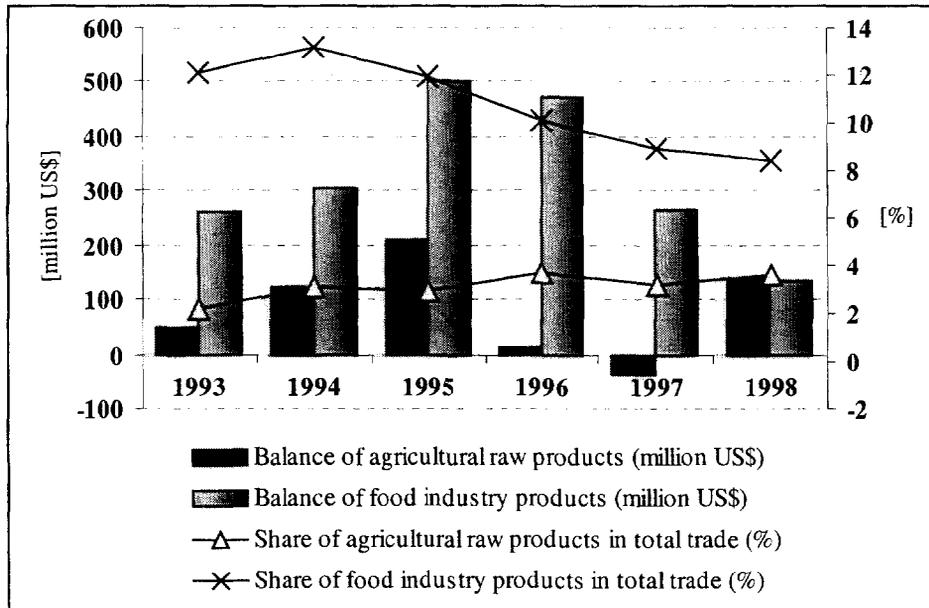
Figure 9: Share of Agriculture in GDP and in Total Employment, 1991-1998

Source: NSI, 1999; European Commission, 1998

According to European standards, agricultural employment in Bulgaria is very high, and only ranks behind Romania and Poland. Another noticeable phenomenon is that, in comparison to some more advanced CEE economies, Bulgaria has experienced an increase in the share of agriculture in total employment. During the economy-wide decline since 1991, and especially the crisis in 1996-97, the significance of agriculture has increased in two ways. First, while the rest of the economy continued to decline in 1997, agriculture grew due to a large extent to favorable growing conditions for grains. Second, agriculture has served as a safety net to absorb some of the labor that has been released from other sectors. Thus its share in employment has grown every year between 1991 and the crisis year 1997, when it reached 24.3% (**Figure 9**). It is the only sector in Bulgaria in which employment actually grew continuously over this period. Currently (1998), agriculture employs 24.7% of the population directly, and about 32% of the population lives in rural areas.

Food and agriculture is an essential component of Bulgaria's foreign trade. In the early 1990s agriculture contributed 20-25% to total exports. In 1998 the share of agriculture (including food) in exports was still 16.4%, which ranked Bulgaria first among the CEEC (**Figure 10**). At the same time, agricultural and food products among imports amounted to only 8-10%.

Figure 10: Foreign Trade with Agricultural and Food Products, Balances and Shares, 1993-1998



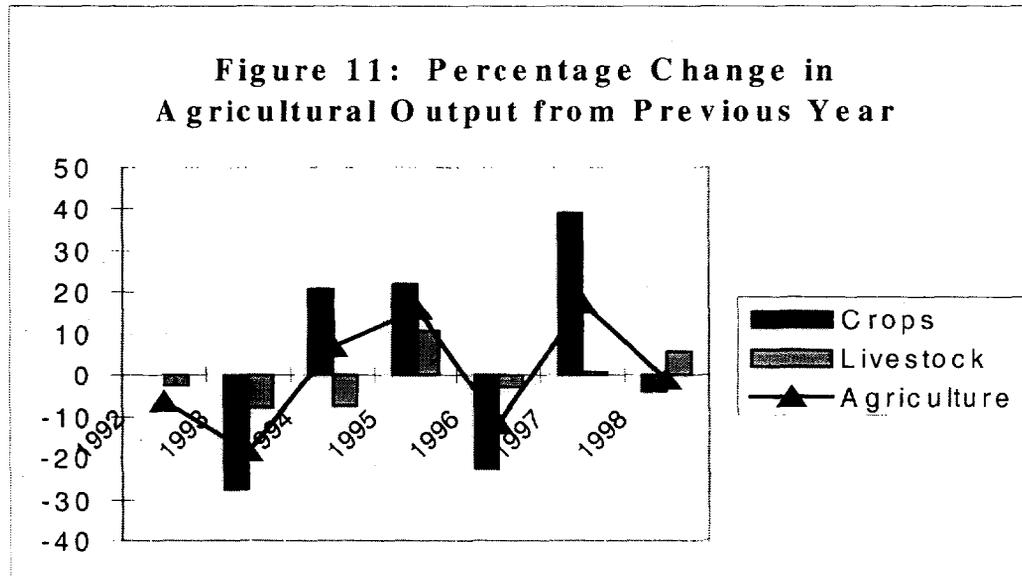
Source: NSI, 1998 and 1999; European Commission, 1998

Primary Agriculture during Transition

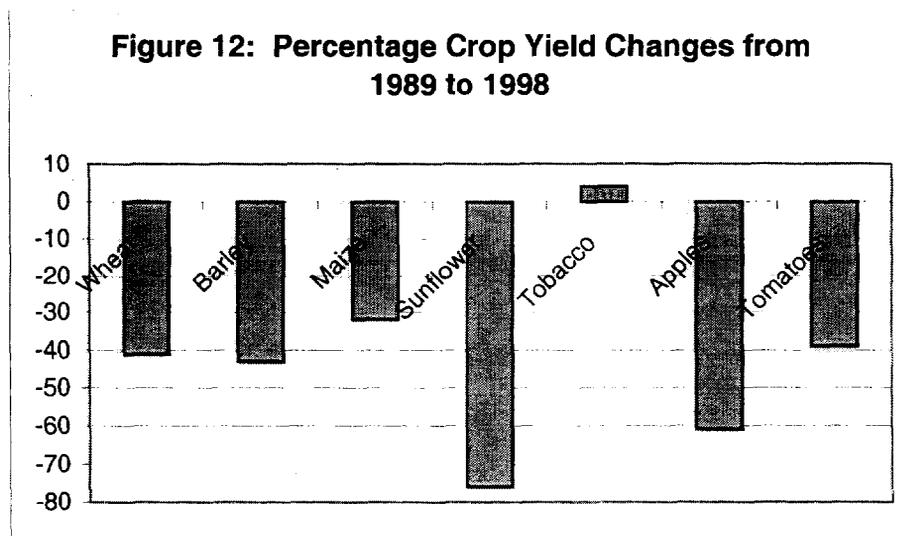
With the end of communism, the Government's first priority in agriculture was to dismantle the most visible symbols of that system—the complexes. This was given priority over other reforms in the areas of pricing policy and privatization, and the way in which it was carried out was quite disruptive. Non-land assets were to be distributed among those who had contributed land, non-land assets, or labor to the cooperative. Animals were the first assets to be distributed. Because of the highly subsidized nature of livestock production in the socialist period, the livestock population was inefficiently large, and declined as subsidies were reduced in any case. This tendency was exacerbated by the fact that many animals were given to farmers who were ill-equipped to care for them, resulting in a large reduction in the herd. In the distribution of land, farmers were supposed to be charged for improvements that had been undertaken in the socialist period. The level of these charges was set relatively high, and private land tenure was still tenuous, with the result that land claimants inflicted widespread intentional damage to irrigation infrastructure, livestock buildings, and orchards to reduce the value of the improvements and minimize their financial liability.

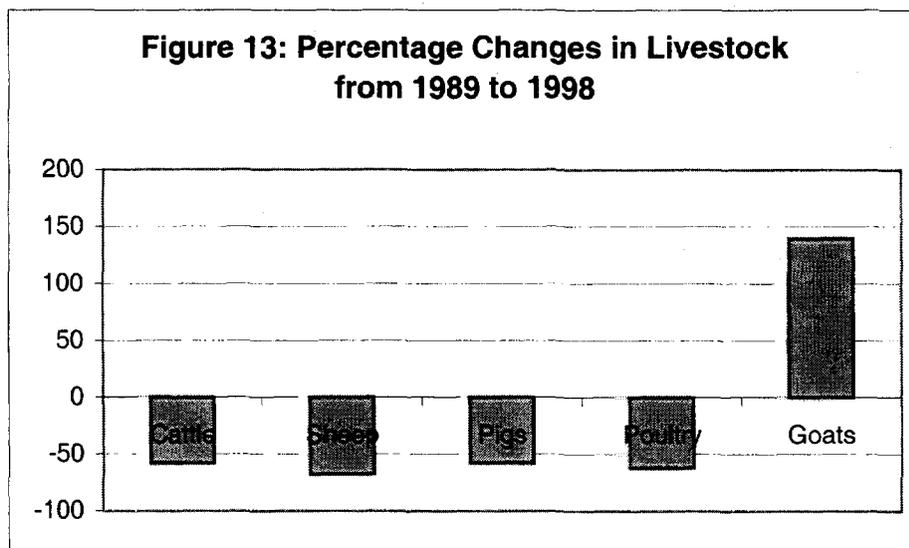
As a result of changes during transition, agricultural production has declined both in terms of output and yields of main products. In 1997, according to official FAO figures, agricultural production was only about 55% of its 1989 level. The performance of the food and agricultural sector shows a rather erratic pattern behind the overall declining tendencies (**Figure 11**). The crop production has fluctuated especially, when viewed on an annual basis. Since the number of animals also sharply declined and this was accompanied by lower yields, the result has been a drastic reduction in output of all

livestock products (**Figure 13**). The roles of crop and livestock production have been changing continuously, but in general crop sector has maintained its dominance.



The main crops are cereals, vegetables, tobacco. Yields of major crops (with the exception of tobacco) declined during the 1990s by 40% to 60% (**Figure 12**). Mineral fertilizer use declined precipitously from close to 800,000 tons in 1989 to less than 200,000 tons in 1996. Mechanization also declined, although not so dramatically. The major livestock products are meat, dairy and eggs. Most animal production declined at even greater rate than those for crops (**Figure 13**).

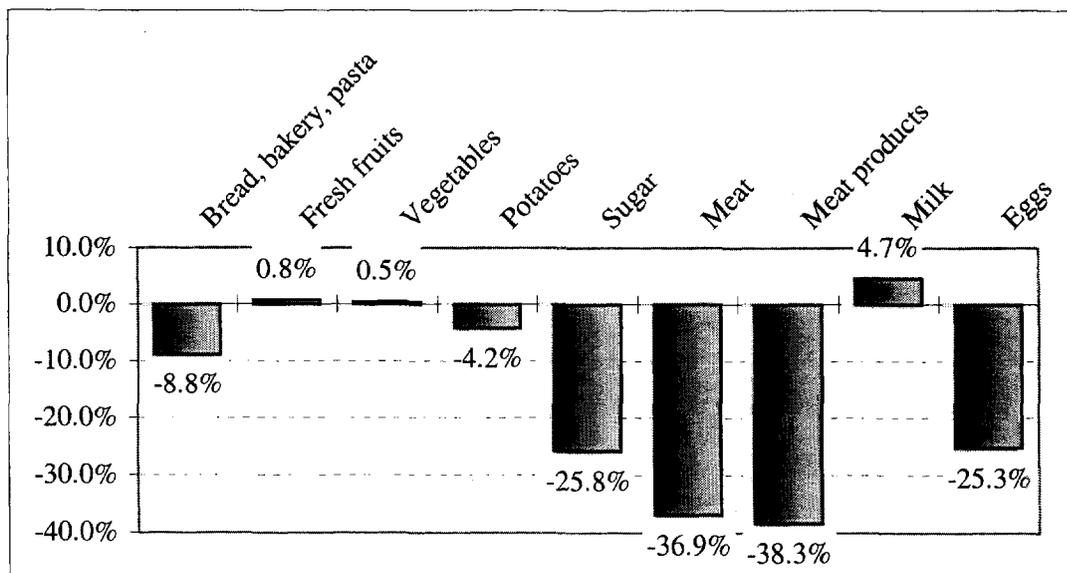




Domestic Consumption and Foreign Trade

The adverse effects of these internally generated supply-side disruptions were magnified by sharp falls in demand for agricultural products. This was due to declines in both external demand as Bulgaria's traditional trading relations in the CMEA disintegrated, and domestic demand as the economy contracted. The per capita consumption of major food and agricultural products, especially meat consumption, declined significantly (Figure 14).

Figure 14: Change in per Capita Food Consumption: 1989-98

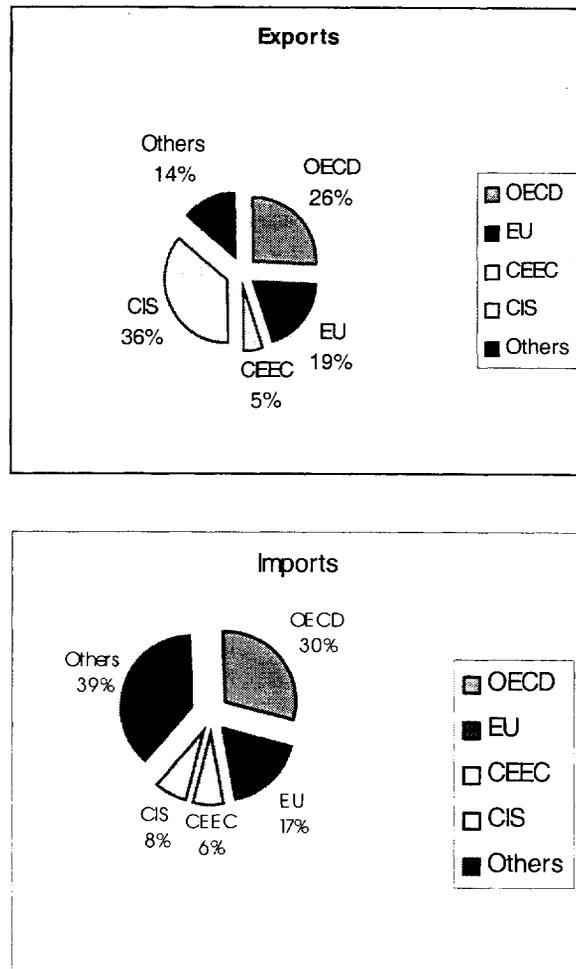


Source: NSI, 1998 and 1999, European Commission, 1998.

Bulgaria's agricultural exports plummeted at the beginning of the 1990s. In 1991 they were about 21% of their 1989 value, and exports to the former CMEA markets fell from 79% of the total in 1989, to 57% of the sharply diminished total in 1991. While exports have begun to recover, the share to former CMEA economies has continued to decline. Bulgaria has been particularly hard hit by the collapse of the Russian market after the financial crisis. Given the strong ruble devaluation and floating exchange rate regime, which makes imports very expensive in Russia now, it is doubtful that Bulgarian exports will be able to be competitive in this market in the foreseeable future. On the whole, however, Bulgaria has been the only CEEC other than Hungary able to maintain a net agricultural exporting position. The total positive balance of food and agricultural trade amounts to about US\$300 to US\$400 million annually (Figure 10).

The most important export products are wine, tobacco, fresh and processed fruit and vegetables. Notwithstanding the collapse of the Russian market, the CIS is still the predominant destination for Bulgarian exports, but the role of the EU and OECD countries has been increasing. On the import side, the OECD countries and the EU supply most of the imported goods to Bulgaria (Figure 15).

Figure 15: Breakdown of 1997 Exports and Imports by Country Group



MACRO ENVIRONMENT – AGRICULTURAL POLICY FRAMEWORK

Objectives and Aims of Bulgarian Agricultural Policy

The major goal of agricultural policy in Bulgaria as formulated by the government, is to facilitate growth in the agricultural sector based on the presence of private land ownership and private property of means of production (MAFAR 1998). This objective is to be achieved by:

- Establishing and strengthening of market structures based on stable ownership relations, which favor the development of an efficient agricultural production;
- Increasing competitiveness and developing conditions for export orientation of Bulgarian agriculture;
- Improving the living and working conditions of people working in agriculture and forestry sectors, as well as of people living in rural areas; and
- Preparing for EU accession, by efficient application of the major regulations of the EU internal market, gradual introduction of the market regimes of the CAP, adopting the EU structural policy mechanisms, and introducing EUROSTAT methods in agrostatistics.

This policy framework characterises the activities of the current government. The details of Bulgaria's agricultural policies, however, are evolving from completing the creation of a fully market conforming policy environment, to coping with the needs of EU accession.

Pricing and Trade Policy

Bulgaria's trade regime was characterized by tremendous instability after 1991, when import and export licensing requirements were removed for most products (with significant exceptions, especially in agriculture) and private and state trading organizations were allowed to import and export without special permission. This early liberalization notwithstanding, non-tariff trade policy measures were used intermittently by Government afterwards until 1998. Instability especially affected grains, oilseeds and their derivative products. From December 1995 to September 1997, basic regulations governing licensing exemptions and bans were changed no fewer than 25 times. This created severe impediments to market entry and investment, with private firms understandably viewing any favorable policy change as temporary.

As direct control mechanisms used under central planning were reduced during the 1990s, there was a tendency to use trade policy for very detailed, short-term intervention aimed at micro-managing domestic supplies and prices. Instruments for implementation of this policy included automatic and non-automatic licenses (import and export); export quotas, taxes and bans; minimum import and export prices; and duty free import quotas.

Pricing and trade policy during the transition was driven by a preoccupation with providing low-priced domestically produced food for the urban population. The

mechanism for implementing this policy—the “material balances” approach—in some important respects resembled that of central planning. Prices of important food products were set by the Government. Domestic consumption was estimated, and at a time when the forthcoming harvest could be forecast, the projected domestic consumption was compared to the quantity to be harvested. Any excess of supply over consumption was considered surplus to be sold abroad. Export licenses could then be issued up to this quantity. If it appeared that there would be deficit that would need to be met with relatively high-cost imports, the Government would sometimes issue licenses for duty-free imports, within a quota equal to the size of the projected deficit. Trade controls were reinforced by price controls. While the formal price control apparatus went through a number of changes—in products covered as well as in mechanics of operation—between 1989 and 1996, the goal was always to keep food prices low, and so agricultural products were always among the products covered. Products which were not expected to be in short supply were monitored through the “automatic licensing” regime, which was less burdensome than the “non-automatic licensing”, but which nonetheless served as the means by which the government would collect information to decide if and when products should be transferred back to the non-automatic licensing regime.

Producer prices of the major crops were held by this system at levels far below those that could have been received in a liberal trading environment. A World Bank mission conservatively estimated that price and export controls and taxes on wheat alone cost farmers US\$457 million in the 3-year period from 1994-96. The large gap between world and domestic prices also generated huge incentives to evade the export controls, and led to extensive corruption and illegal exports.

In 1996, the effects of these policy problems combined with poor weather to produce a dramatic fall in production, particularly of grains, production of which fell by almost 50% (compared to 1995). The harvest shortfall produced a domestic grain shortage, which was exacerbated by widespread illegal exports. This was one facet of the generalized economic chaos that led to the downfall of the socialist party government at that time. Fear of a repetition of these shortages shaped the early policies of the current government.

Since the crisis, the Government has made steady progress in liberalizing trade in agricultural products. All licensing requirements (automatic and non-automatic) for exports and imports of agricultural products and livestock have now been removed, with the exception of wood¹. The Government has also discontinued the practice of allowing duty-free imports within quotas of food items projected by the “material balances” calculations to be in temporary short supply. Elimination of the automatic licensing regime is significant because it lends credibility to the Government’s commitment not to undertake ad hoc interventions as in the past. Without the information from the license applications, the Government will not be able to monitor *ex ante*² trade in these items.

¹ It makes sense to maintain controls on wood exports as a conservation measure for a natural resource with uncertain ownership rights until clear ownership is established or a stumpage fee system can be put in place.

² Of course, the Government will still receive the same statistical information on trade flows on these items as it receives for other products from Customs data.

This will in turn reduce the ability—and temptation—to micro-manage. This credible commitment will reassure farmers and traders that they can make decisions based on market fundamentals, without worrying about ad hoc changes in trade policy.

The export taxes that were imposed on grains and oilseeds when they were removed from the non-automatic licensing regime have now been phased out. In addition, other long-standing export taxes (wool, hides and skins and live animals) have been removed. Thus, no export taxes remain on agricultural products, consistent with the Government's commitment to develop an open, export-oriented economy. The Government has also abolished the contract pricing system, which was the last vestige of price controls, so prices are now freely determined between buyers and sellers in the market.

The Government has also taken steps to expand farmers' access to imported inputs. One such step is the reduction of the tariff on fertilizer imports (formerly 40%) to 35%. Fertilizer imports, 249,000 tons in 1992, fell to around 33,000 tons in 1995 and 39,000 tons in 1996. While there are inconsistent data on total fertilizer use, it is clear that use has fallen significantly during the 1990s. Fertilizer prices in Bulgaria have been very high. While there are multiple causes of the high price of fertilizer and reductions in its use and imports, the 40% tariff has certainly been a contributing factor, so its reduction will provide significant benefits for farmers. The Government has also committed itself to further reductions in the tariff to 25% in January 2001 and 20% in 2002.

The Government is also amending its seed laws and regulations, which have until now required that before being imported, varieties had to first be submitted for MAFAR approval ("registration"), which required lengthy testing. This is a common requirement among developing countries, based mainly on a paternalistic assumption that farmers are not capable of making good decisions on their own as to which varieties they should plant. There is now considerable evidence from countries that have reformed seed laws that this assumption is incorrect, and that in fact these reforms allow farmers access to technology that they would otherwise be denied. (This was demonstrated most recently in Romania, where the Government adopted the EU's Common Catalogue of Seeds under the ASAL, with good results.) The Council of Ministers of Bulgaria has now submitted legislation to the National Assembly to allow automatic registration in the country of all seed varieties in the EU Common Catalogue of Seeds.³ This is both a step toward accession and a step which will have salutary effects on productivity. While this legislation is pending in the National Assembly, the Council of Ministers has passed an ordinance with the same effect, which will allow farmers to take immediate advantage of the changed policy.

³ Under the EU system, any variety tested and approved for one country is normally automatically accepted in all the other EU countries. Thus, farmers in each country have access to a tremendous range of varieties in the Common Catalogue. Even this system is somewhat restrictive relative to the system used in the U.S. and India, among others. In these countries, varieties do not have to be approved by the government to be sold, so farmers have access to an even wider assortment of varieties than do farmers in the EU. However, for countries which will in the near future accede to the EU, it makes more sense to adopt the EU system.

Bulgaria joined the World Trade Organization on January 1, 1997. Its levels of bound tariffs on agricultural products are in general rather high, relative to those of other CEECs (comparable to Poland and Slovenia, but below those of Romania, according to an Organization for Economic Cooperation and Development (OECD) evaluation of bound tariff rates) and those of developed countries, including the EU. Applied Bulgarian agricultural tariffs are high in comparison to those on industrial imports, though close to those in the EU. For primary agricultural production, current tariffs on an import weighted basis are 24%, or twice the level obtaining for industrial tariffs. (This is higher than the Czech and Slovak Republics and Slovenia, though lower than Hungary, Poland, and Romania.) The highest protection among primary products is afforded to meats (especially poultry), vegetables and fruit. Among processed food products, protection is very high for vinegar, dairy products, fermented beverages and alcohol, frozen and preserved vegetables, meat preparation, sugar, chocolate, and vegetable oils. The tariff schedule shows a strong cascading pattern, with higher tariffs on finished and processed products than on primary products. One implication of cascading is the higher protection it affords to domestic processors, relative to primary producers.

Intervention on the Tobacco Market

Tobacco is the only agricultural product in which the government still intervenes extensively and directly. Tobacco is a sensitive crop for Bulgaria because of the number of farmers employed in its cultivation, the tolerance of tobacco for less fertile lands, and the share of tobacco in exports. The area under tobacco occupies about 3% of total arable land in Bulgaria. In 1996-1997 tobacco exports accounted for 40% of the value of total agricultural exports.

The agricultural policy in the tobacco subsector in Bulgaria is implemented according to the Law on Tobacco and Tobacco Products. By this law a legal entity under MAF is established—Fund Tobacco—with the tasks to ensure the implementation of the state policy in this subsector. Its main activities are related to regulating production and trade in tobacco as well as preparing the national strategy for the development of the subsector. The Fund keeps a national register of all tobacco producers in Bulgaria with the production quotas, the actual output, and the necessary data for opening bank accounts (premiums are paid through bank transfer to bank accounts administratively open by the Fund). In the register, there are 225 legal entities and 75,000 physical entities.

Tobacco Fund supports the registered tobacco producers by paying a cash premium and providing tobacco seeds free of charge. The premium is set as a percent of the minimum purchase price. The value of the premium is approved by the Council of Ministers. The aim of the policy of support is to regulate the quantities produced according to the domestic and international demand as well as the implementation of the social policy in the regions where tobacco growing is the main source of income. The allocation of quotas for tobacco production by size and producers is done by the municipalities following a number of criteria:

- persons, associations and cooperatives whose income is only from tobacco production;
- families with numerous children, socially vulnerable families who are inhabitants of the settlement;
- people with traditions and experience in tobacco production of not less than 5 years.

For the period 1995-98 the state has disbursed significant premiums (**Table 5**). The purchase prices are set by the Council of Ministers every year.

Table 5: Tobacco Premium Disbursements 1995-1998
(thousand leva)

Type of subsidy	1995	1996	1997	1998
Supply of tobacco seeds free of charge	76,362	1,614	181,633	370,867
Price premiums paid to producers	-	2,061,361	3,044,209	321,069
Total value	76,362	2,062,975	3,225,842	691,936

Agricultural Support System

Since 1997, the agricultural support system has evolved from one in which prices were administratively determined and protection or taxation levels for individual products were set according to non-economic and non-transparent criteria, to a system of minimal government intervention, with the exception of the tobacco sub-sector. Prices are closely connected to world prices, and support is for the most part provided by transparent border measures. Although there has been, in recent years, some direct government intervention of a kind not consistent with a developed market economy (e.g., loans to farmers which were required to be repaid in commodities delivered to state agencies), this has now ceased. Thus with respect to these pricing and trade policies, the Bulgarian system is now consistent with a market economy. (As noted below, the other major mechanism for support—credit subsidies—are not consistent and will need to be phased out on the road to accession.) Unlike in many other transition economies, which still need to reform their non-transparent administrative mechanisms and direct government procurement which are used to determine prices, the primary remaining policy issues in Bulgaria are related to the levels of support, and the path of harmonization with the CAP. The following sections address these questions.

Levels of Protection for Main Agricultural Activities

In order to analyze the current level of protection for agricultural production in Bulgaria, the protection indicators used in contemporary agriculture policy analysis were applied to twelve major agricultural activities. For more information about these indicators see **Box 1**. The methodology used to calculate these indicators is described in **Annex 1**. The selected plant production activities are wheat, barley, maize, sunflower

seeds, tomatoes, potatoes, and grapes. Production of milk, beef, pork, poultry, and eggs has been selected as livestock production activities. For the computation of NRPs and ERPs, wheat, barley, maize, sunflower and poultry meat are considered as exportables, while the other commodities were considered as importables. Table 6 summarizes the main results of these computations.

Box 1: Measures of Protection

The *Nominal Rate of Protection (NRP)* is the simplest and easiest measurable indicator of price distortions. It serves as a summary indicator for all actions with regard to taxation and subsidization, causing domestic and border prices (which represent the value to society—the “social price”) to differ from each other. Thus, it can be used to identify (dis-)incentives to local producers. It is computed on the basis of the ratio of the domestic price (p_i^D) of a tradable commodity i to its border price equivalent (p_i^B):

$$NRP_i \text{ in } \% = \left(\frac{p_i^D}{p_i^B} - 1 \right) * 100$$

Thus,

- if $NRP > 0\%$, the actual market price is above the social price, implying an implicit protection of producers and taxation of consumers.
- if $NRP < 0\%$, the actual market price is lower than the social price, implying an implicit taxation of producers and subsidization of consumers;
- if $NRP = 0\%$, the coefficient implies a neutral structure of protection.

The *Effective Rate of Protection (ERP)* is an extension to the nominal protection concept. This extension includes the combined effects of price distortions on output and input markets. Because it is conceivable, for instance, that domestic prices on output markets are implicitly taxed, but input use is implicitly subsidized, the effective protection concept measures the aggregate impact of all underlying influences on the producer (production factors). The ERP is computed on basis of the ratio of value-added in the production of i measured at domestic prices (VA_i^D) over such value-added at border prices (VA_i^B) (the coefficient a_{ij} is a technical coefficient, indicating the level of the use of the intermediate factor j per unit of production of output i):

$$ERP_i \text{ in } \% = \left(\frac{VA_i^D}{VA_i^B} - 1 \right) * 100 = \left(\frac{p_i^D - \sum_j a_{ij} p_j^D}{p_i^B - \sum_j a_{ij} p_j^B} - 1 \right) * 100,$$

Thus,

- if $ERP > 0\%$, it implies a direct protection of domestic producers of the commodity i . This results in positive incentives for producers of the commodity, since they receive higher returns on their resources.
- if $ERP < 0\%$, it implies underlying disincentives to domestic producers of the commodity i . Domestic producers will only remain in the activity if they produce more efficiently than foreign producers.
- if $ERP = 0\%$, it implies a neutral structure of net incentives.

In a first step, examining the profile of nominal protection (NRPs), for most of the analyzed main products reveal relatively moderate levels of nominal protection. On average, prices of the analyzed products were found to be implicitly subsidized by 2.1%. NRPs of the threshing crops, which all have been considered as exportables, range from

an implicit subsidization of 8.6% (wheat) to an implicit taxation of 16.2% (sunflower). The vegetable products, potatoes and tomatoes, were found to be implicitly taxed at 5.4% and 12.0%, respectively.

Comparing domestic prices for livestock products to their border price equivalents shows that meat products are implicitly taxed at relatively low levels (NRPs for beef: -1.7%, pork: -7.2%, poultry: -8.0%)⁴. The negative NRPs for meat products suggest that consumers benefit from relatively lower prices for these three products. They are taxed with higher prices for the livestock products eggs and especially milk. The price of milk was identified as the most striking case of implicit subsidization to primary producers. The estimate of nominal protection of 32.7% for milk suggests high levels of price interventions⁵.

In order to examine the impact on farmers' income of the complete set of all existing market influences, the nominal protection of (potentially) purchased intermediary inputs to agriculture was computed⁶. On average, the nominal protection of intermediary inputs corresponds to an implicit taxation of farmers by 8.8% (see **Table 6 and Figure 16**). Even if this aggregate measure can be classified as relatively moderate, a disaggregated view on the analyzed production activities draws a striking picture. While the NRPs for intermediary inputs for most livestock production indicate an almost neutral or slightly taxing impact on aggregate input costs (NRPs ranging from 3.5% in the case of beef to 9.0% in the case of egg production), NRPs for intermediary inputs in crop production are exceptionally high. With exception of potato production (NRP 0.1) the implicit taxation of aggregate input costs ranges from 21.4% in grape production to 48.6% in production of sunflower seeds.

As an illustration of the components that are incorporated in these implicit taxations, the following provides a closer look on the effects of the separate inputs on input costs of wheat production which are, in aggregate, implicitly taxed by 36.1%. As displayed in **Table 6** the costs of intermediary inputs per ton of wheat amount to 58 BGN. The most important single cost positions are seeds (46% of input costs), mineral fertilizers (25%), and fuel (17%). Another 12% are costs of pesticides, tradable inputs in repair and maintenance, and other direct costs. A comparison of domestic prices of each

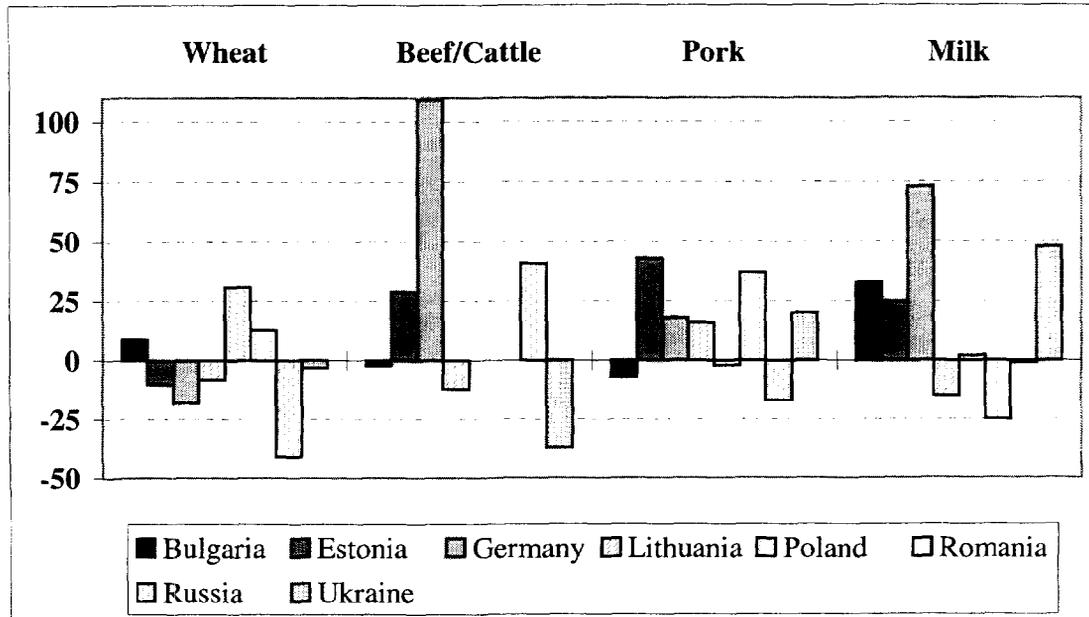
⁴ As all protection measures, these figures should be interpreted as rough indicators of the order of magnitudes and not as exact measures. All activities of meat production are computed on the basis of carcass weight measures and compared to border price equivalents. Especially for the livestock activities this calculation may incorporate high deviations, since the definition of comparators is more difficult than in trades with clearly standardized products. Particularly in the case of beef, the NRP has to be interpreted with caution due to potentially incomplete data on the quality of the traded product. Thus, the NRP for beef should rather be interpreted as 'practically no protection' rather than 'taxation of 2%'.

⁵ As will be shown below in the presentation of the results of divergence separation, this significant NRP is mainly determined by direct policy impacts (70% of total divergence) and only to a minor share by structural effects (30% of total divergence).

⁶ In this context, some words on the 'reverse' interpretation of the NRPs on tradable inputs have to be said. Since Bulgarian farmers are consumers of that input rather than producers, positive NRPs on tradable inputs have to be interpreted as discrimination (implicit taxation) against farmers, whereas negative NRPs indicate a protection of farmers that 'consume' this input or input-mix.

of these inputs with their border price equivalents reveal an implicit taxation of 8.6% for seed, 89.5% for mineral fertilizers⁷, and 119.9% for fuel.

Figure 16: Comparison of Nominal Protection of Selected Agricultural Outputs



Remark: Results for Bulgaria: 1998, other results: 1997.

Source: Valdes (ed.), 1999; Csaki, Valdes and Fock, 1998; Valdes and Kray, 1999; own calculations.

The aggregate impact on the income of primary producers, i.e. its proxy value-added, was computed using the Effective Rate of Protection (ERP) which measures the combined effects of price distortions on output and input markets (see **Box 1**)⁸. **Table 6** and **Figure 15** display the value-added of the analyzed activities at domestic prices vis-à-vis value-added at border price equivalents⁹. For most of the crop production activities value-added accounts for around 65% of gross output value, which is an exceptionally high value compared to other transition economies (where often not even values above 50% can be observed). Livestock activities turned out to generate extremely low relative levels of value-added (around 20% of gross output value). In the two cases of potato and pork production no positive value-added can be generated. Due to the high importance of

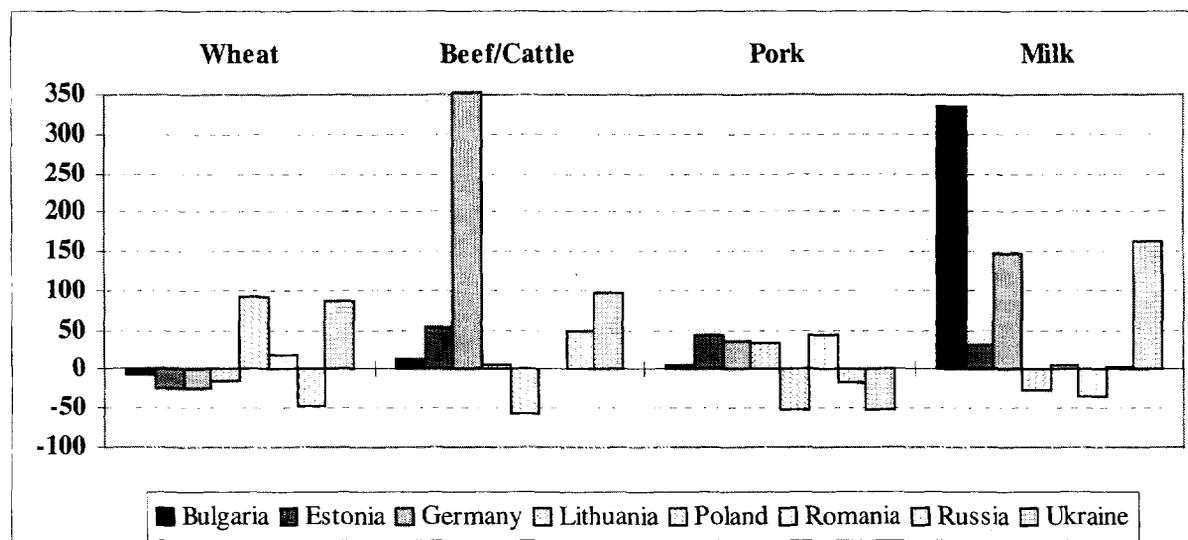
⁷ Weighted average of nitrogenous, phosphorous, and potassium fertilizers. Border price equivalents have been calculated on basis of the most common export/import competing substitute.

⁸ A caveat on the ERP estimates provided here: the available cost structures have not been adjusted for the impact of changes in relative prices of tradable inputs on the input matrix (i.e., fixed coefficient assumption). Such an adjustment is conceptually possible but it is beyond the scope of this study as it requires fairly sophisticated input data and a clear notion of the relevant production function. The consequence of the fixed coefficient assumption is that it could overstate the true input costs.

⁹ While the computations of NRP took only account of the main products (e.g. milk as main product of milk production), the revenue positions in the computation of value-added do also account for byproduct of the farming activities, e.g. in the case of milk production the byproducts 'calves' and 'manure' have been integrated to the calculations.

livestock production for Bulgarian agriculture the weighted share of generated value-added accounts for 33% of gross agricultural output value of the analyzed activities.

Figure 17: Comparison of Effective Protection of Selected Agricultural Activities



Note: Results for Bulgaria: 1998, other results: 1997.

Source: Valdes (ed.), 1999; Csaki, Valdes and Fock, 1998; Valdes and Kray, 1999; own calculations.

As expected, the levels of effective protection are more pronounced (in some cases even adverse) than those of nominal protection. On average the incomes of producers of the analyzed activities are implicitly subsidized by 3.9%, which in fact is twice as high than the average nominal protection. Again, crop production and livestock production show significantly different patterns of protection. Without exception, all crop activities are implicitly taxed – the ones with a negative NRP have a significantly more negative ERP, whereas positive NRPs are more than compensated by the high protection to inputs. Sunflower seed and potato production are the most striking cases where, mainly as a result of the policy regime and market structure, the domestic value-added per ton was approximately 25% and 58% lower, respectively, than it would have been at border equivalence prices. The main reason for the difference between the nominal and the effective rates is the implicit taxation of intermediary input consumption mainly through the domestic level of fertilizer and energy prices.

For all livestock production activities positive ERPs are observable. The positive ERPs for beef, pork, and poultry meat production suggest that actual value-added per ton of carcass weight in 1998 was 13.0%, 7.0%, and 17.1% higher, respectively, than it would have been at border equivalence prices. In principle, the same general interpretation applies to milk production (ERP 336.4%), but the high ERP value requires some additional explanation. **Table 6** shows that value-added at border equivalence prices would be negative (-25.3 BGN/t), whereas it is positive at actual prices. Thus the relatively high ERP value originates from the arithmetic of the computation of the coefficient (see **Box 1**). In addition, the computation depends on adjusting prices for

quality when comparing domestic and border prices, and this adjustment is especially tricky for a product like milk, where the domestic product (fresh milk) is difficult to compare with the traded product, since little fresh milk moves in international trade. Thus, the ERP calculations indicate the correct direction of income changes but the absolute level has to be interpreted with special care. This is also relevant for the interpretation of the ERP of egg production. In this case, value-added at border prices is close to zero, actual value-added (and thus absolute transfers) is relatively low but significantly lower than its reference equivalent¹⁰.

Table 6: Measures of Protection for Major Agricultural Activities, 1998

Indices	Wheat	Barley	Maize	Sunflower	Tomatoes	Potatoes	Grapes
	<i>BGN per ton of main product</i>						
Actual price	135.1	132.0	166.7	366.1	254.0	140.2	634.9
Border equivalence price	124.5	143.8	159.0	436.8	288.5	148.2	620.0
Intermediary inputs, actual prices	58.3	36.8	58.3	80.9	16.6	162.1	111.4
Intermed. inputs, border equiv. prices	42.8	28.1	45.2	54.4	12.4	162.0	91.8
Value-added, actual prices ^c	85.6	102.6	108.4	285.2	237.4	-21.9	523.5
Value-added, border equiv. prices ^c	90.4	123.1	113.8	382.4	276.1	-13.8	528.2
	<i>Percent</i>						
ERP	-5.3	-16.6	-4.8	-25.4	-14.0	-58.4	-0.9
NRP, main product	8.6	-8.2	4.8	-16.2	-12.0	-5.4	2.4
NPR, average, tradable inputs	36.1	30.9	29.1	48.6	34.2	0.1	21.4
Indices	Milk ^a	Beef ^b	Pork ^b	Poultry ^b	Eggs		Total
	<i>BGN per ton of main product</i>						
Actual price	358.4	2,745.5	1,708.3	2,087.8	1,333.3		--
Border equivalence price	270.1	2,792.8	1,840.1	2,269.1	1,167.3		--
Intermediary inputs, actual prices	409.6	2,513.1	2,719.6	1,914.1	1,315.2		--
Intermed. inputs, border equiv. prices	392.3	2,428.7	2,598.8	1,823.1	1,206.8		--
Value-added, actual prices ^c	59.8	804.2	-379.0	1,104.2	205.5		--
Value-added, border equiv. prices ^c	-25.3	711.9	-407.8	943.0	60.6		--
	<i>Percent</i>						
ERP	336.4	13.0	7.0	17.1	239.3		3.9
NRP, main product	32.7	-1.7	-7.2	-8.0	14.2		2.1
NPR, average, tradable inputs	4.4	3.5	4.6	5.0	9.0		8.8

^a cow-milk only ^b (c.w.): all results displayed for carcass weight

^c Value-added is calculated on base of gross output values from main products and, if applicable, from by-products, i.e. value-added differs from 'actual price' minus 'intermediary inputs' by gross output value from by-products.

Source: own calculations.

To better understand the sources of the patterns of protection as they have been presented above, divergences on output prices as well as aggregate effects on value-added have been analyzed by the Divergence Separation Module Approach (DSM; for methodology see **Annex 1**). The DSM results (see **Table 7**) show that the observed

¹⁰ To illustrate this, consider an example where an activity would generate a value-added at border prices of 0.2 BGN/t (very close to zero), but actual value-added accounts to 2.2 BGN/t (which, indeed, still is a very low level). Even if absolute transfers to the producer were only 2.0 BGN/t the calculated ERP would amount to 1000%. The authors of the study are aware of the fact that the deviation of results due to marginal calculation errors (through all the steps of the computation) also is significantly increased in such cases.

aggregate effective protection of 3.9% is the effect of an implicit subsidization of farm incomes by current agricultural policies (19.7% relative to incomes that would prevail at border equivalence prices) that is partially offset by an implicit taxation of farm incomes by structural distortions¹¹ (15.9%). In detail, direct policy effects were observed to induce a 10.2% implicit subsidization of gross output value and a 6.3% implicit taxation of intermediary input costs. Price interventions due to import tariffs on importable commodities are the main factor in these effects. In aggregate, market imperfection and other factors summarized in 'structural distortions' cause farmers' gross output value to decline by 3.6% and cause increased costs of intermediary inputs of approximately 2.4%. As a consequence of these policy and structural effects, farmers' gross output value and their intermediary input costs were higher by 6.6% and 8.8%, respectively, than they would be after removal of all of these divergences.

Table 7: Separation of Divergences for Major Activities, 1998

Indices	Wheat	Barley	Maize	Sunflower	Tomatoes	Potatoes	Grapes
	<i>BGN per ton of main product</i>						
Gross output value distortions	10.7	-11.8	7.7	-70.7	-34.5	-8.0	14.9
o.w. direct policy distortions	-10.4	-10.1	-12.7	-80.0	124.8	26.5	179.2
Structural distortions	21.1	-1.7	20.4	9.3	-159.2	-34.4	-164.2
Intermediary input cost distortions	15.4	8.7	13.2	26.5	4.2	0.1	19.6
o.w. direct policy distortions	5.2	4.8	5.4	13.7	1.1	28.7	12.7
Structural distortions	10.2	3.8	7.7	12.8	3.1	-28.6	7.0
Value-added distortions	-4.8	-20.5	-5.5	-97.2	-38.7	-8.1	-4.7
o.w. direct policy distortions	-15.6	-15.0	-18.1	-93.7	123.6	-2.2	166.5
Structural distortions	10.8	-5.5	12.7	-3.5	-162.3	-5.8	-171.2
	<i>Percent</i>						
ERP	-5.3	-16.6	-4.8	-25.4	-14.0	-58.4	-0.9
o.w. direct policy distortions	-17.2	-12.2	-15.9	-24.5	44.8	-16.1	31.5
Structural distortions	12.0	-4.5	11.1	-0.9	-58.8	-42.2	-32.4
						Total	Total
Indices	Milk ^a	Beef ^b	Pork ^b	Poultry ^b	Eggs	(abs.)	(rel.)
	<i>BGN per ton of main product</i>						
Gross output value distortions	102.4	176.7	149.6	252.2	253.3	24.4	6.6
o.w. direct policy distortions	74.8	558.0	587.8	28.9	42.8	37.7	10.2
Structural distortions	27.6	-381.2	-438.3	223.3	210.5	-13.3	-3.6
Intermediary input cost distortions	17.3	84.4	120.8	91.0	108.4	19.8	8.8
o.w. direct policy distortions	15.5	76.7	117.0	88.5	85.3	14.3	6.3
Structural distortions	1.8	7.7	3.8	2.5	23.1	5.5	2.4
Value-added distortions	85.1	92.4	28.7	161.2	145.0	4.6	3.9
o.w. direct policy distortions	59.3	481.3	470.8	-59.7	-42.5	23.5	19.7
Structural distortions	25.8	-389.0	-442.1	220.8	187.4	-18.8	-15.8
	<i>Percent</i>						
ERP	336.4	13.0	7.0	17.1	239.3		3.9
o.w. direct policy distortions	234.2	67.6	115.5	-6.3	-70.1		19.7
Structural distortions	102.1	-54.6	-108.4	23.4	309.4		-15.8

^a cow-milk only ^b (c.w.): all results displayed for carcass weight

Source: own calculations.

¹¹ As explained earlier in this study 'structural distortion' is a residual value that incorporates the aggregate effect of market imperfections, spillover effects of other policies, imperfect effect shifts to primary producers, and, of course, potentially existing statistical data errors.

Comparing Bulgaria's Agricultural Policy with that of the EU

Integration into the EU is one of Bulgaria's key foreign policy priorities, founded on a broad consensus of the political forces and in the society and officially declared to be without alternative for modern Bulgaria¹². This far-reaching strategic objective creates a momentum for structural reforms prior to a membership to the EU and will have to cover all sectors of the national economy. As a substantial part of this strategy Bulgaria's agricultural policy will gradually have to adopt a policy and institutional framework compatible with the *Common Agricultural Policy of the EU* (CAP). However, EU agricultural policies are also evolving so that CAP at the time of Bulgaria's accession to the EU will probably differ from today's CAP as well as from the CAP framework to be created under the provisions of Agenda 2000 reforms. As part of the process of identifying plausible policy scenarios at the time of Bulgaria's integration into the EU, the following subsections present an outline of the market regulations under the CAP today and under the CAP modified by the Agenda 2000.

The Common Agricultural Policy of the EU

The Common Agricultural Policy of the EU is one of the most important Union policies and is, as indicated by the term 'common policy', a matter reserved exclusively for the Community¹³. Since its creation in 1962 the provisions of the CAP never have been a static framework. In the early 1980s, as a result of the decline in the agricultural sector and the high budgetary cost, the imbalance between supply and demand in European and international markets and a proliferation of unilateral, bilateral and multilateral activities by the Community (a consequence of preferential agreements with third countries), the Community set up a framework for a series of reforms of the CAP. This reform may be divided into three phases: a first phase before the European Council of February 1988 adopting a series of decisions based on the documents COM(83)500 and COM(85)333 (the *Green Paper*); a second phase, in which the Commission Communication on 'the Development and Future of the CAP' was submitted to the Council; and a third phase starting with the Council meeting of May 1992 (*McSharry Reform*). In the first two phases the changes introduced were of two basic kinds: (a) restrictive measures applying to the prices and mechanisms under the COMs to help stabilize markets, and (b) structural measures both to compensate farmers for the repercussions of the first measures and to reduce production. The third phase of the reform involves a radical change in the support system for Community agriculture, since a system of compensation payments or direct income support replaces the support scheme based on guarantee prices. Agenda 2000 envisions a fourth phase in reform of the CAP, marked by the forthcoming accession of the CEECs and the forthcoming revision of the WTO agreements. It can be characterized as a further development of the 1992 reform rather than a turnaround towards full market liberalization. It further develops the replacement of guaranteed prices with direct income support in the main 'continental'

¹² Republic of Bulgaria, 1998b, p.1.

¹³ The provisions relating to the CAP are laid out in the *Treaty on Establishing the European Community* (*Treaty of Amsterdam*), Articles 32 (ex Article 38 of Treaty of Rome) to 38 (ex 46) (see European Union, 1997a). The products subject to the provision of Articles 33 to 38 are listed in Annex I to this Treaty.

sectors (herbaceous plants, beefmeat, milk), supplemented by reforms in the various 'Mediterranean' sectors (olive oil, tobacco, wine) or in the peripheral regions (bananas)¹⁴. Moreover, compensation in the form of direct payments to primary producers is to be organized in a different way compared to the previous regulations, namely via decentralization by partially integrating compensatory payments into national envelopes, financed entirely by the EAGGF Guarantee Section and distributed according to the size of national agricultural production.

Within the CAP framework, the *Common Organizations of Market* (COMs) always have been the basic instrument, used to manage agricultural production and to stabilize markets according to the declared objectives of the CAP¹⁵. The COMs are based on three main principles¹⁶ of:

- * *a unified market*, i.e. free movement of farm products between Member States;
- * *Community preference*, i.e. preferential treatment of goods produced in the Union, being of declining relevance as a result of multi- and bilateral agreements and unilateral concessions; and
- * *financial solidarity*, i.e. CAP spending must be borne by the Community budget.

COMs were gradually introduced and now cover most EU agricultural products¹⁷, accounting for 90% of the final agricultural output of the Community. Having gone through the major price support reforms of 1984, 1988, and 1992 and after the agricultural agreements of the Uruguay Round, the current CAP has focused on gradually reducing institutional prices, reducing the influence of intervention and consolidating direct aids as the basic support mechanism¹⁸. Supplementary measures like production quotas, guaranteed maximum quantities, and set-aside obligations aim on a control of supply. The current design of the COMs can be classified in five categories¹⁹:

- * **COMs with guarantee prices and direct aids to complement production**
Applied to cereals, beef, rice, sheepmeat, olive oil, bananas and milk (from 2003), which account for one third of final Community agricultural production. This type

¹⁴ See European Parliament, 1999.

¹⁵ Objectives of the CAP according to Article 33 (ex 39) of the Treaty on EC are (a) to increase agricultural productivity, (b) to ensure a fair standard of living for the agricultural community, (c) to stabilize markets, (d) to ensure the availability of supplies, and (e) to ensure that supplies reach consumers at reasonable prices. To attain these objectives, Article 34 (ex 40) provides for the establishment of a common organization of agricultural markets. This organization shall take, depending on the product concerned the form of common rules of competition, a compulsory coordination of the various national market organizations, or a European market organization. The organization may include all measures required to attain the objectives set out in Article 33, in particular regulation of prices, aids for the production and marketing of the various products, storage and carryover arrangements and common machinery for stabilizing imports or exports.

¹⁶ See European Parliament, 1999.

¹⁷ With the only major exceptions being alcohol and potatoes.

¹⁸ For COMs that provide for support to be granted to farmers in the form of direct payments Council Regulation (EC) No 1259/1999 of 17 May 1999 establishes common rules for direct support schemes under the common agricultural policy.

¹⁹ See European Parliament, 1999.

of COM has become more important as a result of the CAP reform packages adopted in 1992 and 1999.

* **COMs with automatic intervention**

Applied to sugar and dairy products, affecting just over one fifth of Community final production. This type of COM also involves minimum or guarantee prices paid to farmers by public intervention agencies in exchange for delivery of their products, where market prices are too low. Prior to 1992, this type of COM was the one most characteristic of the CAP.

* **COMs with conditional intervention**

Applied to wine, pigmeat and some fresh fruit and vegetables, affecting approximately one fifth of Community final production. These COMs also involve a guarantee price scheme, although it is applicable only in the event of a serious market crisis. The European Commission decides whether such a crisis exists.

* **COMs with direct production aids only**

Applied to oilseeds, protein crops, feeding stuffs, tobacco, textiles, peas and beans, hops and processed fruit and vegetables (approximately 10% of Community final production). Production aids are granted at a flat rate or proportional to the quantities produced or yields.

* **COMs without direct production support**

Applied to poultry, eggs, processed agricultural products, flowers and plants, some fresh fruit and vegetables and other marginal products. These products receive only customs protection.

Annex 2 briefly outlines the COMs applied to the main EU agricultural product markets under both current CAP provisions and the Agenda 2000 reform framework²⁰.

Current Bulgarian Agricultural Policy Framework vis-à-vis the Common Agricultural Policy

In evaluating the Bulgarian agricultural policy framework relative to that of the EU, three questions are relevant: 1) does Bulgaria have policies which are inconsistent with those of a market economy?; 2) how do support levels compare to those under the CAP, and does this present a problem for the economy, or an obstacle for accession?; and 3) what changes are needed in existing institutions to enable Bulgaria to implement the CAP?

The pricing and trade policies currently being followed by the Government are consistent with a developed market economy. While some actions are needed to complete the reform agenda in this area (see below), the policy instruments are generally transparent and allow the market to function normally. The exceptions to this are the tobacco regime, and the credit subsidies, which are in any case being reduced under the Government's current plans, and should be phased out during the pre-accession period.

²⁰ If not otherwise indicated, the information on COMs been derived from European Commission, 1999d and 1999e; European Council, 1999a; European Parliament, 1999; Csaki, Valdes, Fock, 1998; and Valdes, Kray, 1999.

With respect to support levels, Bulgaria currently has an aggregate level of support for agricultural production which is quite low compared to the EU and to many of its regional neighbors. It is part of a sensible macroeconomic policy framework that has been the cornerstone for Bulgaria's economic recovery from the depths of the 1996-97 crisis. In evaluating this policy, it should also be kept in mind that, first, in the past, some farmers—especially grain producers—were heavily discriminated against, as grain prices were kept artificially low by administered prices and export taxes and controls. These farmers are now better off than they were under the previous policy regime. Second, subsidies to farmers, if not paid directly from the budget, would harm consumers, which already are faced by increasing food prices. It is also important to recognize that this current low level of support will ease the adjustment to the CAP framework, regardless of what the CAP policies are at the time of accession. Farmers will be able to adjust more easily to higher levels of support—if CAP levels indeed turn out to be higher at accession—than they would be able to adjust to lower levels, if support in Bulgaria were increased now and then had to be reduced to harmonize with the CAP as it evolved in the pre-accession period. For these reasons, the current support level should not be an obstacle for Bulgaria's accession; on the contrary, this will facilitate the adjustment. The evolution of commodity-specific policies in Bulgaria is outlined in **Annex 3**, with a description of the current framework for the major commodities.

It is in the area of institutional development that Bulgaria has relatively far to go to be in a position to implement the CAP. While the institutional framework is addressed in greater detail later in this paper, it should be mentioned here that both public institutions and private institutions will need to be developed. These include farmer organizations, wholesale channels (through which intervention is carried out under the CAP), and a comprehensive farmer and animal registration system to allow the delivery of direct payments.

The current, relatively low, support levels will force Bulgarian farmers to try to increase their productive efficiency, which is clearly necessary. But they will be able to do so only if given a proper institutional environment, a well-functioning overall economy, and access to investment resources.

Bulgaria's optimal agricultural policy strategy therefore may be to focus on efforts to: (1) complete the adjustment agenda to develop a functional market economy; (2) move to a second stage of institutional reform; and (3) structure its pre-accession strategy, including investments under the SAPARD program, to ensure that preparation is done properly and expediently, and that available funds are used to best advantage.

Trade and Pricing Policy

In a very short period of time, Bulgaria has progressed from one of the worst trade regimes in the region to one of the most open and less distortive. A few actions are still needed to complete the reform program, including:

- Adhere to the government's announced schedule for reducing fertilizer tariffs (25% in January 2001 and 20% in 2002).

- Pass law to allow for automatic registration for seed varieties in the EU Common Catalogue (currently in Parliament).

In trade and pricing policy, two additional areas need to be addressed. I would also make the following as bullet points: One is the general area of sanitary, veterinary, and phytosanitary licensing requirements for imports and exports, and the associated fee structure. It is clear that such requirements must be in place, but it appears that as they currently exist, they may place an unreasonable burden on importers, exporters, and even on some producers for the domestic market. A further review of these areas is needed to identify how the burden can be reduced while still maintaining the necessary inspections. The second is the tobacco sector, since that is the only area where the Government still significantly intervenes in ways that are not consistent with efficient private sector development. Reduction of distortion in other sectors has increased relative distortions for tobacco. The current policy framework for this sub-sector is also an obstacle to EU accession.

In the medium term, Bulgaria will have to make decisions with regard to harmonization of its trade policy with that of the EU. In agriculture, this will revolve mainly around the question of when to adopt the trade measures (tariffs and export subsidies) of the CAP. The section of this report with detailed simulations of the results of different options for harmonizing with the CAP shows the costs and benefits to different groups of each option. One clear conclusion from that exercise is that rapid implementation of CAP mechanisms would have very high costs for both Bulgarian consumers and taxpayers. For this and other reasons, it would be difficult for Bulgaria to activate these mechanisms before accession. Instead, Bulgaria could place its emphasis on setting up institutions that will be required for CAP implementation, leaving the trade policy and price support measures until the time of accession. However, reforms in trade policy for agricultural inputs could be highly beneficial for Bulgarian farmers. As shown by the effective protection measures, high prices for inputs are taxing Bulgarian farmers. Tariffs on these should be reduced, which would in general also bring them more in line with those of the EU.

Rural Finance and Credit Policy

Availability of investment capital continues to be a constraint on the ability of agricultural and agroindustrial producers to restructure and improve competitiveness. While anecdotal evidence suggests that there may be some marginal improvements in credit access compared to past years, it is clearly not sufficient. Banks continue to demand high collateral (both because of the very stringent prudential regulations they face and because they view agriculture as a risky sector in which they have little expertise), and farmers continue to be reluctant to mortgage their homes, which is the only kind of collateral they have which banks would consider acceptable. Investment credit lines of SFA are not used because banks are not willing to make what they consider small, high-risk loans for the small margin on these lines. The government should focus on getting farmers some liquidity for investment capital, but in a way that will attract, not crowd out, lending by the commercial banks and other forms of financing. The priority actions should be:

- Adhere to announced timetable for phasing out SFA short-term credit lines.
- Shift emphasis from direct long-term credit to partial risk guarantees in SFA credit lines.
- Require that risk evaluation of investment projects supported by SFA be exclusively done by commercial banks.
- Make agroindustrial investments eligible for SFA credit and guarantees. (These are the borrowers with collateral that the banks might find acceptable, that is, their plant and equipment. Helping agroindustry to recover is a crucial step to help producers. This action would require amending the Law on Support for Agricultural Producers.)
- Pass an appropriate law on Credit Coops.
- Allow SFA funds to be channeled through Credit Coops.
- Restructure SFA as the paying agency for SAPARD funds (currently underway).
- Pay banks a fixed fee for SFA loans, the size of which would be the same no matter what the size of the loan. (This would cover their fixed costs and remove the current disincentive to even consider small loans.)
- Improve legal environment for collateral in secured transactions and mortgages.
- Improve legal environment for equipment and machinery leasing.

In rural finance, the medium term goal should be to integrate agricultural credit into the general finance system, rather than relying only on specialized institutions. There should, of course, be institutions that specialize in agricultural lending, but their agricultural focus would be the result of their special skills and comparative advantage in this type of lending; there would be no institutions like the current SFA which are run by the Government exclusively for one sector. Before accession, the role of the SFA will need to be completely changed, so that it is no longer a conduit for credit subsidies.

II. ADJUSTING BULGARIAN AGRICULTURAL POLICIES TO THE EU'S CAP

ALTERNATIVE AGRICULTURAL POLICY OPTIONS FOR BULGARIA

The assumption is that, as a new entrant, Bulgaria will have to adjust to the EU, accepting the full body of the existing legislation and policies in the EU. Accession negotiations will therefore focus on the speed and method by which Bulgaria has to adopt the EU legislation. However, agricultural policy in the EU is also evolving beyond the changes introduced under the so-called McSharry reform and Agenda 2000. Current prices in the EU are not necessarily a good benchmark for price alignment. The pressure for reform in the CAP will probably become even stronger if the WTO negotiations on agriculture will take place, and due to the approaching time for EU enlargement. Therefore, the EU agricultural policy at the time of accession has to be seen as a "moving target" which depends on a number of still open questions.

Some words have to be said about the limitations and various considerations to implement EU agricultural policy scenarios:

- A rapid alignment would push food prices upward, reducing consumer's real income, particularly for those who spend a relative high share of their income on food. By how much, is an empirical question we examine below.
- Moreover, higher farm gate prices would imply higher prices for raw materials for the agro-processing industry in Bulgaria, which would force the processing industry to absorb these higher prices through lower processing and marketing margins. This phenomenon could greatly reduce the prospects of modernization and restructuring of the agro-processing industry.
- Rapid alignment to CAP prices would probably result in surplus production, which could not be exported without export subsidies, and - before membership - such exports are to be financed by Bulgaria's government budget.
- Bulgaria is bound by trade agreements with several countries. It has a free trade agreement with CEFTA countries which includes agriculture. Most important, due to the Europe Agreement, Bulgaria is very restricted in imposing tariffs against the EU.

To the extent that current supply control policy in the EU continues for some products (production quotas for sugar and milk, acreage for compensation payments and set-aside requirements in grains), will the level of allowed production continue to be based on a past reference period? If so, this gives the (wrong) incentives to new entrants to expand their production before accession so that it gives them a higher production base for receiving compensation payments and production rights. Presumably the EU and the new entrants will find an agreement on a method for establishing base numbers that do not induce such artificial output expansion before accession.

Consequently, it would be difficult, if not impossible, to implement a rapid price adjustment with the CAP in Bulgaria. For importables, the restriction to impose extremely high tariffs (due to WTO) and to impose tariffs against certain trading partners at all (due to trade agreements) might fail to implement full EU price support. For exportables, the prohibition of export subsidies will restrict the support of domestic prices. This applies above all for dairy products. A possible solution would be to do the same as has been done in the EU and implement a quota regime. This, however, would be administratively very costly to implement¹ and possibly a critical mistake from a strategic point of view, in the sense that Bulgaria loses competitiveness in many agricultural products.

DERIVING AGRICULTURAL POLICY OPTIONS

The task of deriving future agricultural policy option for Bulgaria on its way to EU accession would have been considerably easier if one could anticipate more precisely what EU agricultural policies will be at the time of Bulgaria's accession. To answer this question with sufficient certainty, a simulation approach was used to analyze the potential impacts the most relevant policy options for Bulgaria to consider for the pre-accession period. Considering the likely evolution of EU agricultural policy as discussed above and considering the current trade regime prevailing in Bulgaria, the following policy scenarios have been chosen to this pre-accession analysis (in no particular order of importance):

- Scenario A:** **Bulgaria keeps its current liberal trade and market policy** (this scenario will also be referred to as '*base-period scenario*').
- Scenario B₁:** **(Rapid) Partial adoption of current CAP, without** compensatory payments: Under this extreme scenario, Bulgaria adopts the current CAP (1999/2000 regulations) within a short period of time, but without introducing the compensatory payment schemes.
- Scenario B₂:** **(Rapid) Complete adoption of current CAP, including** compensatory payments: Basically similar to Scenario B₁, but including introduction of compensatory payment schemes equal to those currently applied in the EU.
- Scenario C₁:** **Partial adoption of CAP Agenda 2000, without** compensatory payments: Under this scenario, Bulgaria rapidly adopts the final price levels projected in Agenda 2000 for output levels assumed to be eligible under future CAP regulations. This scenario explicitly excludes the system of compensatory payments on a per hectare or per head base.
- Scenario C₂:** **Complete adoption of Agenda 2000, including** compensatory payments: Basically similar to Scenario C₁, but including introduction of compensatory payment schemes equal to those currently applied in the EU.
- Scenario D:** **Complete removal of current divergences** (this scenario will also be referred to as '*non-intervention scenario*' or '*reference scenario*'): This reference scenario, which sets NRPs to zero, is close to a free trade

¹ Although countries like Hungary or Slovakia have a law on introducing a milk quota, no such instrument works effectively in any CEEC.

scenario. It provides an order of magnitude of the effects of the current trade regime in Bulgaria.

As a new member of the European Union, we assume that Bulgaria will have to adopt the full body of the relevant existing EU legislation and policies under the current CAP regime (Scenarios B_{1/2}) or that of CAP Agenda 2000 (Scenario C_{1/2}). As outlined above, we restrict our analysis to the set of agricultural and trade policies that are currently applied (Scenarios B_{1/2}), or projected to be implemented from the 2000/01 marketing year on (Scenario C_{1/2}). Moreover, the authors of the study are aware of the fact, that, at the time of Bulgaria's accession, new developments in the EU policy framework could have significantly modified the agricultural policy regime, which is well defined by the expression of "hitting a moving target".

It can be stated without regarding the quantitative results of this study, that a rapid alignment of Bulgaria to the current CAP (Scenarios B_{1/2}) would lead to a substantial increase in domestic farm prices. This phenomenon implies higher prices for raw materials for the agro-processing industry, forcing these industries to adjust, presumably in the direction of reducing processing and marketing margins (unless border protection for their own products is also increased). A consequence of this process would be a further decline in their –currently already very low– export potential as they become less competitive in international markets. Furthermore, higher farm prices would also lead to an increase in food prices, consequently reducing the real income of Bulgarian consumers, who already spend a very high share of their income on food (above 60% for low and middle income households).

Another consequence of higher farm prices is the likely increase of export surpluses of farm products that is already a heavy burden for Bulgarian markets at currently prevailing market conditions. Assuming Bulgaria would align to CAP policies before EU accession takes place, Bulgaria would, on one hand, be faced with the prospect of having to offer export subsidies, and this, of course, would have adverse fiscal implications. On the other hand, adjustments to Bulgaria's foreign trade regime are bound by trade agreements with neighboring countries (CEFTA) and restricted by Bulgaria's WTO membership.

Under the current CAP regime in the EU, and also under the future provisions of Agenda 2000, compensatory payments are bound to "historical reference yields" (see explanation above). Furthermore, the current CAP includes livestock limitations (max. 90 livestock units per holding are eligible for direct payments). In addition, the production of some products (e.g., milk, sugar, suckler cows, wine) is subject to quota limitations. The EU and potential entrants like Bulgaria would have to agree fairly soon on future levels of reference yields and quotas, if these are to apply to the accession candidates. Any further delay in determining these future procedures enhances the motivation for candidates to expand current production in order to establish a higher base for compensation and production rights.

SIMULATION OF AGRICULTURAL POLICY SCENARIOS

For the twelve activities selected (wheat, barley, maize, sunflower seeds, tomatoes, potatoes, grapes, milk, beef, pork, poultry, and eggs) the simulation approach identifies and quantifies the potential impact under each scenario on producers' value added (farm income), consumers' real income, and on the state budget.

Table 8: Summary of Simulation of Effects under Policy Scenarios

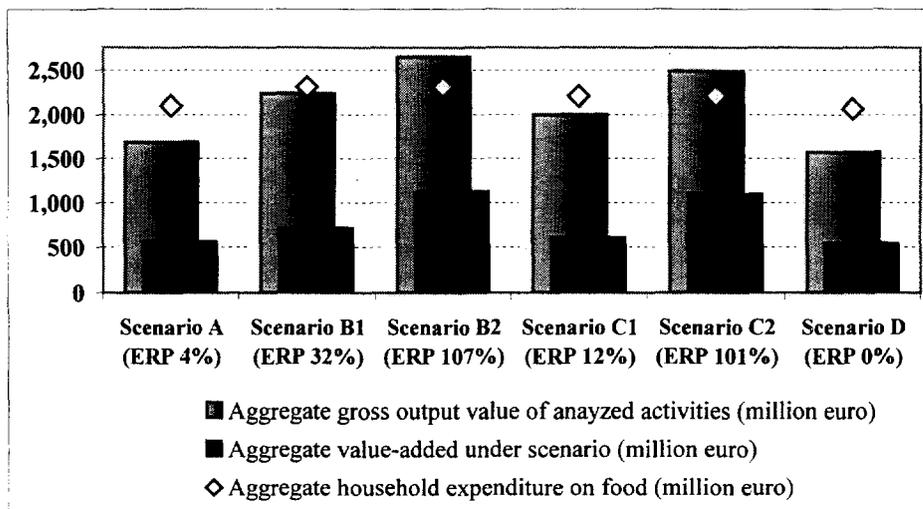
		Scenario					
		A	B ₁	B ₂	C ₁	C ₂	D
		Current policies	CAP, excl. dir. paym.	CAP, incl. dir. paym.	A2000, excl. dir. paym.	A2000, incl. dir. paym.	Non-Intervention
Agricultural producers							
NRP, main products ^{a,b}	percent	2.1	38.2	38.2	22.8	22.8	0.0
Gross output value ^a	million €	1,686.6	2,242.3	2,651.7	2,006.4	2,491.0	1,575.1
VA at domestic prices ^a	million €	565.3	717.1	1,126.5	608.0	1,092.7	544.1
VA at border equiv. prices ^a	million €	544.1	544.1	544.1	544.1	544.1	544.1
ERP ^{a,b}	percent	3.9	31.8	107.0	11.7	100.8	0.0
Households							
Expenditure on food ^c	million €	2,104.9	2,312.9		2,210.3		2,067.1
Change in real income	percent	0.0	-5.1		-2.7		1.0

^a aggregate measurement for all analyzed products, ^b aggregate estimate is a weighted average of the product-wise indicators, ^c including non-alcoholic beverages

Source: own calculations.

Table 8 and Figure 18 provide a summary overview on selected results (in euro) obtained from the simulations carried out under the assumptions of the policy scenarios mentioned above. These results will be discussed and interpreted in detail in the following sections of this study.

Figure 18: Selected Results of Simulations of Alternative Policy Scenarios



Source: own calculations.

Producer Income Effects

Table 9 presents the results of the base-period analysis of producer incomes in Bulgarian agriculture. The base-period represents the agricultural policies prevailing during the time of the World Bank mission to Bulgaria (autumn 1999). These policies have been projected on the 1998 price and cost situation, since complete data for 1999 was not yet available at the time of preparation of this report.

Among the several interesting features in **Table 9** it is observable that a ranking of the various activities in terms of their share in total gross output value, which is a common practice, differs significantly from a ranking based on value added. For instance, although total revenue of milk is higher than that of wheat, the latter is a relatively larger sector (in terms of contribution to farm income) than milk. This reflects the differences in the ratio value added to gross output value. It was already mentioned earlier in this study that value added for most of the crop production activities accounts to around 65% of gross output value which is an exceptionally high value compared to other transition economies (where often not even values above 50% can be observed). Livestock activities turned out to generate extremely low relative levels of value added (around 20% of gross output value). In the two cases of potato and pork production no positive value added can be generated. Due to the high importance of livestock production for Bulgarian agriculture the weighted share of generated value added accounts for 33% of gross agricultural output value of the analyzed activities².

An interesting pattern is the comparison of nominal protection of intermediary input costs³ between crop and livestock production activities. Whereas nominal protection of inputs translates to a high implicit taxation for all crop production activities, it only implies a slight implicit taxation for all livestock activities. As mentioned in the context of measurement of current protection, prices for fertilizers and energy being significantly above their border price equivalents were identified as the main reason for the implicit taxation of inputs in crop production. In livestock production, the taxation effect of energy is overcompensated by an implicit subsidization arising from domestic prices for feeding stuff that are well below border price equivalents.

From the analysis of the aggregate effect of farm support policies in Bulgaria as they currently prevail, it can be concluded that farm income is increased (implicitly subsidized) by approximately 10%. Even if the analysis of effective protection for this particular scenario is almost identical with what was presented in the section on measurement of current protection, some issues are worth being recalled.

² Consequently it can be observed that crop production is, compared to livestock production, the larger sector in terms of value added. This illustrates a point made earlier in the discussion of indicators, namely why this study stresses effective rather than nominal protection.

³ As was explained earlier, NRPs for intermediary inputs require a careful interpretation. As usual, positive NRPs indicate an implicit subsidization and negative NRPs an implicit taxation of the producer of the analyzed good. Since the NRPs on tradable *inputs* refers to (potentially) purchased inputs, Bulgarian farmers are consumers of that input rather than producers. Subsequently, positive NRPs on tradable inputs have to be interpreted as discrimination (implicit taxation) against farmers, whereas negative NRPs indicate a protection of farmers that 'consume' this input or input-mix.

As described in more detail in the section of measurement of current protection in Bulgaria, the analysis of different sources of price divergences on Bulgarian markets revealed an aggregate effective protection of 3.9% is the effect of an implicit subsidization of farm incomes by current agricultural policies (19.7% relative to incomes that would prevail at border equivalence prices) that is partially offset by an implicit taxation of farm incomes by structural distortions (15.9%).

Table 9: Simulation of Base-Period Results for Major Activities (Scenario A)

Indices	unit	Wheat	Barley	Maize	Sunflower	Tomatoes	Potatoes	Grapes
Border equivalence price	<i>BGN per ton</i>	124.5	143.8	159.0	436.8	288.5	148.2	620.0
NRP, main products	<i>percent</i>	8.6	-8.2	4.8	-16.2	-12.0	-5.4	2.4
Domestic price	<i>BGN per ton</i>	135.1	132.0	166.7	366.1	254.0	140.2	634.9
Quantity produced	<i>thous. tons</i>	3,203.4	717.1	1,303.4	524.2	489.0	478.3	396.3
Gross output value ^c	<i>million BGN</i>	461.0	100.0	217.3	191.9	124.2	67.1	251.6
Gross output value shares	<i>percent of total</i>	14.0	3.0	6.6	5.8	3.8	2.0	7.6
NRP, intermediary inputs	<i>percent</i>	36.1	30.9	29.1	48.6	34.2	0.1	21.4
Value added ^c	<i>million BGN</i>	274.3	73.6	141.3	149.5	116.1	-10.5	207.5
Value added shares	<i>percent of total</i>	24.8	6.7	12.8	13.5	10.5	-0.9	18.8
ERP	<i>percent</i>	-5.3	-16.6	-4.8	-25.4	-14.0	-58.4	-0.9
Value added at border equiv. ^c	<i>million BGN</i>	289.5	88.3	148.4	200.5	135.0	-6.6	209.3

Indices	unit	Milk ^a	Beef ^b	Pork ^b	Poultry ^b	Eggs	Total
Border equivalence price	<i>BGN per ton</i>	270.1	2,792.8	1,840.1	2,269.1	1,167.3	—
NRP	<i>percent</i>	32.7	-1.7	-7.2	-8.0	14.2	2.1
Domestic price	<i>BGN per ton</i>	358.4	2,745.5	1,708.3	2,087.8	1,333.3	—
Quantity produced	<i>thous. tons</i>	1,287.4	50.0	271.9	107.6	101.4	—
Gross output value ^c	<i>million BGN</i>	604.3	165.9	636.3	324.8	154.2	3,298.7
Gross output value shares	<i>percent of total</i>	18.3	5.0	19.3	9.8	4.7	100.0
NRP, intermediary inputs	<i>percent</i>	4.4	3.5	4.6	5.0	9.0	8.8
Value added ^c	<i>million BGN</i>	77.0	40.2	-103.0	118.8	20.8	1,105.6
Value added shares	<i>percent of total</i>	7.0	3.6	-9.3	10.7	1.9	100.0
ERP	<i>percent</i>	336.4	13.0	7.0	17.1	239.3	3.9
Value added at border equiv. ^c	<i>million BGN</i>	-32.6	35.6	-110.9	101.5	6.1	1,064.2

^a cow-milk only ^b (c.w.): all results displayed for carcass weight

^c Gross output values comprise of gross output value (GOV) from main products and, if applicable, from by-products. Consequently, value added is calculated on base of these GOVs, i.e. value added differs from 'actual price' minus 'intermediary inputs by GOV from by-products.

Source: own calculations.

Simulation results under Scenario B₁ (Rapid Alignment with CAP, without direct payments) are presented in **Table 10**. As expected, domestic farm prices under this scenario increased substantially for most products. For example, the price of wheat increased from 135 BGN per ton in the base-period to 233 BGN per ton (**Table 9**). Similarly, the prices of the other threshing crops, beef, and pork rises significantly. The price of milk was assumed to show a smaller increase (from 358 BGN per ton to 399 BGN per ton) since, at Bulgaria's current milk quality standards, a significant amount of the produced milk will be penalized for non-compliance with EU quality requirements (as

regards germ and bacteria contents)⁴. In contrast to these price increases, prices of tomatoes and grapes were assumed to remain unchanged (no increasing impacts of EU market regimes on these commodities could be identified), the price of domestically produced eggs was even expected to decrease from 1333 BGN per ton (Table 9) to 1200 BGN per ton (Table 10). Even if nominal protection of intermediary input costs remains higher in crop activities than in livestock production, the increase in prices of intermediary inputs were found to be, in relative terms, much more significant in livestock activities. Since around 70% of the total intermediary input costs of livestock production are made up by feeding stuffs, these activities are highly affected by the increase of prices for domestic grains.

Overall, this scenario would induce a clear increase in the income of primary producer, as reflected in the change in value added. On average, aggregate value added for all analyzed activities increases by 26.9% (gross output value by 32.9%⁵). Compared to a valuation at border equivalence prices the effective protection under Scenario B₁ was assumed to increase to a level of 31.8% (aggregate NRP for main products 38.2%).

Even if this increase in farmers' income is impressive, it might appear to be relatively small compared to the substantial increase in farm gate prices that the introduction of Scenario B₁ would bring about. Detailed examination reveals a dissimilar impact on the individual activities. Compared to the base-period scenario, value added of livestock activities was (with the exception of beef production) negatively effected by Scenario B₁, while crop producers enjoy high income increases. Consequently, the shares of value added of crop and livestock production in the total value added of all analyzed activities changed from 86% and 14% to 6% and 94%, respectively. Therefore, considerable differences of impact on different farm types will occur depending on their individual output mix and technologies. Of course, remarkable differences can be observed regarding the impact on value added in the different activities within the groups of crop and livestock production. The value added in wheat, barley, maize and sunflower production increases (relative to the base-period) by 88.4%, 75.0%, 41.3% and 11.5%, respectively. The corresponding values for ERPs are 78.5%, 45.9%, 34.6% and -16.8%, respectively. On the other hand, producers of tomatoes, potatoes, and grapes –activities for which the current CAP does not provide direct price support schemes- experience no significant changes in value added generation (-0.4%, 0.2%, and -0.5%). Value added in livestock production activities are much more pronounced, from an decrease -267% in egg production to an increase of 213% in beef production⁶. As mentioned earlier, most of the livestock producers will have to cope with decreasing incomes unless they adjust their production technology. Due to the currently prevailing technologies, Bulgarian livestock farmers would be severely affected by the significant increase in input prices that overcompensate the output price increases and would not be able to reap the benefits of an introduction of 'current CAP'-type market regimes.

⁴ This approximation has been carried out on basis of the German *Regulation on Milk Quality*.

⁵ The difference between value added growth and gross output value growth is caused by a smaller relative increase of intermediary input costs than relative product price growth.

⁶ The arithmetic problem of high relative changes in low-value added commodities has already been addresses in the context of measurement of current protection (see above).

Table 10: Simulation Results for Rapid Price Alignment with Current CAP (Scenario B₁)

Indices	unit	Wheat	Barley	Maize	Sunflower	Tomatoes	Potatoes	Grapes
Border equivalence price	<i>BGN per ton</i>	124.5	143.8	159.0	436.8	288.5	148.2	620.0
NRP, main outputs	<i>percent</i>	87.3	54.0	39.3	-7.1	-12.0	8.0	2.4
Domestic price	<i>BGN per ton</i>	233.1	221.5	221.5	405.6	254.0	160.0	634.9
Quantity produced	<i>thous. tons</i>	3,203.4	717.1	1,303.4	524.2	489.0	478.3	396.3
Gross output value (GOV) ^c	<i>million BGN</i>	774.8	164.1	288.7	212.7	124.2	76.5	251.6
GOV change rel. to base-run	<i>percent</i>	68.1	64.2	32.8	10.8	0.0	14.1	0.0
NRP, intermediary inputs	<i>percent</i>	88.0	75.3	51.1	61.0	42.5	12.3	24.0
Value added (VA) ^c	<i>million BGN</i>	516.9	128.8	199.7	166.7	115.6	-10.5	206.5
Value added shares	<i>percent of total</i>	36.9	9.2	14.2	11.9	8.2	-0.7	14.7
ERP	<i>percent</i>	78.5	45.9	34.6	-16.8	-14.4	-58.6	-1.3
VA change rel. to base-run ^c	<i>percent</i>	88.4	75.0	41.3	11.5	-0.4	0.2	-0.5

Indices	unit	Milk ^a	Beef ^b	Pork ^b	Poultry ^b	Eggs	Total
Border equivalence price	<i>BGN per ton</i>	270.1	2,792.8	1,840.1	2,269.1	1,167.3	—
NRP, main outputs	<i>percent</i>	48.0	94.7	60.4	-8.0	2.8	38.2
Domestic price	<i>BGN per ton</i>	399.9	5,437.2	2,952.1	2,087.8	1,200.0	—
Quantity produced	<i>thous. tons</i>	1,287.4	50.0	271.9	107.6	101.4	—
Gross output value (GOV) ^c	<i>million BGN</i>	752.4	300.6	974.5	324.8	140.7	4,385.6
GOV change rel. to base-run	<i>percent</i>	24.5	81.1	53.1	0.0	-8.8	32.9
NRP, intermediary inputs	<i>percent</i>	47.3	43.6	50.4	31.0	43.5	47.9
Value added (VA) ^c	<i>million BGN</i>	8.2	126.2	-88.4	67.8	-34.9	1,402.6
Value added shares	<i>percent of total</i>	0.6	9.0	-6.3	4.8	-2.5	100.0
ERP	<i>percent</i>	125.2	254.3	20.2	-33.2	-668.0	31.8
VA change rel. to base-run ^c	<i>percent</i>	-89.3	213.6	-14.2	-42.9	-267.4	26.9

^a cow-milk only ^b (c.w.): all results displayed for carcass weight

^c Gross output values comprise of gross output value (GOV) from main products and, if applicable, from by-products. Consequently, value added is calculated on base of these GOVs, i.e. value added differs from 'actual price' minus 'intermediary inputs by GOV from by-products.

Source: own calculations.

The next scenario examined (Scenario B₂) corresponds to the CAP scenario presented above (Scenario B₁) but assumes that Bulgaria will also introduce direct payments to agricultural producers. Since prices are basically the same as in Scenario B₁, only those activities will be affected to which direct payment schemes apply (total allocation on activities are displayed in **Table 11**). Among the plant production activities these are wheat, barley, maize, and sunflower, where value added changes relative to the base-period increase to 209.5%, 189.6%, 139.6%, and 160%, respectively. The corresponding ERPs of 193.2%, 141.4%, 128.1%, and 93.9%, respectively, indicating a substantial increase in effective protection. Beef production is the only livestock activity that would be eligible for direct payments under a 'current CAP'-type market regime. Here value added would increase by 272.8% (213.6% under CAP without direct payments). As expected crop production becomes more preferable and creates a clear incentive to modify the land related product mix in favor of directly supported crops. While crops accounted for 94% in aggregate value added of all analyzed activities in

Scenario B₁, this share increases by another percentage point to 95%. On average, an implementation of a policy set equal to Scenario B₂ would translate to an increase of farmers' income of approximately 99.3% (rel. to base-period), which means an additional 60 percentage points compared to results obtained for Scenario B₁. Simultaneously, the effective protection of agricultural incomes would increase to 107.0% (31.8% in Scenario B₁).

Table 11: Simulation Results for Rapid Support Alignment with Current CAP (Scenario B₂)

Indices	unit	Wheat	Barley	Maize	Sunflower	Tomatoes	Potatoes	Grapes
Domestic price	BGN per ton	233.1	221.5	221.5	405.6	254.0	160.0	634.9
Quantity produced	thous. tons	3,203.4	717.1	1,303.4	524.2	489.0	478.3	396.3
Direct payments	million BGN	331.9	84.3	138.7	222.0	0.0	0.0	0.0
GOV (incl. Dir. aid) ^c	million BGN	1,106.8	248.4	427.4	434.6	124.2	76.5	251.6
GOV change rel. to base-run	percent	140.1	148.5	96.7	126.5	0.0	14.1	0.0
Value added (VA) ^c	million BGN	848.8	213.1	338.4	388.7	115.6	-10.5	206.5
Value added shares	percent of total	38.5	9.7	15.4	17.6	5.2	-0.5	9.4
ERP	percent	193.2	141.4	128.1	93.9	-14.4	-58.6	-1.3
VA change rel. to base-run ^c	percent	209.5	189.6	139.6	160.0	-0.4	0.2	-0.5

Indices	unit	Milk ^a	Beef ^b	Pork ^b	Poultry ^b	Eggs	Total
Domestic price	BGN per ton	399.9	5,437.2	2,952.1	2,087.8	1,200.0	—
Quantity produced	thous. tons	1,287.4	50.0	271.9	107.6	101.4	—
Direct payments	million BGN	0.0	23.8	0.0	0.0	0.0	800.7
GOV (incl. Dir. aid) ^c	million BGN	752.4	324.4	974.5	324.8	140.7	5,186.3
GOV change rel. to base-run	percent	24.5	95.5	53.1	0.0	-8.8	57.2
Value added (VA) ^c	million BGN	8.2	150.0	-88.4	67.8	-34.9	2,203.3
Value added shares	percent of total	0.4	6.8	-4.0	3.1	-1.6	100.0
ERP	percent	125.2	321.2	20.2	-33.2	-668.0	107.0
VA change rel. to base-run ^c	percent	-89.3	272.8	-14.2	-42.9	-267.4	99.3

^a cow-milk only ^b (c.w.): all results displayed for carcass weight

^c Gross output values comprise of gross output value (GOV) from main products, direct payments and, if applicable, from by-products. Consequently, value added is calculated on base of these GOVs, i.e. value added differs from 'actual price' and direct payments minus 'intermediary inputs by GOV from by-products.

Source: own calculations.

The simulation carried out under Scenario C₁ corresponds to the provisions of Agenda 2000 (excluding direct payment schemes), the reformed framework of the European Union's Common Agricultural Policy. The results of Scenario C₁ are displayed in **Table 12**. Compared to the previous simulation (Scenario B₁: rapid alignment with CAP, without direct payments), the changes in prices relative to base-run levels are more moderate under the Agenda 2000 scenario. For domestic prices of milk an introduction of Agenda 2000 would even translate to a decrease by around 7%⁷. On one hand, the

⁷ As mentioned earlier, the average CAP price for milk of the average quality currently prevailing in Bulgaria was carried out on basis of the German *Regulation on Milk Quality*. Since Agenda 2000 foresees a price cut of 15% for cow milk, the domestic price in Bulgaria was assumed to be below the one currently prevailing.

nominal protection of farm gate output prices was estimated to amount to 22.8%, on the other hand the average nominal protection of intermediary inputs would induce an implicit taxation of input costs amounting to 35.6%. However, Scenario C₁ still induces clear increases in both gross output value (35.6%) and aggregate value added (7.6%). Thus, the effective protection indicator ERP reveals that farmers' income would earn an income that is roughly 11.7% higher than in an undistorted border price environment.

The patterns of impacts on revenue and value added of crop activities vis-à-vis livestock activities are similar to what was observed for Scenarios B₁ and B₂, but in absolute figure the situation appears to be much more dramatic. Aggregated value added of livestock production amounts to only 1% of aggregate value added of all analyzed activities. This occurs because the production of milk, pork, and eggs cannot generate a positive value added. This again underlines the considerable need for investments in livestock production technologies.

Table 12: Simulation Results for Rapid Price Alignment with Agenda 2000 (Scenario C₁)

Indices	unit	Wheat	Barley	Maize	Sunflower	Tomatoes	Potatoes	Grapes
Border equivalence price	BGN per ton	124.5	143.8	159.0	436.8	288.5	148.2	620.0
NRP, main outputs	percent	59.2	30.9	18.4	-7.1	-12.0	8.0	2.4
Domestic price	BGN per ton	198.1	188.2	188.2	405.6	254.0	160.0	634.9
Quantity produced	thous. tons	3,203.4	717.1	1,303.4	524.2	489.0	478.3	396.3
Gross output value (GOV) ^c	million BGN	662.8	140.3	245.4	212.7	124.2	76.5	251.6
GOV change rel. to base-run	percent	43.8	40.3	12.9	10.8	0.0	14.1	0.0
NRP, intermediary inputs	percent	71.7	62.4	40.8	61.0	42.5	12.3	24.0
Value added (VA) ^c	million BGN	427.2	107.6	162.4	166.7	115.6	-10.5	206.5
Value added shares	percent of total	35.9	9.0	13.7	14.0	9.7	-0.9	17.4
ERP	percent	47.5	21.9	9.5	-16.8	-14.4	-58.6	-1.3
VA change rel. to base-run ^c	percent	55.7	46.2	15.0	11.5	-0.4	0.2	-0.5
Indices	unit	Milk ^a	Beef ^b	Pork ^b	Poultry ^b	Eggs	Total	
Border equivalence price	BGN per ton	270.1	2,792.8	1,840.1	2,269.1	1,167.3	—	
NRP, main outputs	percent	16.6	55.7	44.4	-8.0	2.8	22.8	
Domestic price	BGN per ton	315.1	4,349.8	2,656.2	2,087.8	1,200.0	—	
Quantity produced	thous. tons	1,287.4	50.0	271.9	107.6	101.4	—	
Gross output value (GOV) ^c	million BGN	605.0	246.2	894.0	324.8	140.7	3,924.1	
GOV change rel. to base-run	percent	0.1	48.4	40.5	0.0	-8.8	19.0	
NRP, intermediary inputs	percent	33.8	29.2	36.5	21.8	31.6	35.6	
Value added (VA) ^c	million BGN	-70.9	89.3	-70.3	85.9	-20.4	1,189.2	
Value added shares	percent of total	-6.0	7.5	-5.9	7.2	-1.7	100.0	
ERP	percent	-117.7	150.7	36.6	-15.3	-431.5	11.7	
VA change rel. to base-run ^c	percent	-192.1	121.9	-31.8	-27.7	-197.7	7.6	

^a cow-milk only ^b (c.w.): all results displayed for carcass weight

^c Gross output values comprise gross output value (GOV) from main products and, if applicable, from by-products. Consequently, value added is calculated on basis of these GOVs, i.e. value added differs from 'actual price' minus 'intermediary inputs by GOV from by-products.'

Source: own calculations.

The situation for the Bulgarian livestock sector as a whole improves slightly under Scenario C₂ which simulates a move of agricultural policies towards an Agenda 2000-type including direct payment schemes. Under the assumptions of this scenario the

livestock sector accounts for 6% of aggregate value added. Similar to the differences between Scenario B₁ and B₂, prices in both Agenda 2000 scenarios are the same, and only those activities are additionally affected which fulfill the eligibility criteria for direct payment schemes (among the analyzed products this will be wheat, barley, maize, sunflowers, milk, and beef; see **Table 13**). As explained above, Agenda 2000 reduces the level of direct price protection and strengthens the role of direct support to farmers. In aggregate, the impact of this scenario translates to a 93.3% increase of farm incomes compared to the base-period. Thus farm incomes would be twice as high as valued with border equivalence prices.

Table 13: Simulation Results for Rapid Support Alignment with Agenda 2000 (Scenario C₂)

Indices	unit	Wheat	Barley	Maize	Sunflower	Tomatoes	Potatoes	Grapes
Domestic price	<i>BGN per ton</i>	198.1	188.2	188.2	405.6	254.0	160.0	634.9
Quantity produced	<i>thous. tons</i>	3,203.4	717.1	1,303.4	524.2	489.0	478.3	396.3
Direct payments	<i>million BGN</i>	384.9	97.7	160.8	181.6	0.0	0.0	0.0
GOV (incl. Dir. aid) ^c	<i>million BGN</i>	1,047.7	238.0	406.2	394.3	124.2	76.5	251.6
GOV change rel. to base-run	<i>percent</i>	127.3	138.1	86.9	105.4	0.0	14.1	0.0
Value added (VA) ^c	<i>million BGN</i>	812.0	205.3	323.3	348.3	115.6	-10.5	206.5
Value added shares	<i>percent of total</i>	38.0	9.6	15.1	16.3	5.4	-0.5	9.7
ERP	<i>percent</i>	180.4	132.6	117.9	73.8	-14.4	58.6	-1.3
VA change rel. to base-run ^c	<i>percent</i>	196.0	179.0	128.8	133.0	-0.4	0.2	-0.5

Indices	unit	Milk ^a	Beef ^b	Pork ^b	Poultry ^b	Eggs	Total
Domestic price	<i>BGN per ton</i>	315.1	4,349.8	2,656.2	2,087.8	1,200.0	—
Quantity produced	<i>thous. tons</i>	1,287.4	50.0	271.9	107.6	101.4	—
Direct payments	<i>million BGN</i>	64.7	58.2	0.0	0.0	0.0	948.0
GOV (incl. Dir. aid) ^c	<i>million BGN</i>	669.7	304.3	894.0	324.8	140.7	4,872.1
GOV change rel. to base-run	<i>percent</i>	10.8	83.4	40.5	0.0	-8.8	47.7
Value added (VA) ^c	<i>million BGN</i>	-6.2	147.4	-70.3	85.9	-20.4	2,137.1
Value added shares	<i>percent of total</i>	-0.3	6.9	-3.3	4.0	-1.0	100.0
ERP	<i>percent</i>	-81.0	314.1	-36.6	-15.3	-431.5	100.8
VA change rel. to base-run ^c	<i>percent</i>	-108.0	266.5	-31.8	-27.7	-197.7	93.3

^a cow-milk only ^b (c.w.): all results displayed for carcass weight

^c Gross output values comprise of gross output value (GOV) from main products, direct payments and, if applicable, from by-products. Consequently, value added is calculated on base of these GOVs, i.e. value added differs from 'actual price' and direct payments minus 'intermediary inputs by GOV from by-products.

Source: own calculations.

Table 14: Simulation Results for Complete Removal of Current Distortions (Scenario D)

Indices	unit	Wheat	Barley	Maize	Sunflower	Tomatoes	Potatoes	Grapes
Domestic price	<i>BGN per ton</i>	124.5	143.8	159.0	436.8	288.5	148.2	620.0
Quantity produced	<i>thous. tons</i>	3,203.4	717.1	1,303.4	524.2	489.0	478.3	396.3
Gross output value (GOV) ^c	<i>million BGN</i>	426.8	108.4	207.3	229.0	141.1	70.9	245.7
GOV change rel. to base-run	<i>percent</i>	-7.4	8.5	-4.6	19.3	13.6	5.7	-2.4
Value added (VA) ^c	<i>million BGN</i>	289.5	88.3	148.4	200.5	135.0	-6.6	209.3
Value added shares	<i>percent of total</i>	27.2	8.3	13.9	18.8	12.7	-0.6	19.7
VA change rel. to base-run	<i>percent</i>	5.6	20.0	5.0	34.1	16.3	-36.9	0.9

Indices	unit	Milk ^a	Beef ^b	Pork ^b	Poultry ^b	Eggs	Total
Domestic price	<i>BGN per ton</i>	270.1	2,792.8	1,840.1	2,269.1	1,167.3	—
Quantity produced	<i>thous. tons</i>	1,287.4	50.0	271.9	107.6	101.4	—
Gross output value (GOV) ^c	<i>million BGN</i>	472.5	157.1	595.7	297.7	128.5	3,080.6
GOV change rel. to base-run	<i>percent</i>	-21.8	-5.3	-6.4	-8.4	-16.7	-6.6
Value added (VA) ^c	<i>million BGN</i>	-32.6	35.6	-110.9	101.5	6.1	1,064.2
Value added shares	<i>percent of total</i>	-3.1	3.3	-10.4	9.5	0.6	100.0
VA change rel. to base-run	<i>percent</i>	-142.3	-11.5	7.6	-14.6	-70.5	-3.7

^a cow-milk only ^b (c.w.): all results displayed for carcass weight

^c Gross output values comprise of gross output value (GOV) from main products and, if applicable, from by-products. Consequently, value added is calculated on base of these GOVs, i.e. value added differs from 'actual price' minus 'intermediary inputs by GOV from by-products.

Source: own calculations.

Table 14 presents the results for Scenario D, that is the removal of current interventions. Compared to the first scenario (Scenario A), it measures the effect of removing actual levels of protection prevailing in Bulgaria in 1998⁸. As shown in **Table 14**, for the sector as a whole, moving towards free trade would result in a 3.7% decline of aggregate value added. However, because of differences in production patterns different farm types will be affected in very different ways. Crop farmers in Bulgaria would gain from the removal of negative protection on their products, whereas livestock farmers would lose income from the removal of positive effective protection on most of their outputs. In a more detailed view, this negative perspective for livestock production is mainly based on the negative value added values for milk and pork. Producers of beef, poultry, and eggs would still earn a positive contribution to their income from these activities.

Adjusting for Supply Response Effects

In all the simulations presented so far, output levels for all analyzed activities have been kept constant (i.e., assumption of totally inelastic supply). This is a simplifying assumption but one which presumably captures the essence of the short-term effects. However, after some time, producers would naturally begin to react to the new price situation, readjusting the output mix and the overall level of resource intensity.

⁸ For an explanation of sources of current protection see the section 'Measuring the Current Protection'.

As an illustration of the potential effect on income, once adjustments for supply response are introduced to the model, **Table 15** to **Table 17** (for Scenarios B to D) present results for all analyzed activities under alternative elasticities of supply. These are not econometrically estimated supply elasticities; they were chosen from various studies for other countries. The input-output coefficients (quantity of intermediary inputs per unit of main product) were assumed to remain constant, and no adjustments were made for cross-price effects. For each activity the obtained results are compared assuming completely inelastic supply response (elasticity = 0) with those assuming the medium run supply elasticities.

As can be seen from the tables, the assumed output supply elasticities in the usual sense (indicated as 'unadjusted elasticities', e) were 0.1 for grapes, 0.3 for barley, 0.4 for wheat, tomatoes, milk, and beef, 0.5 for maize, sunflower seeds, and eggs, 0.6 for potatoes, and 0.75 for pork and poultry. In a next step, elasticities were adjusted to capture difference in the ratio of value added to price (Valdes, 1973, p.158 f.) among the considered production activities. In particular, the 'adjusted elasticities', ε , are calculated by $\varepsilon = e v$, where v is the rate of per-unit value added at base-run prices (V_B , i.e. per-unit value added as of the base-period) to base-period price (p). Estimates of percentage quantity supply response (i.e., the quantity change indicated in **Table 15** to **Table 17** for the product j induced by changes in value added at prices under the scenario S^p have been computed by applying δq_j in percent = $\varepsilon * (V_{jS} / V_{jB} - 1) * 100$. The calculation of the change in total gross output value relative to the base-period scenario (Scenario A) was captured by the expression $[(p_S + c_S) * q_S] / [(p_B + c_B) * q_B] - 1$, where c represents the direct (compensatory) payments to primary producers converted to a per-unit price equivalent. Total value added is also based on q_S and q_B , respectively. Consequently, assuming a positive supply response, the percentage change per-unit value added differs from the percentage change in total value added due to the quantitative effects of supply response.

As shown in **Table 15** to **Table 17**, the outputs quantities under the Current CAP scenarios increase, on average, by 10.4% (B_1) and 31.7% (B_2), and by 4.7% (C_1) and 29.0% (C_2) under the more moderate price changes of the Agenda 2000 scenarios. The removal of all currently existing market distortions (Scenario D, see Table) would induce output quantities to slightly increase by 0.6%. As expected, for scenarios under which direct payment schemes are introduced (B_2 and C_2) quantity changes are more pronounced. Furthermore, a comparison of the results of Scenarios B_2 and C_2 shows that the additional compensatory payments of the Agenda 2000 do not fully compensate the production effects of price reductions. For all relevant crop activities increased quantities were observed, while producers of most livestock activities are likely to reduce they produced quantity (except beef). In the case of egg production (and milk production under Agenda 2000) this is the response to negative price changes that induce negative changes of value added. In the other cases, negative supply response occurs even if positive price changes (and positive elasticities) have been assumed. At a first glance, this behavior appears to be irrational, but is a logical consequence of both the methodology described above and the changes in per-unit value added. Due to increasing costs for

⁹ In the calculation of value added under different scenarios, input-output coefficients remain constant, but adjustments for price changes of intermediary inputs under the scenarios have been included in the simulations.

intermediary inputs (mainly due to increased prices for ingredients of feeding stuffs) price effects are overcompensated and subsequently per-unit value added declines. The latter creates an incentive to respond by reducing the quantity produced.

Table 15: Simulation Results for Rapid Alignment to Current CAP, Assuming a Positive Supply Response, % change relative to the 1998 base-run

Indices	Wheat	Barley	Maize	Sunflower	Tomatoes	Potatoes	Grapes							
<i>Unadj. supply elasticity^c</i>	0.40	0.00	0.30	0.00	0.50	0.00	0.50	0.00	0.40	0.00	0.60	0.00	0.10	0.00
<i>Adj. supply elasticity^d</i>	0.25	0.00	0.23	0.00	0.33	0.00	0.39	0.00	0.37	0.00	0.09	0.00	0.08	0.00
<i>Scenario B₁:</i>														
	<i>Alignment excluding direct compensatory payments</i>													
price change	72.5	72.5	67.8	67.8	32.8	32.8	10.8	10.8	0.0	0.0	14.1	14.1	0.0	0.0
quantity change	22.4	0.0	17.5	0.0	13.4	0.0	4.5	0.0	-0.2	0.0	0.0	0.0	0.0	0.0
GOV change	105.8	68.1	92.9	64.2	50.7	32.8	15.8	10.8	-0.2	0.0	14.1	14.1	0.0	0.0
per unit VA change	88.4	88.4	75.0	75.0	41.3	41.3	11.5	11.5	-0.4	-0.4	0.2	0.2	-0.5	-0.5
total VA change	130.7	88.4	105.6	75.0	60.3	41.3	16.5	11.5	-0.6	-0.4	0.2	0.2	-0.5	-0.5
<i>Scenario B₂:</i>														
	<i>Complete Alignment including direct compensatory payments</i>													
price change	72.5	72.5	67.8	67.8	32.8	32.8	10.8	10.8	0.0	0.0	14.1	14.1	0.0	0.0
quantity change	53.1	0.0	44.2	0.0	45.4	0.0	62.3	0.0	-0.2	0.0	0.0	0.0	0.0	0.0
GOV change	267.5	140.1	258.4	148.5	185.9	96.7	267.6	126.5	-0.2	0.0	14.1	14.1	0.0	0.0
per unit VA change	209.5	209.5	189.6	189.6	139.6	139.6	160.0	160.0	-0.4	-0.4	0.2	0.2	-0.5	-0.5
total VA change	373.7	209.5	317.6	189.6	248.2	139.6	322.0	160.0	-0.6	-0.4	0.2	0.2	-0.5	-0.5
Indices	Milk ^a	Beef ^b	Pork ^b	Poultry ^b	Eggs	Total								
<i>Unadj. supply elasticity^c</i>	0.40	0.00	0.40	0.00	0.75	0.00	0.75	0.00	0.50	0.00				
<i>Adj. supply elasticity^d</i>	0.07	0.00	0.12	0.00	0.17	0.00	0.40	0.00	0.08	0.00				<i>elast. inelast</i>
<i>Scenario B₁:</i>														
	<i>Alignment excluding direct compensatory payments</i>													
price change	11.6	11.6	98.0	98.0	72.8	72.8	0.0	0.0	-10.0	-10.0			35.4	35.4
quantity change	-6.0	0.0	25.0	0.0	-2.4	0.0	-17.0	0.0	-20.6	0.0			10.4	0.0
GOV change	17.1	24.5	126.5	81.1	49.5	53.1	-17.0	0.0	-27.6	-8.8			38.2	32.9
per unit VA change	-89.3	-89.3	213.6	213.6	-14.2	-14.2	-42.9	-42.9	-267.4	-267.4			26.9	26.9
total VA change	-90.0	-89.3	292.2	213.6	-16.2	-14.2	-52.6	-42.9	-232.9	-267.4			45.1	26.9
<i>Scenario B₂:</i>														
	<i>Complete Alignment including direct compensatory payments</i>													
price change	11.6	11.6	98.0	98.0	72.8	72.8	0.0	0.0	-10.0	-10.0			35.4	35.4
quantity change	-6.0	0.0	32.0	0.0	-2.4	0.0	-17.0	0.0	-20.6	0.0			31.7	0.0
GOV change	17.1	24.5	158.0	95.5	49.5	53.1	-17.0	0.0	-27.6	-8.8			91.0	57.2
per unit VA change	-89.3	-89.3	272.8	272.8	-14.2	-14.2	-42.9	-42.9	-267.4	-267.4			99.3	99.3
total VA change	-90.0	-89.3	392.0	272.8	-16.2	-14.2	-52.6	-42.9	-232.9	-267.4			188.4	99.3

^a cow-milk only ^b (c.w.): all results displayed for carcass weight ^c Own-price supply elasticities

^d For explanation of adjustment procedure see explanation above.

Source: own calculations.

As expected, the changes in total value added in simulation with supply response are significantly higher than under a totally inelastic response (this does not apply to Scenario D where the aggregate change of value added amounts to zero). Combining the effects of per-unit value added changes (due to price and compensatory payment modifications) with quantity adjustments, value added changes are almost two-fold higher than under the inelastic response assumption. Whereas aggregate value added changes under the Current CAP scenario were estimated to amount to 26.9% (B₁) and 99.3% (B₂) under inelastic supply, these values increase to 45.1% (B₁) and 188.4% (B₂) under the elastic supply assumption. Mainly, due to the more moderate price changes under Agenda 2000 these estimates amount to 7.6% (B₁) and 93.3% (B₂) under inelastic

supply, these values increase to 17.2% (B₁) and 170.1% (B₂) under the elastic supply assumption. For reasons already explained above, the patterns of affection vary between crop and livestock activities.

Table 16: Simulation Results for Rapid Alignment to Agenda 2000, Assuming a Positive Supply Response, % Change Relative to the 1998 Base-Run

Indices	Wheat		Barley		Maize		Sunflower		Tomatoes		Potatoes		Grapes	
<i>Unadj. supply elasticity</i> ^c	0.40	0.00	0.30	0.00	0.50	0.00	0.50	0.00	0.40	0.00	0.60	0.00	0.10	0.00
<i>Adj. supply elasticity</i> ^d	0.25	0.00	0.23	0.00	0.33	0.00	0.39	0.00	0.37	0.00	0.09	0.00	0.08	0.00
<i>Scenario C₁:</i>														
<i>Alignment excluding direct compensatory payments</i>														
price change	46.6	46.6	42.6	42.6	12.9	12.9	10.8	10.8	0.0	0.0	14.1	14.1	0.0	0.0
quantity change	14.1	0.0	10.8	0.0	4.9	0.0	4.5	0.0	-0.2	0.0	0.0	0.0	0.0	0.0
GOV change	64.1	43.8	55.5	40.3	18.4	12.9	15.8	10.8	-0.2	0.0	14.1	14.1	0.0	0.0
per unit VA change	55.7	55.7	46.2	46.2	15.0	15.0	11.5	11.5	-0.4	-0.4	0.2	0.2	-0.5	-0.5
total VA change	77.7	55.7	61.9	46.2	20.6	15.0	16.5	11.5	-0.6	-0.4	0.2	0.2	-0.5	-0.5
<i>Scenario C₂:</i>														
<i>Complete Alignment including direct compensatory payments</i>														
price change	46.6	46.6	42.6	42.6	12.9	12.9	10.8	10.8	0.0	0.0	14.1	14.1	0.0	0.0
quantity change	49.7	0.0	41.7	0.0	41.9	0.0	51.8	0.0	-0.2	0.0	0.0	0.0	0.0	0.0
GOV change	240.2	127.3	237.5	138.1	165.2	86.9	211.8	105.4	-0.2	0.0	14.1	14.1	0.0	0.0
per unit VA change	196.0	196.0	179.0	179.0	128.8	128.8	133.0	133.0	-0.4	-0.4	0.2	0.2	-0.5	-0.5
total VA change	343.1	196.0	295.5	179.0	224.7	128.8	253.7	133.0	-0.6	-0.4	0.2	0.2	-0.5	-0.5
<i>Indices</i>														
	<i>Milk</i> ^a		<i>Beef</i> ^b		<i>Pork</i> ^b		<i>Poultry</i> ^b		<i>Eggs</i>		<i>Total</i>			
<i>Unadj. supply elasticity</i> ^c	0.40	0.00	0.40	0.00	0.75	0.00	0.75	0.00	0.50	0.00	<i>elast. inelast</i>			
<i>Adj. supply elasticity</i> ^d	0.07	0.00	0.12	0.00	0.17	0.00	0.40	0.00	0.08	0.00				
<i>Scenario C₁:</i>														
<i>Alignment excluding direct compensatory payments</i>														
price change	-12.1	-12.1	58.4	58.4	55.5	55.5	0.0	0.0	-10.0	-10.0			20.3	20.3
quantity change	-12.8	0.0	14.3	0.0	-5.3	0.0	-11.0	0.0	-15.2	0.0			4.7	0.0
GOV change	-12.7	0.1	69.6	48.4	33.1	40.5	-11.0	0.0	-22.7	-8.8			18.4	19.0
per unit VA change	-192.1	-192.1	121.9	121.9	-31.8	-31.8	-27.7	-27.7	-197.7	-197.7			7.6	7.6
total VA change	-180.3	-192.1	153.6	121.9	-35.4	-31.8	-35.6	-27.7	-182.8	-197.7			17.2	7.6
<i>Scenario C₂:</i>														
<i>Complete Alignment including direct compensatory payments</i>														
price change	-12.1	-12.1	58.4	58.4	55.5	55.5	0.0	0.0	-10.0	-10.0			20.3	20.3
quantity change	-7.2	0.0	31.2	0.0	-5.3	0.0	-11.0	0.0	-15.2	0.0			29.0	0.0
GOV change	2.8	10.8	140.7	83.4	33.1	40.5	-11.0	0.0	-22.7	-8.8			76.1	47.7
per unit VA change	-108.0	-108.0	266.5	266.5	-31.8	-31.8	-27.7	-27.7	-197.7	-197.7			93.3	93.3
total VA change	-107.4	-108.0	381.0	266.5	-35.4	-31.8	-35.6	-27.7	-182.8	-197.7			170.1	93.3
^a cow-milk only ^b (c.w.): all results displayed for carcass weight														
^c Own-price supply elasticities ^d For explanation of adjustment procedure see explanation above.														
Source: own calculations.														

Table 17: Simulation Results for Complete Removal of Current Distortions, Assuming a Positive Supply Response, % Change Relative to the 1998 Base-Run

Indices	Wheat		Barley		Maize		Sunflower		Tomatoes		Potatoes		Grapes	
<i>Unadj. supply elasticity^c</i>	0.40	0.00	0.30	0.00	0.50	0.00	0.50	0.00	0.40	0.00	0.60	0.00	0.10	0.00
<i>Adj. supply elasticity^d</i>	0.25	0.00	0.23	0.00	0.33	0.00	0.39	0.00	0.37	0.00	0.09	0.00	0.08	0.00
<i>Scenario D:</i>														
	<i>Complete Removal of Distortions</i>													
price change	-7.9	-7.9	8.9	8.9	-4.6	-4.6	19.3	19.3	13.6	13.6	5.7	5.7	-2.4	-2.4
quantity change	1.4	0.0	4.7	0.0	1.6	0.0	13.3	0.0	6.1	0.0	-3.4	0.0	0.1	0.0
GOV change	-6.1	-7.4	13.5	8.5	-3.1	-4.6	35.2	19.3	20.5	13.6	2.0	5.7	-2.3	-2.4
per unit VA change	5.6	5.6	20.0	20.0	5.0	5.0	34.1	34.1	16.3	16.3	-36.9	-36.9	0.9	0.9
total VA change	7.0	5.6	25.5	20.0	6.8	5.0	51.9	34.1	23.4	16.3	-39.0	-36.9	1.0	0.9
Indices	Milk ^a		Beef ^b		Pork ^b		Poultry ^b		Eggs		Total			
<i>Unadj. supply elasticity^c</i>	0.40	0.00	0.40	0.00	0.75	0.00	0.75	0.00	0.50	0.00	<i>elast. inelast</i>			
<i>Adj. supply elasticity^d</i>	0.07	0.00	0.12	0.00	0.17	0.00	0.40	0.00	0.08	0.00				
<i>Scenario D:</i>														
	<i>Complete removal of distortions</i>													
price change	-24.6	-24.6	1.7	1.7	7.7	7.7	8.7	8.7	-12.5	-12.5			-2.0	-2.0
quantity change	-9.5	0.0	-1.3	0.0	1.3	0.0	-5.8	0.0	-5.4	0.0			0.6	0.0
GOV change	-29.2	-21.8	-6.6	-5.3	-5.2	-6.4	-13.7	-8.4	-21.2	-16.7			-7.0	-6.6
per unit VA change	-142.3	-142.3	-11.5	-11.5	7.6	7.6	-14.6	-14.6	-70.5	-70.5			-3.7	-3.7
total VA change	-138.3	-142.3	-12.7	-11.5	8.9	7.6	-19.5	-14.6	-72.1	-70.5			0.0	-3.7

^a cow-milk only ^b (c.w.): all results displayed for carcass weight ^c Own-price supply elasticities

^d For explanation of adjustment procedure see explanation above.

Source: own calculations.

Effects for Consumers of Food Products

Bulgarian households, on average, spend more than half of their disposable income on food and beverages; for the lowest decile this share is about 70% (see **Table 18**). Thus, policy reforms that affect food prices will undoubtedly affect consumers' real income. For each scenario, the approach we use (based on Schiff and Valdes, 1992, ch. 8) is to compute the effect of the price change in the primary product on the price at the retail level and then compute the expected change in the cost of the consumers' basket given a constant nominal income. Different income groups have different consumption patterns and thus this estimate captures this differential effect of a given change in farm prices. We then express this change in the cost of the consumers' basket as a percent of household income, under the assumption of a constant nominal income. Clearly, this is a short/medium-term type analysis. In the long-term, consumers would adjust their consumption patterns to the changes in relative prices, and the rise in food prices could have some effect on nominal wages (increase) and the subsequent share of expenditures on food (decrease). Thus our approach overestimates somewhat the true longer-run impact of the change in farm prices.

The availability of a detailed household survey enabled the inclusion of about 160 single food products, beverages, and tobacco products in the simulations. The available statistics provided the shares of household income (by deciles) spent on each of the single food products. In order to present the findings clearly, these products have been aggregated to groups of food product in the following tables (these groups will be referred to as 'food products' in the subsequent sections of this study). The food products

covered by this analysis are cereals and pasta, meat and products thereof, milk, dairy products, eggs, fats, and oils of vegetable and animal origin, vegetables and potatoes, 'dining out', as well as alcoholic beverages¹⁰. Sample data on nominal expenditure and expenditure shares is provided for selected deciles in **Table 18**.

Table 18: Structure of Household Expenditure for Selected Deciles

	Average	Decile I	Decile IV	Decile VIII	Decile X
	<u>Nominal expenditure [BGN/capita]</u>				
Total expenses	920.1	395.2	589.3	604.6	684.8
Food, beverages and tobacco	530.5	281.6	346.7	394.7	429.1
Food and non-alcoholic beverages	500.2	269.4	332.5	378.2	410.3
	<u>Expenditure shares [% of total expenditure]</u>				
Total expenses	100.0	100.0	100.0	100.0	100.0
Food, beverages and tobacco	57.7	71.3	58.8	65.3	62.7
Food and non-alcoholic beverages	54.4	68.2	56.4	62.6	59.9
Cereals and pasta	12.6	24.4	17.6	17.9	16.0
Meat and meat products	11.6	10.0	8.7	10.3	10.6
Fish and fish products	0.6	0.9	0.7	0.8	0.8
Milk, dairy products and eggs	9.5	10.0	9.6	11.0	10.6
Fats and oils (veg. and anim.)	2.2	3.5	2.8	3.0	2.8
Fruit, fresh or dried	3.6	2.9	2.7	3.3	3.4
Vegetables and potatoes	8.5	10.6	9.2	10.3	9.9
Sugar and sugar products	2.4	2.7	2.3	2.7	2.6
Other food, non-alc. beverages	1.7	2.0	1.6	1.8	1.8
Dining out	1.7	1.2	1.2	1.3	1.5
Alcoholic beverages	1.7	0.9	0.9	1.1	1.2
Tobacco products	1.6	2.2	1.5	1.7	1.6

Source: NSI, own calculations.

Food price changes had to be estimated on the basis of assumed cost shares of purchased agricultural raw products in the total costs of the food processing industry¹¹. Transmission of price changes was computed under assumption of constant processing and trading margins, i.e. food price changes are solely the result of raw product price changes. The relevant price levels in Bulgaria have been evaluated based on the NRP measure provided above and were taken as a reference for the simulation of the adoption of measures of the EU trade regime under the different scenarios. Thus, for each scenario, food price changes were obtained by adjusting the 1998 food prices (base-period) by the

¹⁰ In addition, fish and fish products, fruits, sugar and products thereof, non-alcoholic beverages, and tobacco products were included in our analysis. Since none of the analyzed agricultural products was assumed to have a direct impact on the prices of these food products, they will not be displayed in the following result charts. Nevertheless, the expenditure on these products remains as a constant in the aggregate assessment of consumers' income effects.

¹¹ Cost structure information on the food processing industry was provided by SAPI Ltd., Sofia.

relative change in nominal protection of raw materials weighted by its share in the total costs of food production. Similar to the analysis on the supply and farm income effect, this computation corresponds to a short-term impact, a situation that does not capture the effect of consumers' reaction to the new set of relative prices. Conceptually, all household types face identical food price changes, but the impact of these price changes on their real incomes varies as a result of the different weight of the various food items in their household expenditure.

Table 19 summarizes the main results of the simulations. For each scenario the impact of food price changes on: (a) nominal expenditure (change of food expenditure relative base-period food expenditure); and (b) consumers' real income (reduction of purchasing power of nominal income induced by changes in expenditure on food) is estimated. As expected, changes in food expenditures under Scenario B (Alignment to current CAP)¹² are more pronounced than under the Scenario C (Alignment to Agenda 2000). On average, the price changes under these scenarios induce a 9.4% (B) and 4.8% (C) increase of expenditure on food, beverages and tobacco. Only regarding the expenditure on food and non-alcoholic beverages, consumers would have to spend an additional 9.9% and 5.0%, respectively, than under the current base-period market conditions. In both scenarios, the highest expenditure changes occur in products of cereals and pasta (15.5% in Sc. B; 10.0% in Sc. C) and meat and meat products (23.8% in Sc. B; 17.8% in Sc. C). Due to the significant price changes for main agricultural products of the CAP scenario (compared to the currently prevailing prices in Bulgaria), increases of expenditure were recorded for all food product groups under the assumptions of Scenario B. As was mentioned earlier in this study, the assumptions of the Agenda 2000 Scenario provide for a relative decrease of cow milk prices relative to the base-period (-12%). This affects consumers' expenditure on milk and dairy products, inducing an 8.3% decline of this expenditure position.

In contrast, a non-interventionist policy framework (as assumed in Scenario D) would induce slight decreases of consumers' expenditure on food (1.7%). Even if prices of meat and meat products, vegetables and potatoes, as well as of 'dining out' are assumed to increase to some extent (3.4%, 4.0%, and 0.1% respectively), this is overcompensated by declining prices for cereals and pasta (1.7%), fats and oils (2.3%), and milk dairy products and eggs (15.2%).

As presented in **Table 19**, both simulations of a potential introduction of EU-type agricultural policies in Bulgaria have been estimated to induce reductions of consumers' real income of 5.1% (CAP) and 2.7% (Agenda 2000) as an impact of food price changes on average households. On the other hand a removal of all currently existing market distortions (Sc. D) would favor domestic consumers by inducing a slight increase of real income by 1.0%, indicating an almost neutral impact under this scenario. Even if the results of Scenarios B and C may, at a first glance, appear to be relatively moderate, they impose an additional burden on Bulgarian households, which already spend a significant

¹² By this token, no distinction has to be made between Scenario B₁ and Scenario B₂, since price effects of both variants are basically the same. Direct compensatory payments to primary producers are covered by the state budget. Due to the assumption of constant nominal net incomes direct payments to producers will not affect consumers' real income.

share of their disposable income on food. This is especially true when regarding the impacts on the lower deciles. Due to their higher share of food in total expenditures and their different mix of the food consumption basket¹³, lower income households experience a more significant change in real income than higher income groups. The immediate introduction of the current CAP policies in Bulgaria would reduce real incomes of the first decile households by 5.1% which is significantly above losses for households with a higher income (e.g., 4.7% for decile IX households). Under Agenda 2000, the corresponding reductions in real incomes of this decile was estimated to amount to 3.2% (average of all households 2.7%, decile IX households 2.4%).

Table 19: Simulation of Scenario Effects on Real Income of Selected Household Deciles, Assuming Inelastic Demand Response

<i>Type of Household:</i>	<i>Scenarios: B: Current CAP</i>		<i>C: Agenda 2000</i>		<i>D: Non-Intervention</i>	
	<i>Average</i>	<i>Decile I</i>	<i>Average</i>	<i>Decile I</i>	<i>Average</i>	<i>Decile I</i>
Change in real income [%]	-5.12	-6.09	-2.67	-3.19	+0.98	+1.34
	<i>Change in nominal expenditure [%]</i>					
Food, beverages and tobacco	+9.37	+9.11	+4.76	+4.63	-1.69	-1.85
Food, non-alcoholic beverages	+9.88	+9.49	+5.01	+4.82	-1.79	-1.94
Cereals and pasta	+15.52	+15.79	+9.97	+10.14	-1.69	-1.72
Meat and meat products	+23.80	+18.72	+17.80	+14.09	+3.43	+3.13
Milk, dairy products and eggs	+3.93	+4.34	-8.26	-8.30	-15.23	-15.45
Fats and oils (veg. and anim.)	+1.77	+1.16	-1.00	-0.45	-2.33	-1.11
Vegetables and potatoes	+1.75	+1.98	+1.75	+1.98	+3.97	+3.49
Dining out	+5.81	+5.70	+4.02	+3.95	+0.40	+0.39
Alcoholic beverages	+1.68	+2.22	+1.06	+1.40	+0.10	+0.21

Source: own calculations.

Adjusting for Demand Response to Price Changes

A simple approach was used to sketch out the magnitude of possible impacts of demand response. To better capture the medium- to longer-term response in consumption to price changes, price demand elasticities for each separate product group were introduced. Thus, they were assumed to be -0.1 for bread, pasta, and potatoes, -0.2 for vegetable fats, vegetables (and products) other than potatoes, and alcoholic beverages, and -0.3 for all other products. Compared to what has been estimated or assumed for other studies under a single price change, these elasticities are rather low. However, considering that the simulation captures simultaneous changes in many prices, we expect these parameters would be lower than those which apply under a discrete price change.

Table 20 presents the results of the simulation of changes in consumers' real income under the elastic demand assumption. Subsequently, **Table 21** compares the real income changes under the two assumptions of elastic and inelastic demand supply for the

¹³ As can be observed in Table 16, relatively poorer households consume a higher share of the more heavily affected products such as cereals and pasta products.

three relevant scenarios. As expected, the effects of the 'elastic' scenarios is substantially lower compared to inelastic demand scenarios. Under the current CAP scenario, real income losses in the elastic variant are 3.6% instead of 5.1% in the case of inelastic demand. For the Agenda 2000 scenario real income losses in the elastic variant were observed to amount to 1.9%, compared to 2.7% in the inelastic variant. The pattern of impacts on the different deciles of households under the elastic variant is principally the same as described above.

Table 20: Simulation of Scenario Effects on Real Income of Selected Household Deciles, assuming elastic demand response

<i>Type of Household:</i>	<i>Scenarios: B: Current CAP</i>		<i>C: Agenda 2000</i>		<i>D: Non-Intervention</i>	
	<i>Average</i>	<i>Decile I</i>	<i>Average</i>	<i>Decile I</i>	<i>Average</i>	<i>Decile I</i>
Change in real income [%]	-3.56	-4.74	-1.88	-2.57	+0.78	+1.07
	<i>Change in nominal expenditure [%]</i>					
Food, beverages and tobacco	+6.40	+6.99	+3.32	+3.70	-1.35	-1.49
Food, non-alcoholic beverages	+6.74	+7.28	+3.49	+3.85	-1.43	-1.56
Cereals and pasta	+13.58	+13.82	+8.81	+8.97	-1.53	-1.56
Meat and meat products	+12.83	+10.57	+10.34	+8.44	+2.34	+2.14
Milk, dairy products and eggs	+2.56	+2.84	-6.00	-6.02	-11.38	-11.56
Fats and oils (veg. and anim.)	+1.22	+0.82	-0.72	-0.32	-1.77	-0.83
Vegetables and potatoes	+1.52	+1.70	+1.52	+1.70	+3.11	+2.72
Dining out	+3.93	+3.86	+2.75	+2.70	+0.28	+0.28
Alcoholic beverages	+1.32	+1.75	+0.84	+1.11	+0.08	+0.17

Source: own calculations.

Table 21: Change in Consumers' Real-Incomes under Different Demand Elasticities

Decile	<i>Scenario B</i>		<i>Scenario C</i>		<i>Scenario D</i>	
	<i>Alignment to CAP</i>	<i>Alignment to CAP</i>	<i>Alignment to Agenda 2000</i>	<i>Alignment to Agenda 2000</i>	<i>Removal of Distortions</i>	<i>Removal of Distortions</i>
	<i>inelastic</i>	<i>elastic</i>	<i>inelastic</i>	<i>elastic</i>	<i>inelastic</i>	<i>elastic</i>
<i>Average</i>	-5.12	-3.56	-2.67	-1.88	0.98	0.78
<i>I</i>	-6.09	-4.74	-3.19	-2.57	1.34	1.07

Source: own calculations.

Impact on Poverty

As mentioned earlier in this section, Bulgarian households spend on average more than half of their disposable income on food and beverages; for the lowest decile this share is as high as 70% (see **Table 18**). Consequently, all changes in the agricultural policy framework aiming at an increase of product prices are likely to noticeably reduce the real income of domestic consumers. The relative reduction of real consumer incomes is the most significant for households with low disposable incomes and thus high share of expenditure on food products (Engel's Law). In order to assess the potential impact of the

analyzed policy scenarios on the poorest parts of the Bulgarian population the analysis of effects for consumers of food products has been extended by an estimation of potential poverty effects of the scenarios.

First, parts of the Bulgarian population classified as poor were determined based on the findings of a World Bank study on poverty issues in Bulgaria (World Bank 1999b). The report applies two poverty lines: the first (lower) poverty line equals 50% of average per capita consumption in 1997; and the second (higher) poverty line equals 66.7% of average per capita consumption in 1997. Applying these poverty lines, the study estimates 20.2% of the Bulgarian population to be below the lower and 36% below the higher poverty line.¹⁴ As displayed in **Table**, poverty is more widespread in rural regions (41.2% of population) than in urban regions (33.5%), but even among the urban regions significant differences occur.

Table 22: Regional Distribution of Poverty in Bulgaria, 1997

Region	Urban	Rural	Total
Sofia	37.6	0.0	37.6
Bourgas	18.5	38.7	24.8
Varna	30.6	41.3	33.8
Lovech	30.5	32.0	31.1
Montana	22.4	34.4	27.3
Plovdiv	42.4	52.3	45.8
Russe	37.3	38.6	37.9
Sofia Reg	50.2	49.0	49.7
Haskovo	22.3	37.0	28.1
Bulgaria	33.5	41.2	36.0

Note: all results are based on application of the higher poverty line (66.7% of average consumption).

Source: World Bank, 1999b.

Second, changes in poverty groups due to different EU integration scenarios were calculated using these poverty shares. Similar to the assessment of real income effects presented earlier in this section, changes in food prices have been computed on the basis of the price changes for primary agricultural products and the share of these primary products in the final food products (approach according to Schiff and Valdes, 1992, ch.8). The results of this estimation are presented in **Table 2**.

¹⁴ The study revealed that poverty increased sharply during the period 1995-97 when the macroeconomic conditions disfavored Bulgarian consumers. In terms of the higher poverty line, the proportion of the population in poverty rose from 5.5% (approximately 450,000 people) in 1995 to 36% (approximately 3 million people) in 1997. According to the report, the bulk of the rise in poverty can be explained by the generalized fall in consumption and incomes. However a significant share was found to occur due to widening inequality in earnings, and consequently, consumption. Today, with more favorable macroeconomic conditions, the overall poverty figure of 20% or 36% is probably an overestimate. However, these figures were used as the latest available data.

Table 23: Impact of Scenarios on Poverty

	<i>Share of poverty in population</i>		<i>Number of poor citizens^a</i>	
	[%]		[million]	
	<i>Poverty line 1</i>	<i>Poverty line 2</i>	<i>Poverty line 1</i>	<i>Poverty line 2</i>
<i>Current situation</i>				
<i>Scenario A: Base-run</i>	20.0	36.0	1.66	2.98
<i>Inelastic demand response</i>				
<i>Scenario B: Current CAP</i>	24.8	40.7	2.05	3.37
<i>Scenario C: Agenda 2000</i>	22.3	38.3	1.84	3.17
<i>Scenario D: Non-Intervention</i>	19.6	34.9	1.62	2.89
<i>Elastic demand response</i>				
<i>Scenario B: Current CAP</i>	23.5	39.4	1.94	3.26
<i>Scenario C: Agenda 2000</i>	21.7	37.7	1.80	3.12
<i>Scenario D: Non-Intervention</i>	10.4	35.2	0.86	2.91

^a Total population 1998: 8,283,200

Source: World Bank (1999b), own calculations

According to the 1997 higher poverty measure approximately 3 million people of the total population (8.3 million) were assumed to be poor. Our results show that an introduction of CAP-type policies increases the extent of poverty.¹⁵ As expected, the increases in relative poverty are more pronounced under the Scenario B (Current CAP) than under Scenario C (Agenda 2000). Applying the higher poverty line, a rapid adoption of current CAP price support schemes would increase the share of poor inhabitants to 40.7% (compared to 36.0% at current, i.e. base-run, conditions), which corresponds to an absolute increase of 392,000 people. The introduction of Agenda 2000 price schemes would increase poverty by 190,000 people to 38.2%. Since consumers will be able to adjust their consumption patterns to the altered food prices over time, we also included the assumption of an elastic demand response to the analysis. As expected, the increase in poverty under this assumption is more moderate but still significant. Under the Current CAP, poverty would rise (by 282,000 people) to 39.4% and Agenda 2000 prices would translate to an increase (by 141,000 people) to 37.7% poor. Comparing the growth of poverty between the two 'poverty groupings' as established by the two different poverty lines (high and low), it is clear that the increases of poor people falling under the lower poverty line are more pronounced in both CAP-type scenarios. This clearly underlines the more negative impact on the 'very poor' parts of the population by CAP-type pricing policies.

A further removal of all distorting market influences (as simulated in Scenario D) would reduce the share of poor people to a different degrees. Assuming no demand response, the share of poverty would decline to 34.9%, when applying the higher poverty line. Using the lower poverty line, only a marginal decline in poverty would be realized. Under the assumptions of an elastic demand response, which is the more likely case, the share of poor population would decline to 35.2%, when applying the higher poverty line. In comparison the results for the lower poverty line are much more striking – here the

¹⁵ The simulation results take into account only the impacts of food price changes, it does not account for further transfers to/from consumers in an EU integration environment.

extent of poverty would be reduced to 10.4% (from an initial 20%) or by 800,000 people (from an initial 1.7 m people). This result clearly indicates that the very poorest shares of the population would benefit most significantly by a removal of current distortions in the pricing of food products.

Effects on the State Budget

Trade Related Budget Effects

This section on simulations provides estimates of possible trade related budget effects that arise from an introduction of CAP-type policies in Bulgaria. An implementation of EU policies would require a wide range of additional budgetary allocations. The most important effects are: (a) direct budget effects of internal price support measures (e.g., intervention purchases and border measures); (b) budget effects due to direct income transfers; and (c) budget effects of restructuring Bulgaria's administrative infrastructure and institution building in order to implement the described set of EU policies.

The effect of the policy changes on tariff revenues and export refunds are estimated based on the premise that they are required to 'protect' domestic price levels under CAP-type policies. The budget effects below only represent a lower limit of total budget effects since we only included a limited range of products in our analysis and, as was explained above, these measures only represent a certain part of awaited budgetary allocations to the agricultural sector. On the other hand, in this computation we did not treat Bulgaria as an EU member state, but as implementing CAP-type policies separately, i.e. the calculated revenues from trade flows still include trade with EU member countries.

Tariff revenues and export refunds under both scenarios are calculated for each importable and exportable commodity by multiplying the net traded quantity by the difference between the border price equivalent and the assumed domestic price. For importables, the net imported quantity has been multiplied by the difference between border prices and domestic prices covered by the tariff in order to protect the domestic price level, (where $NRP > 0$). For exportables, export refunds have been computed by multiplying net exports by the price difference (where $NRP > 0$)¹⁶. Yearly net traded quantities have been estimated on the basis of Bulgarian trade statistics and assumed to remain constant. Regarding price levels, we assumed NRPs estimated in the first part of this report to remain constant.

The results of the analysis of potential trade related budgetary effects are provided in **Table 24**. The estimations show that under the Current CAP scenario (Scenario B), the net budget effects are almost 45% higher than those for the Agenda 2000 scenario (Scenario C) which arises from the decrease of the domestic price level foreseen for the CAP reform. The total effect under the CAP scenario which corresponds to an additional budgetary burden of 62.0m BGN (31.7m euro) is dominated by export refunds amounting to 95.6m BGN (48.9m euro). In their largest shares, these funds will have to be disbursed on wheat exports. The second largest negative impact arises from tariff revenue foregone

¹⁶ Thus, the calculated values correspond to an ad valorem equivalent tariff.

(e.g., on pork markets). Similarly, negative budgetary impacts of the Agenda 2000 scenario (42.9m BGN; 22.0m euro) are clearly dominated by additional allocations on export refunds (60.2m BGN; 30.8m euro).

Table 24: Simulation of Trade Related Budget Effects - Tariff Revenues and Export Refunds

		Wheat	Barley	Maize	Sunflower	Tomatoes	Potatoes	Grapes
Net exports	[1000 t]	916.43	9.35	90.65	46.37	-1.18	-20.52	-1.31
<i>Scenario B: Current CAP</i>								
NRP	[%]	87	54	39	-7	-12	8	2
Net budget effects	[m BGN]	-89.78	-0.84	-4.96	0.00	0.00	0.03	0.00
<i>Scenario C: Agenda 2000</i>								
NRP	[%]	59	31	18	-7	-12	8	2
Net budget effects	[m BGN]	-57.73	-0.53	-1.95	0.00	0.00	0.03	0.00

Indices		Milk ^a	Beef ^b	Pork ^b	Poultry ^b	Eggs	Total [BGN]	Total [euro]
Net exports	[1000 t]	-46.10	-18.34	-15.46	7.12	-3.61	---	---
<i>Scenario B: Current CAP</i>								
NRP	[%]	48	95	60	-8	3	38	
Net budget effects	[m BGN]	0.76	41.61	-8.86	0.00	0.00	-62.04	-31.72
<i>Scenario C: Agenda 2000</i>								
NRP	[%]	17	56	44	-8	3	23	
Net budget effects	[m BGN]	-0.79	24.80	-6.75	0.00	0.00	-42.93	-21.95

^a cow-milk equivalents ^b (c.w.): all results displayed for carcass weight equivalents

Source: own calculations.

In a long-time perspective the identified effects could become even more significant as the result of producers' and consumers' behavior. Producers will expand production in some activities while consumers will tend to substitute relatively expensive foods with cheaper goods. Both reactions would lead to increasing budgetary outlays on agricultural market regimes in order to maintain the target farm price levels. Furthermore, any interpretation of these results should take into account, that these do only comprise of the analyzed commodities. Thus, the results presented above are likely to underestimate the true budgetary effects of an implementation of CAP-type market regimes in Bulgaria.

Table 25: Bulgarian Potential Contributions to and Revenues from the EU Budget, 1998 Conditions

		<i>million BGN</i>	<i>million euro</i>
Contributions to the EU Budget	VAT based contribution	89	45
	GNP based contribution	126	64
	Total contribution	214	110
Revenues from the EU Budget ^a	Direct payments to agric. <i>CAP</i>	801	409
	Direct payments to agric. <i>A 2000</i>	948	485
	Structural funds ^a	3,710	1,897
	Cohesion funds ^a	729	373
	Total revenues <i>CAP</i>	5,240	2,679
	Total revenues <i>A 2000</i>	5,387	5,061
Net Revenue from the EU Budget	unrestricted ^a <i>CAP</i>	5,025	2,569
Net Revenue from the EU Budget	unrestricted ^a <i>A 2000</i>	5,172	2,645
Net Revenue from the EU Budget	restricted ^b <i>A 2000</i>	1,597	816

^a Calculation based on current (i.e., CAP) support conditions, since negotiations on Agenda 2000 conditions for budgetary contributions and support from structural and cohesion funds were still in process at the time of preparation of this report.

^b Restriction under Agenda 2000 scenario: maximum annual receipts from structural operations (i.e., including the Cohesion Fund) should not exceed 4% of national GDP (BGN 863 million based on Bulgaria's 1998 GDP).

Source: own calculations.

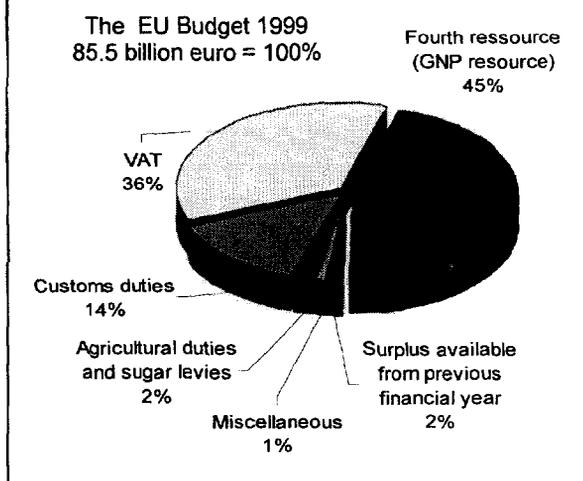
The EU Budget Revenues and Bulgaria's Potential Contribution

In 1999, the total size of the EU budget was about 85.5b euro (total appropriations for payments), an increase of 2.4% from 1998 due to rising outlays for structural and cohesion funds (1999: 30.6b euro, approximately 7%)¹⁷.

Overall EU revenues comprise of: (a) miscellaneous revenues (accounting for less than 1% of the budgeted revenue); and (b) 'own resources' (equaling 85b euro, i.e. more than 99% of budgeted revenue)¹⁸. EU own resources are comprised of: (a) the so-called "Traditional Own Resources" (TOR); (b) Member States' contributions based on Value Added Tax;

(c) Member States' contributions based on Gross National Product; and (d) Member States' contributions to the financing of the so-called UK-rebate. The 1999 ceiling on expenditures has been fixed at 1.27% of the Union's GDP.

Figure 19: Resources of the EU Budget, 1999



¹⁷ For details on the 1999 budget see European Commission, 1999a.

¹⁸ See European Commission, 1998b.

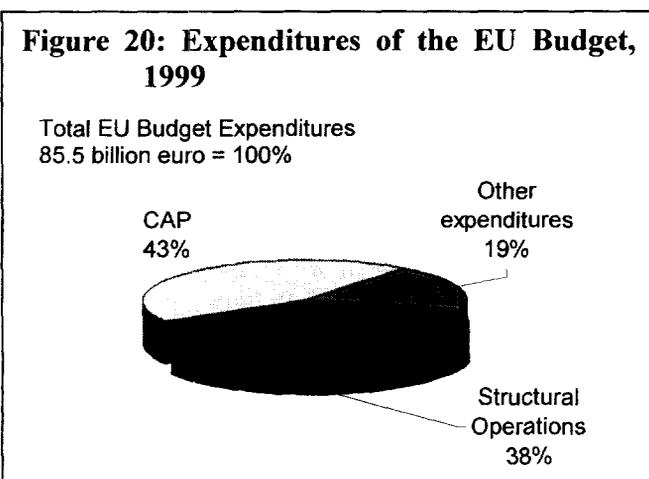
In 1999 TOR made up 16.2% of the total budget, a continuous decrease in terms of the share of the budget (1988: 29.1%). In particular, they consist of customs duties (13.2 bn. euro), agricultural levies (1.1 bn. euro), and sugar levies (1.1 bn. euro)¹⁹. Member states' contributions based on VAT account for 30.4b euro, corresponding to a share of 35.4% (1988: 60.0%). This contribution is paid as a 0.9% uniform rate²⁰ based on a VAT base which is calculated for all countries in a harmonized way. This VAT base may not exceed 55% of national GNP. Consequently, Bulgaria's VAT based contribution would not exceed 88.8m BGN (45.4m euro). The Gross National Product Resource is a residual resource and is used to balance the EU budget. In 1999, it accounted for 41.5 billion euro (48.5% of the total budget). The contribution of each member state is calculated based on their GNP. In 1999, it accounted for 24.5b euro (48.5% of the total EU budget). The contribution of each member state is calculated based on their GNP. Based on a EU-15 GDP of 7130b ECU, the Bulgarian contribution to GNP resources was estimated not to exceed 125.6m BGN (64.2m euro).

Having considered Bulgaria's potential obligations to the EU budget, the estimations are that transfers to the EU budget will not exceed 214.4m BGN (109.6m euro; computed on the basis of 1998 figures), i.e. roughly 1% of Bulgarian GDP.

The EU Structural and Cohesion Funds and Bulgaria's Potential Gains

Potential transfers from the EU budget to Bulgaria were estimated by focusing predominantly on the so-called Structural and Cohesion Funds²¹. Financial transfers to be received in case of an implementation of CAP-type compensatory payments were presented in context of the simulations (CAP-scenario: 800.8m BGN, 409.4m euro; Agenda 2000-scenario: 948.0m BGN, 484.7m euro). Additional budgetary outlays other than the ones mentioned above are either used for public goods of the EU with little

direct transfers to member states or for non-member countries, and are significantly smaller in total volume²².



In terms of appropriations for commitments, the breakdown of expenditure from the 1999 budget by subsections is 43.7% of total spending for Common Agricultural Policy measures (mainly for the so-called Guidance Section of the European Agricultural Guarantee and Guidance Funds (EAGGF), 37.7% for structural operations,

¹⁹ Member States retain 10% of TOR revenues to cover costs of collection.

²⁰ In 1999 a cap on that base was introduced. Formerly this rate was 1.4%.

²¹ A more detailed description of these funds are provided in the Annex 5.

²² Since the estimations presented here refer to a situation after accession of Bulgaria, transfers from SAPARD funds are not included. These are analyzed in the chapter 5.

6.2% for internal policies, 6.6% for external action, 4.6% for administrative expenditures, and 1.2% for other expenditures.

Planned appropriations for structural operations grew significantly during recent years and reached 39.0b euro for commitments and 30.5b euro for expenditure in the financial year 1999. According to Agenda 2000 proposals, structural operations are not to exceed a final level of 32.5b euro in 2006 (measured in 1999 prices). The largest portion of resources for structural operations is allocated to the Structural Funds (35.9m euro appropriated for commitments, 27.6m euro appropriated for payments), and a smaller portion is allocated to the Cohesion Fund (3.1m euro appropriated for commitments, 2.9m euro appropriated for payments).

The EU Structural Funds are administered by the Commission to finance Community structural aid. The European Union maintains four structural funds, namely The European Regional Development Fund (ERDF), The European Social Fund (ESF), the aforementioned EAGGF, and the smaller Instrument For Fisheries Guidance. All of these funds have the common aim of redistributing income from the relatively richer to the poorer regions of the EU. Actions are focused on six main objectives. Altogether, the budget of the Structural Funds has quadrupled in the last few years, totaling more than 161 billion ECU for the period 1994-1999 (see below). In addition, structural operations are carried out by the Cohesion Fund and loans from the European Investment Bank (EIB), which are based on a project-financing approach and are governed by their own specific rules.

The assistance of the ERDF is provided to less favored regions and is focused mainly on productive investment, infrastructure and development of small- and medium-size enterprises²³. About 44% of the total spending on Structural Funds is allocated to the ERDF. Under current provisions, ERDF payments are granted to regions eligible for payments under Objectives 1, 2, 5b and 6. The ESF accounts for 27% of budgetary allocations to Structural Funds. Its main task is the financial support of vocational training and employment aids in less favored regions of the EU eligible under Objectives 1, 2, 3, 4, 5b and 6. Promotional activities of agricultural structures and rural development measures under the Guidance Section of the EAGGF account for another 14% of Structural Funds. Its activities are limited to the regions eligible for support under Objectives 1, 5a, and 5b (a further detailed description of structural operation of the European Union is presented later on in **Chapter 5**).

Since the eligibility criteria have not been fully decided for the new Objectives, we restrict our estimates of Bulgaria's potential gains from Structural Funds to the current structure of Objectives. Under current conditions, Bulgaria would fall under Objective 1. Bulgaria's receipts from Objective 1 programs were estimated on the basis of average per capita payments (under Objective 1) to EU member states, which amounted to 229 ECU per inhabitant during 1994-1999²⁴. Assuming Objective 1 applies to Bulgaria, the country would receive about 1.89b euro yearly payments, i.e., around 3.7b BGN or 17% of the 1998 GDP. However, it has to be taken into account that these estimates are rather

²³ See European Council, 1993c, Art. 1.

²⁴ Estimates based on payments to Greece, Ireland, and Portugal, which are completely eligible.

optimistic and also assume that Bulgaria would be supported under the framework of the 1999 conditions that apply to current members of the EU.

Furthermore, an assessment of Bulgaria's potential gains from the structural funds has to bear in mind that funding of projects under the priority objectives are subject to a co-financing mechanism. Thus, the amount estimated above only constitutes the EU's share in project funding, and has to be accompanied by funds from the national (i.e., Bulgarian) budget. The EU's contribution to structural funding is subject to the following ceilings²⁵: (a) a maximum of 75% of the total eligible cost and, as a general rule, at least 50% of eligible public expenditure in the case of measures carried out in the regions covered by Objective 1. Where the regions are located in a Member State covered by the Cohesion Fund, the Community contribution may rise, in exceptional cases, to a maximum of 80% of the total eligible cost; (b) a maximum of 50% of the total eligible cost and, as a general rule, at least 25% of eligible public expenditure in the case of measures carried out in areas covered by Objective 2 or Objective 3. Assuming that Bulgaria will qualify for assistance under Objective 1 and the Cohesion Fund, and assuming a EU participation rate of (on average) 75%, the EU's contribution of 3.7b BGN would have to be accompanied by a Bulgarian co-financing share of about 1.2 billion BGN from the national budget²⁶.

Bulgaria's potential gains from the Cohesion Fund have been estimated on the basis of the payments granted to Greece, Ireland, Portugal, and Spain. Cohesion Fund payments are granted to countries (not regions) with a per capita GNP of 90% of the EU average. The total amount to be spent in 1999 is 2.88b euro, i.e. 45 euro per inhabitant. If Bulgaria receives equal payments, it could expect to receive 372m euro, i.e. 729m BGN.

Given that our estimates are based on current support conditions of the EU, they have to be considered extremely optimistic. Under these assumptions (current CAP and current structural support) we estimated a transfer from structural operations of about 2.6b euro (5.0b BGN), corresponding to about 23% of Bulgaria's 1998 GDP. Under Agenda 2000, a restriction will apply that restricts the maximum annual receipts from structural operations to 4% of national GDP of any Member State. In this case, Bulgaria would only be able to receive a maximum of 863 million BGN (estimate based on Bulgaria's 1998 GDP).

Additional Costs to the Bulgarian Budget

It is of great importance to keep in mind the context of the above analysis of budgetary effects of integrating Bulgaria's agriculture and food sector into the EU. The transfers of budgetary gains and duties to new EU member countries are political questions, which will be answered during EU accession negotiations and will be influenced by external determinants such as changes in world market prices and the next WTO round of negotiations.

²⁵ Information adapted from European Commission, 1999c.

²⁶ Applying the Agenda 2000 restrictions for structural funding (annual receipts from structural funding, i.e. including Cohesion Fund, should not exceed 4% of national GDP), Bulgaria would receive a maximum of 863m BGN from structural operations (estimate based on Bulgaria's 1998 GDP).

Moreover, it should be noted, that budgetary costs of EU accession in the agriculture/rural area are more numerous than those quantified above. Most importantly, in addition to the effects of price support measures which occur at the border, direct income transfers, and costs of structural programs, there occur administrative costs. Although they are relatively difficult to quantify, they can be expected to be quite substantial. To some extent, Bulgaria's local regional and national agricultural and rural administration would need to be reformed substantially even without integration into the EU. In any case, old administrative structures would have to be converted into more efficient ones which better suit the objectives of Government authorities in a market environment, many institutions would have been necessary to establish in order for the private sector to be able to compete in Western, and, in particular, EU markets.

However, the implementation of the complex CAP and the entire detailed *acquis communautaire* in the agricultural area requires considerable additional resources which would not be necessary if Bulgaria, without the superior objective of EU integration, would have chosen a liberal agricultural policy with few interventions and a limited number of targeted support measures. For example, only the extra administrative efforts for the implementation of the direct payments per hectare/per animal are estimated to be at least 15% of the value of subsidies by some authors.

III. CRITICAL CONSTRAINTS ON COMPETITIVENESS: FROM FACTOR MARKETS TO PRODUCT MARKETS

Well-functioning factor and product markets constitute the basis for a market-based adjustment of Bulgarian agriculture and are essential conditions for EU accession. This would imply less distortive interventions from the state or outdated laws and the development of modern instruments and institutions for the exchange of land, labor, finance, inputs and outputs of agricultural and food production.

FACTOR MARKETS

Land Reform and Farming Structure

Bulgaria began the transformation of its agricultural sector early on in the reform process. The country opted for physical restitution of expropriated property, including agricultural land, as well as the distribution of collective farm assets among the members. The initial phase of restitution and restructuring and privatization of large-scale collective and state farms is nearly completed. The outcome of this process has been a very fragmented structure of land ownership with a mixed and still evolving farming structure dominated by a large number of small private family farms, and the successors of former collective enterprises.

The land reform has been a rather difficult and painful period for the Bulgarian food and agriculture. Due to the specific procedures used to privatize state assets and reconstitute private ownership, the relative instability of the overall economy, and the crisis in the Russian market, there has been more disruption in the farming sector in Bulgaria than has occurred in many other Central and Eastern European countries. Several important components of land reform and farm restructuring are still unfinished: such as, full completion of land privatization and farm restructuring; creation of functioning land and lease markets; and conditions for farm consolidation. These all must be completed to achieve a viable farming structure under EU conditions.

Land and Property Restitution

The settlement of land ownership issues in Bulgaria was undertaken within the land restitution process and the privatization of the state farms. The process of land restitution started in 1991, and was based on the Law on Ownership and Use of Farm Land (LOUFL). The implementation, which is being managed by the Municipal Land Commissions, operating under MAFAR, started with the registration of claims (including a decision by MLC regarding the recognition of ownership claims), the re-establishment of ownership based on old boundaries or through agreement on a reallocation plan, and finished with a certification which could be used to register ownership.

Restoring former ownership rights to the status of fifty years ago, when neither the corresponding structures of production, nor proper records of the previous boundaries exist, is a costly, labor-intensive, and complicated exercise. It is not surprising that the

restoration of the old boundaries have been impossible in most cases. The attempt to provide an acceptable replacement for the claimants often ended in a court debate. The task is further complicated by the fact that the original ownership is restituted in the first phase to the initial owner. Most of these owners are deceased and have a variety of heirs, which results in time-consuming inheritance debates. The restitution process has been further complicated and delayed by the frequent amendments to the LOUFL, which has been amended 15 times since its inception. It is not surprising that the restitution of private land ownership, which began in 1991, is still not fully implemented.

The current government put a high priority on the completion of land restitution. Among other actions, it has increased resources devoted to this and has eliminated the fee for issuance of notarial deeds. It has also eliminated the conveyance tax. This has paid off in an acceleration of the process, so that by the end of 1999, 95% of land subject to restitution was returned to the original owners, although critical ownership issues, as well as proper titling, are far from resolved. About 39% of the land subject to restitution has been titled, either through a formal titling process or through a decision of the Land Committees, which (under amendments to the law of 1999) have the power of notary deeds. However, much of this land must still be divided among heirs before it is titled to individual owners. The completed restitution will result in a rather fragmented ownership. After the completion of the process, Bulgarian agricultural land will be owned by around 3 million (or by some extreme estimates 5 million) people. Looking retrospectively at the process of restitution in Bulgaria, the complicated process itself, and the changing political attitudes toward restitution, resulted in a much lengthier and disruptive land settlement process than occurred in most other Central European countries.

Transformation of Inherited Farming Structure

To a greater extent than some other countries in Central Europe, agriculture in Bulgaria was organized in very large state-operated farms in the communist era. Before the communist takeover, there were 1.1 million farms with an average size of 4.3 hectares. Few were large—most in holdings under 20 hectares—and over 80% were owned by the operators. This network of small private farms was supported by marketing and credit co-operatives. Following the communist takeover, collectivization was carried out in stages. By 1958, 90% of the land was organized into 3,290 cooperatives, averaging 1,200 hectares. After several more stages of consolidation, by 1971 the dominant structure was the “agro-industrial complex” (APKs), of which there were 161, with an average of 24,000 hectares and 6,500 members. In 1973, seven industrial-agricultural complexes were created, averaging 55,000 hectares. After this, successive waves of reforms reorganized and increased the numbers of the APKs to more than 250 in attempts to increase their productivity and make them more financially self-sufficient. Throughout the communist period, a small share of the land (around 10%) remained under private control as “household plots,” producing a disproportionate part of the total output, especially in fruits and vegetables. Privately owned livestock represented a share of the total livestock population ranging from 18% of cattle to 38% of poultry.

The transformation of the agro-industrial complex (APK), and especially, the privatization and reorganization of the components of the APK, was one of the major cornerstones of agricultural reforms in the last decade. The principal objective of the transformation process was to establish real and clear ownership rights for all property of the APK, including the agricultural cooperatives. The initial years of reform, however, were characterized by quick and rather disorganized distribution of properties of the large-scale farms. In a later period, the process became somewhat more organized, but on the whole, it was a more drawn out and traumatic experience than in neighboring Central and Eastern European countries, where, in most cases, this process was completed in two to three years.

As a result, Bulgaria's current farming structure cannot be considered final and requires further restructuring. The current farming structure in Bulgaria is highly polarized. On the one hand, there are a large number of small subsistence farms belonging to mostly older people. On the other hand, there are a smaller, but significant number of commercial farms that are managed by younger and more educated people. There are a significant number of commercially and non-commercially oriented so-called "private cooperatives" and a few private agricultural companies. Additionally, one still finds the state sector with an active, though diminishing, role. In 1997, about one-third of agricultural land is still used by relatively large-scale, often nominally restructured, collective farms. On the other hand, hundreds of thousands of small farmers and other private farming organizations cultivate about 45% of agricultural land. At the same time, over 94% of arable land was used by private farmers and cooperatives. By some estimates, about one quarter of the agricultural land has remained uncultivated (Table 26).

Table 26: Farm and Land Use Structures (1997)

Farm Type	No. of Units	Land Size ('000 ha)	Average Size (ha)	Share of Agric. Land (%)	Arable Land* (%)	Pastures* (%)
State and Municipal	493	1,259.2	2,554.2	20.3	5.7	70.1
Cooperative	3,475	2,158.6	621	34.8	42.4	13.6
Individual and farm companies	1,778,495	2,785.2	1.6	44.9	51.9	16.3
Total		6,203.0		100	100	100

Source: NSI.

* 1996 figures.

The above-mentioned major components of the farming structure can be characterized as follows:

- **Private Farms.** As of 1997 there were over 1.78 million private farms in Bulgaria. Most of these farms (about 1,750,000) are extended household plots with the average size of less than two hectares. In 1996, only 4.9% of private farms farmed more than 2 hectares. At the same time, 0.2% of the individual farms (3,506) farmed over two thirds of the individual farming sectors land, on an average of 500 hectares each (Table 27). The majority of the largest private farms (about 80% of them were

owned by one person), were operating in one or another form of legal entities. European-type family farms are very rare in Bulgaria. According to a recent EU-PHARE ACE survey, in the crop year 1997-98, 77% of all private farmers, or about 1.5 million farmers, did not sell anything on the market (zero degree of commercialization) and were, accordingly, subsistence or part-time farmers. Only 10% of all private farmers were market-oriented (selling more than 50% of their output). The majority of these farms belonged to the larger farm size categories (Figure 21).

Table 27: Size of Individual Farms (1996)

Groups by Land Area (ha)	Number of Farms	Share of group in Total	Farmed land (ha)	Average Size	Share of farm land in group
Up to 0.2	915,217	51.5%	83,102	0.09	3.1%
0.21 – 0.5	363,564	20.5%	118,413	0.33	4.4%
0.51 – 1.0	256,442	14.4%	180,535	0.77	6.7%
1.1 – 2.0	156,473	8.8%	214,634	1.37	8.0%
2.1 – 5.0	68,474	3.9%	205,148	3.00	7.7%
5.1 – 10.0	13,446	0.8%	90,299	6.72	3.4%
Over 10	3,506	0.2%	1,783,169	508.60	66.7%
Total	1,777,122	100%	2,675,300	1.51	100%

Source: NSI

- Private Agricultural Cooperatives.** By the end of 1998, there were 3,269 so-called “Private Cooperatives” in Bulgaria. These cooperatives were, for the most part, created in 1991 in the absence of settled ownership rights of the main production factors such as land and indivisible assets. Most of these enterprises were registered under the cooperative law, which allowed temporary transferred land ownership rights to the cooperatives. The number of cooperatives shows a steady increase in recent years (Table 28), and they cultivate over 40% of arable land. Most of these cooperatives specialize in cereal and industrial crop production (83%). The new production cooperatives have a diverse profile according to the EU-PHARE ACE survey. Some are more market oriented, while others focus on the personal consumption needs of the members. There are many uncertainties surrounding the status of the cooperatives. The financial status of about one third of the cooperatives is close to bankruptcy. There are increasing conflicts between managers and member/shareholders in the more market and profit oriented cooperatives. The newly envisaged legislation intending to separate land ownership and cooperative membership, might be potential fuel for conflicts between cooperatives and landowners.

Table 28: Number and Size of Agricultural Co-operatives during Transition

Year	Number	Cultivated Land	Members ('000)	Average Size (ha)	Average Membership
1992	347	670	n.a.	193.08	200*
1993	1,230	7,563	268	614.88	218
1994	1,873	13,422	468	716.00	250
1995	2,623	20,985	678	800.04	258
1996	3,213	21,882	736	681.05	229
1998	3,269	24,273	765	742.53	234

*Estimate.

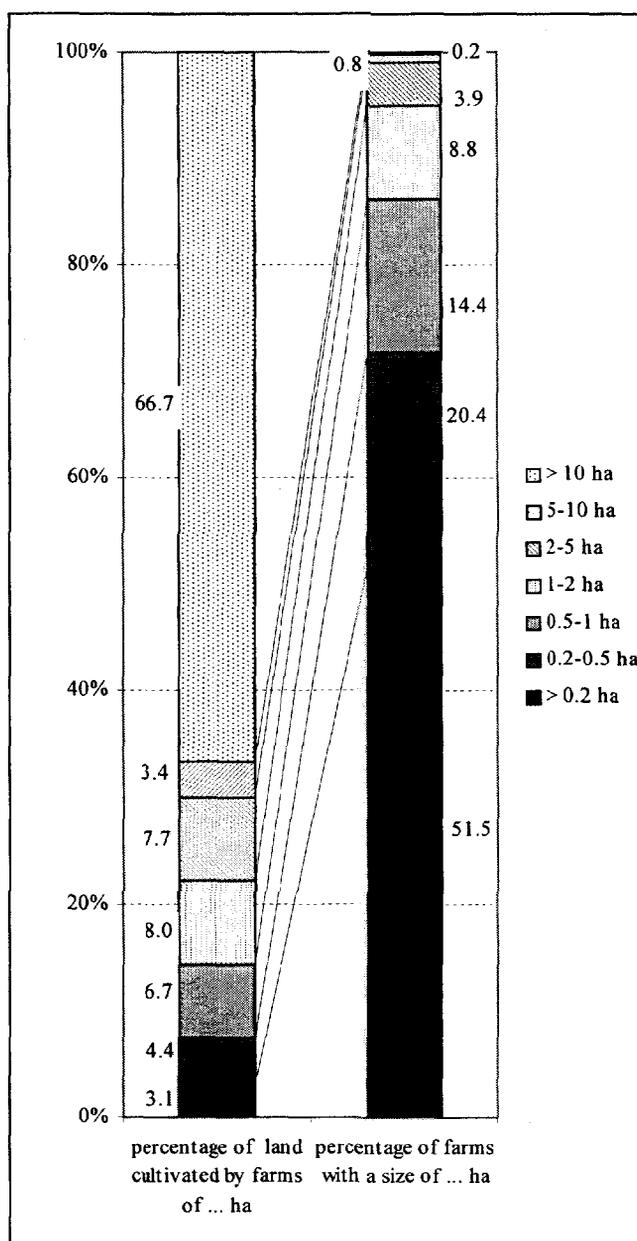
Source: NSI.

State-Owned Agricultural Companies.

Though some of the state enterprises in agriculture have already been privatized, there are still 236 entities left under state ownership. All of these were supposed to be privatized by the end of 1999 (Table 29). About half of the remaining enterprises are active in agriculture, the rest are service enterprises, mainly farm machinery and tractor service stations. These units are both organizationally and technically obsolete.

Due to the lack of information, it is very difficult to judge the efficiency and productivity of the major components of the farming system. In general, however, there are abundant anecdotal indications of low profitability, low efficiency, and financial difficulties. According to the EU-PHARE ACE survey, individual private farms employ more capital (3,000 BGL vs. 500 BGL per hectare), and more intermediate inputs (102 BGL vs. 62 BGL per hectare) than corporate farms. The physical output per hectare is also higher in the individual

Fig. 21: Structure of the private agricultural enterprises according to the size of their arable land



Source: NSI

private farms (767 BGL/ha) than the corporate farms (517 BGL/ha), but not as much as one might expect given the capital and input differentials. According to the same study an average Bulgarian cereal farm produces only 44.4% of the output that an efficient farm elsewhere could produce with the same input bundle. (Figure 22.)

Table 29: Number and Activity of State-Owned Agro-companies in 1995 and 1997

Activity	1995		1997		Activity	1995		1997	
	No.	%	No.	%		No.	%	No.	%
Agromarketing	14	2.8	9	3.0	Poultry	41	8.2	28	9.4
Agrochemical	31	6.2	19	6.4	Farming	51	10.2	36	12.1
Agrarian	53	10.6	29	9.8	Greenhouse	32	6.4	15	5.1
Pig Production	65	13.0	15	5.1	Fishery	33	6.6	24	8.1
Mechanization	156	31.1	104	35.0	Seed & seedlings	26	5.2	18	6.1
Total						502	100	297	100

Source: MAFAR

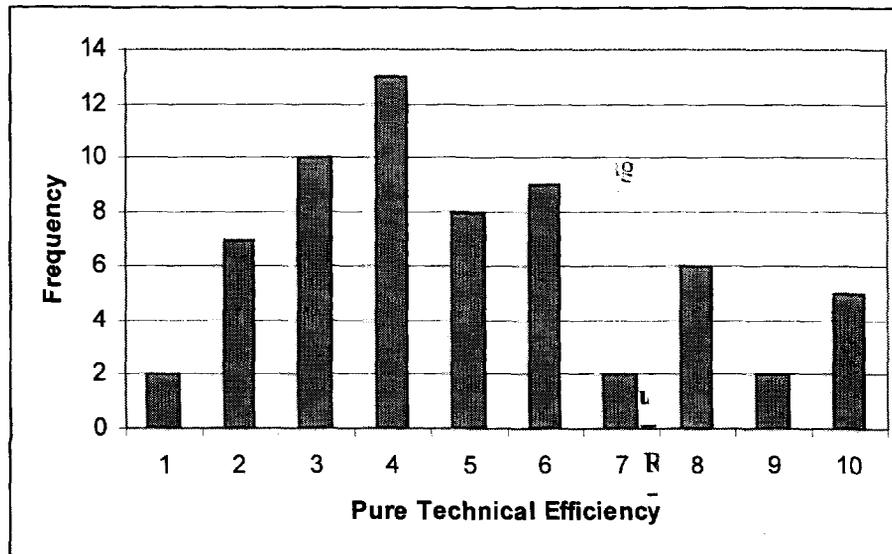
Land and Leasing Markets

Establishment of ownership rights through restitution is essential but not in itself sufficient to improve the efficiency of land allocations. A further requirement is that land be readily transferable through lease, purchase or sale, and that some legal and institutional supports for land transfer (for example, provision of information to new landowners on land transfer options) be in place.

Despite progress in farm restructuring, and in the development of the legislative framework required by private agriculture, the situation on the ground remains problematic. A high share of agricultural land remained idle in 1999; estimates of the share of unused land vary between one quarter and two fifth. These facts cannot be mainly attributed to a low profitability of agricultural production due to temporarily unfavorable terms of trade. In fact, the analysis shows, that Bulgaria's farmers face more or less world market reference prices for their inputs and outputs. Hence, a high proportion of the problems has to be seen as structural problems due to restrictions in factor market. Most importantly, a poorly functioning land market as still observed in Bulgaria with fewer leases and even fewer purchases, is a major obstacle to efficient allocation of land, but also other resources such as capital.

Currently the lease market remains undeveloped and only a few formal leasing transactions take place. Lease transactions do occur, but most of these are typically informal and unrecorded. The sub-rosa nature of these activities undoubtedly reduces the competitiveness of the leasing market and increases costs. One of the most important actors on the lease markets is the State Land Fund which leases significant amounts of land on a more formal basis, and gives priority to landless or smallholder farmers. The Municipal Land Funds also lease out some of the municipal land, but generally on a short-term (annual) basis. The lack of options for individual landholders to lease or sell their land in a market led many to place their land in a cooperative on extremely unfavorable terms.

Figure 22: Data Envelopment Analysis Results: Distribution of Pure Technical Efficiency for all Bulgarian Farms



Source: ACE/PHARE Study.

Even more so than in the case of leasing, there is currently only a minimal active sales market for agricultural land. There is no comprehensive information available on the exact number of transactions. What information there is, however (from a recent study by SAPI), indicates that only a few contracts have been concluded for land where land owners had notarial deeds, and prices are quite low—reportedly \$280- 1,110/ha for some recent transactions in agricultural land, though much higher for land intended for alternative uses.). It is, nonetheless encouraging that even this low level of activity represents an improvement over the previous situation, according to the SAPI study. The government and MAFAR are attempting to stimulate the development of an active land market. In October 1999, SFA made the decision to provide guarantees to commercial banks for credits extended to agricultural producers for the purchase of farm land.

The current situation regarding land and lease markets is a reflection of several underlying factors:

- **Unsecure Land Ownership.** Even after restitution, uncertainty exists regarding the status of rights set out by Land Commissions. For example, many believe that certificates of ownership provided by the Commissions establish ownership rights, while others think that a notarial deed is required. This uncertainty is a significant constraint to development of a land market since potential buyers are hesitant to buy land over which they do not have a firm claim. Alternatively, they may heavily discount the price at which they purchase, which is undoubtedly a factor underlying the low prices observed in many land transactions. Confidence in Land Commission

decisions as proof of ownership would be greatly increased if these were maintained in a national, unified system for land registration.

- **Over-regulation of Lease Markets.** Until the 1998 amendments, the Land Leasing Law obstructed leasing transactions through provisions stating that the lease contract must be in written form, certified by a public notary, and registered in notary and Land Commission registration books.¹ There was also a ceiling of 600 hectares on the amount of land that could be leased. The amendments made changes in line with Western European legislation, abolishing maximum terms and sizes for land leases, and providing for registration of lease contracts in court by judges as well as in the Land Commissions. At the same time these amendments include some problematic provisions. In an attempt to protect the interests of owners/lessors, the amendments introduce non-mandatory guidance on rent amounts based on the level of the taxes that apply to the leased property.
- **Legal and Institutional Barriers.** Many administrative and institutional barriers to land market development have been removed. For example, to further increase security of tenure, the Government made amendments to the Law on Ownership and Use of Agricultural Land that give the documents (decisions) issued by the Municipal Land Commissions the power of notarial deeds. Other amendments to the Law on Ownership and Use of Agricultural Land eliminated the ceiling (currently 30 ha) on the size of agricultural plots which can be bought and sold within two years of restitution. However, a remaining serious obstacle to completion of land reform is that the certificates issued by Land Commissions are usually in the form of a title to a specific parcel granted to the former owner or his heirs. If there is more than one heir, they must then agree on how to split the parcel before the land actually becomes usable in a land market or for collateral.

Land Cadastre and Land Registration

One of the most urgent steps needed now—to protect the rights of owners, tenants and financial institutions, and protect all interested parties against fraud and high transaction costs—is a safe and cost effective system of registration of real estate property throughout the country. This is essential to strengthen the confidence of families, farmers and businesses to improve their land and property, gain access to cheaper credit, and facilitate the more intensive and sustainable use of their assets. There is a general consensus in the country to replace the existing personal system of notarizing deeds with a parcel-based registration system that will be linked to a unified cadastre. The present institutional arrangement also should be re-engineered to create either a single agency responsible for real estate and registration and cadastre or two agencies working closely together.

A law for real estate registration and unified cadastre, which outlines the institutional set up and the technical framework for implementing the cadastre and real

¹ Rights enumerated in leasing contracts are personal rights, not real (ownership) rights. Most countries do not enter statistical data of this type in a land registration system.

estate registration, was first presented to Parliament in May 1999. However, the initial draft had significant shortcomings and is in the process of redrafting². It should be revised and adopted as soon as possible. A major challenge is the quick implementation of this and other laws in order to promote a functioning land market. These issues involve considerable institutional capacity building, which is time-consuming and requires continued political support. However, as in other areas of agricultural policy, the Government is willing to make up for time lost in earlier years of transition. If an appropriate legal framework is put in place, the World Bank is willing to give assistance in this area and is preparing an investment project to support the Government in setting up the cadastre and registration system.

Critical Issues for the Future

The Government has made great progress in restitution of land and issuing of Land Commission certificates with the legal status of titles, and in amending overly restrictive laws governing leasing and sale. However, there are still two critical sets of tasks to develop a well-functioning land market.

Completion of land privatization, creation of legal and institutional conditions for land markets and leasing. This involves:

- The creation of a modern land titling and cadastral system. In this regard, it should be emphasized that the current draft of the law, which has passed Parliament on first reading, will need substantial revision in order to serve as the basis for a lending project and a well-functioning system. The World Bank team is working with the parliamentary commission to accomplish this.
- The speedy settlement of land ownership issues and the provision of proper proof of ownership which can facilitate a land mortgage market.
- The sale of remaining state-owned land.
- The acceptance of land ownership by foreign investors.
- Pass an appropriate Land Cadastre and Registration Law.
- Focus on and set targets for individually titling parcels.
- Improve system for collecting and disseminating information on land market prices and on land market transfer procedures to new landowners.

Conducive framework for farm consolidation. The further consolidation of the farming sector involves two major tasks:

- Consolidation of fragmented land ownership and consolidation of smaller farms. The creation of viable farming units can be accomplished by consolidating the current small farms. These objectives should be facilitated by appropriate government policies such as liberal land and leasing market regulations, promotion and support of land consolidation, and initial farming investments.
- Further transformation of private cooperative farms. There are many indications that cooperative farms in their current state would hardly be able to cope with the

² Involved in the drafting of the law are the Ministry of Regional Territorial Development of Bulgaria (MRTDB), the Ministry of Justice and Legal Euro-integration (MJLEI) and the MAFAR.

competitive pressure of the EU environment. Their methods of operation and management and their handling of current resources all need to be adjusted to the principles of a market economy. In the medium-term, strict profit motivation and hard budget constraints, as well as financial consolidation are essential. A further transformation involving the restructuring of ownership management and labor is needed, and in many cases the splitting up and diversification of downstream activities is needed as well. Government policies and legislation should facilitate, rather than obstruct, this process. At the same time, the bailout of insolvent cooperatives through government support should be avoided.

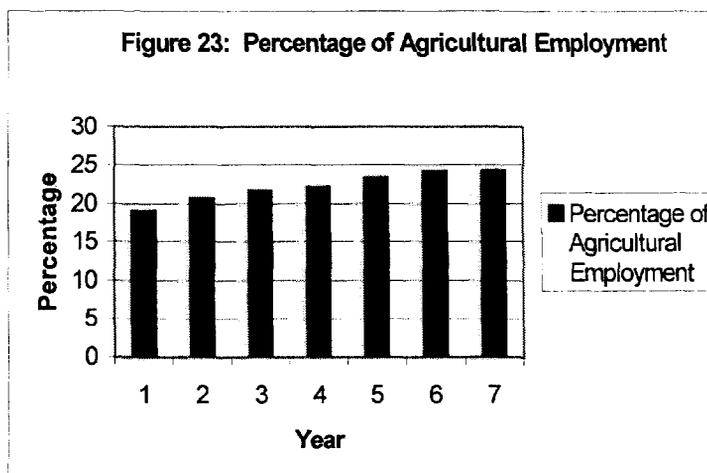
Facilitating the creation of marketing and service cooperatives. In developed market economies, marketing and service activities represent the major framework of cooperation among farmers. Western-type marketing and service cooperatives are very rare in Bulgaria, however, they represent a very important instrument in increasing the efficiency and competitiveness of smaller farms. The creation and functioning of these cooperatives should be supported by appropriate legislation and conducive financial policies.

Privatization of remaining state farms. There are still a number of state owned agricultural enterprises. The privatization of these enterprises needs to be completed as planned by the end of 1999. Only a very small amount of farm land attached to research and extension offices should remain in state ownership.

Foreign ownership of agricultural land. In principle, membership in the EU would require that agricultural land markets be opened to competitive forces from anywhere within the Union. Right now foreign ownership of agricultural land is not allowed in Bulgaria (except through a Bulgarian registered business) and foreign agricultural land ownership is a rather sensitive issue, similar to other EU accession countries. It is feared that the opening of agricultural land markets will have a potentially very significant negative impact. Right now agricultural land prices are much lower in Bulgaria than within the EU, and the fear is that opening the markets would result in large parts of the countryside under foreign ownership. This could be recognized and Bulgaria might try to negotiate a grace period for the full liberalization of the agricultural land market, following the example of Austria. However, it is not clear that this is an appropriate strategy, since there is another side to the debate. It is not at all clear that there would be a large shift in land ownership to foreigners (this negative conjecture has no basis in economic theory or experience elsewhere), and there are several positive effects that could be expected. What is clear is that there would be a large jump in the price of land. At the higher price, some land would be bought by foreigners, but probably much less than is feared. And this increase in land prices would be of significant benefit to Bulgarians. It would give land sellers much-needed cash; for other land owners, it would increase their wealth. For farmers, this would be especially beneficial by helping provide collateral to alleviate the current lack of liquidity. It could jump-start the land market. And it would also be more consistent with the basic meaning of property rights in a free society.

Labor Markets

The importance of agriculture as a source of employment is still significant in Bulgaria. The EU report on Bulgaria estimates the number of people working in agriculture in 1997 as 745,000 which corresponds to 23.3% of the total working population. A downward trend can be observed in agricultural employment can be observed from 1989 to 1992. During this period the number of agricultural employees decreased by 14% (Figure 23). Since then, employment in agriculture increased 17% by 1997. In addition, about 4% were employed by the agro-processing industry.



Since then, employment in agriculture increased 17% by 1997. In addition, about 4% were employed by the agro-processing industry.

Beyond these developments, there are important facts to highlight:

- The 23.3% share of agricultural employment is somewhat misleading. The statistics do reflect the large number of small farmers (approximately 1.5 million) who produce mainly for their own consumption. About 44% of these farms are run by pensioners who are not counted in official labor statistics. Similarly a significant portion of rural unemployed are engaged in some sort of agricultural production activities.
- Forty-five percent of the workforce in agriculture are women.
- The primitive nature and the difficult financial position of farming turn young people away from farming, resulting in a relatively high average age of the agricultural labor force.
- The majority of those now working in agriculture have no skills suitable for individual commercially-oriented farming.

In 1999 the rural areas have suffered most from unemployment and had the lowest proportion of the economically active population (Table 30). The average rural population in Bulgaria is considerably older (43.8 years) than the urban population (37.3 years). The mobility of labor is rather low. Only local labor markets have developed so far. In general the movement of people across regions is rather limited and constrained by several factors, especially housing and the narrow focus of work training and experience.

Table 30: Employment Status by Rural and Urban Areas, March 1999

	Activity Rate (%)	Employment Population Ratio (%)	Unemployment Rate (%)
Total	49.1	41.3	15.9
Urban	54.7	46.9	14.1
Rural	37.4	29.4	21.4

Source: NSI (1999, p. 25)

A well-functioning labor market is essential for improving the productivity and competitiveness of Bulgarian agriculture because the current labor force in agriculture is still large compared with the standards of productive and internationally competitive agriculture. The non-agricultural components of the rural economy should provide immediate employment opportunities for those who are not needed in agriculture. The inter-regional and inter-sectoral mobility should also be promoted with provisions for training and relocation.

Financial Markets

From 1990, which marked the transformation of the regional branches of the Bulgarian National Bank into “commercial” (but initially not private) banks, until 1996, the banking sector was fragmented and inefficient. State banks propped up loss-making state owned enterprises, and many banks made large loans to poor risks in the private sector. When privatization was carried out, it was done in a non-transparent manner to managers and businessmen, who did not operate the banks as professional institutions. The banking system collapsed in 1996, resulting in the bankruptcy of approximately one-quarter of the country’s financial institutions. Following the crisis, the activities of banks still focused mainly on government bond and foreign currency transactions, rather than commercial lending, and savings mobilization in rural areas was poor. Few banks lent to agriculture, exceptions to some degree being the Central Cooperative Bank and Hebros Bank.

Clearly, non-existent or limited access to credits remains one of the major constraints mentioned by farmers and other entrepreneurs in the rural areas. Existing capital is very limited, obsolete and inadequate for today’s farm structures. The lack of financing for immediate inputs and carry-over stocks is a serious constraint to private commercial farming. Special financial instruments common in developed market economies, such as a warehouse receipt system, are not well developed yet in Bulgaria although the warehouse receipt system has been introduced.

Reasons why commercial banks are very reluctant to lend to agriculture, even though banks recovered and have liquidity, are manifold. The currently low profitability and high risk of the sector is certainly only one problem. More importantly, the relatively small size of loans that can be afforded by most private farmers implies a high share in fixed costs for evaluating the creditworthiness of the potential client. This problem could possibly be alleviated by a policy instrument, which subsidizes the fixed costs of a loan, thereby making smaller loans more attractive to commercial banks. However, one of the

main reasons for a limited access of agriculture to investment capital is the lack of collateral. A functioning long-term credit market for agriculture heavily depends on a functioning land market, which, as shown above, has not yet been realized in Bulgaria.

These constraints have been tackled partly by Government intervention. Since 1992, the Government has operated a specialized agricultural credit scheme, the Agricultural Credit Center, which has provided medium and long-term investment loans. Another specialized agricultural credit scheme was started by the EU PHARE program in 1996 as a system of credit cooperatives. These so-called Private Mutual Rural Credit Associations (PMRCA) are supported through technical assistance and capital resources on a revolving basis. Repayment rates are high. Despite the positive effect, the schemes also leads to distortions since the loans are given at below-market interest rates.

These above mentioned schemes have, however, been relatively small players in the agricultural credit market compared to the much larger credit program, the State Fund for Agriculture (SFA). However, as will be shown below, these SFA credit subsidies have been poorly targeted, and subsidized credit schemes using commercial banks as agents also encounter disbursement problems, and to some extent compete with potential commercial lines.

State Fund Agriculture

State Fund Agriculture (SFA) is the key instrument for state support in agriculture in Republic of Bulgaria. It was established in 1995 based on the Law on Support of Agricultural Producers and began operating in early 1996. The Law on Support of Agricultural Producers defines objectives, function and structure of SFA, and foresees its main activities in the provision of grants, the extension of targeted credits, the covering of banks' credits interests, the provision of credit guarantees, and the co-financing of target projects under EU programs related to agriculture and rural development. SFA is a legal entity with its own budget, which is subject to annual approval by the Council of Ministers of the Republic of Bulgaria upon proposal of the Minister of Agriculture, Forestry and Agrarian Reform. According to the Law on support for Agricultural Producers, resources of the SFA originate from annual subsidy from the state budget; a tax on food products (recently eliminated); export taxes (of which there are currently none); a percentage of revenues from lease or sale of state-owned agricultural land; and funds received in the framework of international programs.

In practice, SFA's main activity has been to provide funds directly to farmers, using commercial banks as agents. The amount lent has been substantial (up to 2%-4% of agricultural GDP). The types of schemes financed vary from year to year, but they have included a seasonal credit facility financing inputs for wheat, maize and sunflower production (with a 50% interest subsidy); direct subsidies per unit area for the same crops; and 70% interest subsidies on special investment loans approved by the Managing Board of the SFA.

Some of these schemes have been distortive not only through their interest subsidies, but also due to other regulations set by the program. For example, wheat producers receiving credit under the input-financing scheme at planting were obliged to sell wheat to mainly

state connected companies designated by the SFA, at contract prices negotiated before planting. This requirement limited development of a wheat market still heavily influenced by the marketing agency Zarneni Hrani and state millers.

A 260 billion leva loan guarantee scheme in 1997 was designed to guarantee loans extended by commercial banks to purchasers of the wheat crop. The state served as ultimate guarantor of loans to purchase from farmers at the official guaranteed price. Along with this scheme, the government also introduced a high official purchase price and an export tax. While a large number of commercial banks were involved in intermediation of the loans to purchase the crop, final borrowers were limited to Zarneni Hrani and another twenty state purchasing companies and mills. This allocation pattern was an additional blow to development of a competitive wheat market, since it effectively excluded the private trade. The aftermath of this scheme remained a problem and has only recently been resolved. Banks are still reluctant to make any loans for purchase of harvest.

SFA is still the main implementing agency of agricultural policy instruments, most of which today are credit subsidies. However, the program of SFA has changed considerably. Today, SFA is administering a number of short-term credit schemes as presented in **Table 31** as well as capital subsidies for investment projects.

Table 31: Short-Term Credit Lines Provided by SFA, Production Year 1999/2000

Instrument	Description
1. Direct subsidy for storage of wheat	Total allocation for harvest 1999: BGN 3.4 million; 1.50 BGN per ton per month
2. Direct subsidy for feeding animals and poultry for breeding	Total allocation: BGN 1.8 million to be utilized between Aug. 15 and Oct. 30 1999; subsidy is provided upon presentation of invoices for the purchase of feed
3. Commodity credit of wheat seeds for the autumn sowing	Total allocation: BGN 4.1 million for subsidized credit line for purchase seeds obtained from licensed seed producers
4. Commodity credit of fertilizer to producers of wheat, barley, maize and sunflower	Total allocation: BGN 9.0 million for subsidized credit line for purchase of phosphate and nitrogen derivatives
5. Financial support to agricultural producers of bread wheat and wheat for seeds	Total allocation: BGN 2.6 million; interest subsidy for credit lines of commercial banks for wheat production (cultivation, fertilizers, herbicides, harvesting, etc.)

Source: SFA 1999

SFA's short-term loans do not seem to be able to create good credit access to farmers. First, the regulations and requirements are quite specific. Besides the transaction costs involved in the administration of such scheme, it is also distortive by favoring certain groups of farmers over others, supporting the role of existing input suppliers, etc. Moreover, specific regulations also give incentives to farmers to change their production activities in a way, which is not in line with improving the sector's overall net income/welfare contribution. Second, and probably more important, the short-term loans

are competing with potential credit lines of commercial banks. Banks might generally be interested in short-term lending which is relatively less risky in unknown markets and for unknown clients. However, they will continue to channel their own money to urban areas or even abroad, as long as they have to compete with subsidized credits. Therefore, a further reduction of direct short-term lending is an important step of continued reform program of the SFA.

In addition to the short-term credits, SFA also has a longer-term investment program. This includes credit lines: (1) for start-ups in agriculture (projects up to 15,000 BGN with a repayment up to 4 years or, in the case of purchase of land, up to 5 years); (2) for larger 'Bulgarian Farm' projects (up to 100,000 BGN with a minimum of 10% producer's own financing); (3) for still larger 'Development' projects (up to 260,000 BGN with a minimum of 30% producer's own financing); (4) for farming in Mountainous areas (up to 15,000); (5) for ecological farming (up to 80,000 BGN); (6) for farmers younger than 35 (up to 15,000 BGN); and (7) for greenhouses (up to 1 million BGN with the borrower putting up 35%).

Recently, a further instrument was approved by a protocol decision of Oct 7, 1999 of the Managing Board of SFA. It consists of guarantees to commercial banks for credits extended to agricultural producers for the purchase of land. The maximum amount for such a credit is 100,000 BGN, covering up to 90% of the amount of the requested credit over a maximum maturity period of 60 months. This guarantee is the collateral for the commercial bank that gives the loan, while SFA takes physical collateral in the amount of 130% of the guaranteed amount.

The issue of evaluating the net impact of long-term credit on credit access of farmers is more difficult than for short-term credits, since banks are making very few long-term loans, even in sectors where there is no crowding out by state lending. This indicates that SFA credit is not as likely to crowd out the private sector in this market. Furthermore, some important steps have been undertaken to reform SFA's investment program so that the adverse effect on the credit market is minimized. First, investment loans are amortized over the life of the loan, with at least annual payments of principal. Second, objective criteria are established for bank eligibility in SFA programs (e.g. minimum balance sheet standards). In addition, the SFA's interest rate charge on its long-term funds to banks (for on lending to borrowers for investments) is now at least one third of the cost of deposit funds of commercial banks. Nonetheless, most SFA programs do not serve the objective of encouraging commercial banks to start lending to agriculture.

For these reasons, and to bring policy into conformity with the EU, the investment program of SFA also needs to be further reformed. One obvious reason is, that disbursements in the second half of 1999 have almost come to a halt. To make investment credits more attractive by increasing subsidy would be the wrong strategy. Instead, the state should focus on technical assistance to ensure that alternative private financial agents are becoming more willing to fill the gap as the SFA's programs are reduced. The Government should develop a strategy to promote alternative financial mechanisms, such as equipment leasing, mortgage credit, and other long-term credit sources common in developed markets. SFA's short-term credit lines should be eliminated in the next year,

and its long-term credits should be transformed into partial guarantees for commercial bank loans. Other strategies to attract commercial lending could also be tried, such as offering banks a subsidy per loan transaction (rather than as a percent of loan volume) for first-time borrowers to overcome a reluctance to consider small loans. Another obvious reason for restructuring the investment program of SFA is because it will become the paying agency providing counterpart funds for SAPARD. This aspects, which will require a lot of Bulgaria's own resources will hardly leave means for a continuous support of investments programs with ambitious effect for the Bulgaria's agriculture and rural sector. The restructuring of SFA in the light of SAPARD is described later in the study.

Credit Cooperatives

Rural credit cooperatives have a long historical tradition in Bulgaria although they stopped during the Soviet period. Their activities were revived in 1995 with the support of EU PHARE. Thirty-three credit cooperatives have been established in Bulgaria with limited magnitude of operation. Currently, the rural credit cooperatives represent one of the only sources of credit for small private farmers. They operate on a mutual-responsibility basis using their capital, which came from their initial membership fees as well as from EU PHARE grants. Their activities, however, are limited because, according to current legislation, they are not allowed to collect deposits from their members. The legislative framework governing their activities is not fully developed and their potential for financing small-scale private farmers is underutilized.

Critical Issues for Further Developing Financial Markets

In summary, at a time when Bulgarian agriculture is faced with new challenges resulting from the accession to the EU, financial markets clearly constitute a significant constraint to be addressed by Bulgaria to ensure reasonable chances to adjust to the new challenges with the proper instruments. In the absence of such adjustment, in particular in the absence of a more pro-active liquidation and bankruptcy process, social pressure may grow for more state intervention and support to make-up for the failure of these markets. Therefore, it would be appropriate (knowing that such adjustments take often a long time to become effective) to:

- review the main legal reasons that prevent land market and mortgage lending based on agricultural land, from functioning;
- review and adjust as needed the legal foundations of the warehouse receipts system, ensure that the private sector can operate properly under these laws, and assess the effectiveness of the performance guarantee given by the warehouses to deliver the product to their owner;
- activate the legal process for bankruptcy and liquidation in the farm sector;
- review the status of rural credit cooperatives, create a framework more conducive for their operations which allows deposit taking and borrowing from other banks, and establishes linkages to the rest of the rural financial sector;
- reverse the tendency to focus credit guarantees and subsidies by SFA on cooperatives, and large private units in the farming sector; and

- nominate financial auditors (Bulgarian and foreign) to review the evolution of the risks taken by the state through its activities in SFA, and assess whether and how this interest rate subsidy and guarantee by state would be acceptable at the time of accession to the EU.

PRODUCT MARKETS AND SERVICES

Agricultural Services

The agricultural services required by a well-functioning agriculture are not yet fully in place in Bulgaria.

Mechanization. The lack of mechanization is characteristic in the Bulgarian small-scale private farming sector. Tractor, combine harvesters and other agricultural machinery in use in farm activities dropped by almost 30% since 1990 (Table 32). Around 80% of the available machinery on the so-called private cooperatives are outdated or worn out. Only a tiny group of large-scale private farmers operate with new and up-to-date technical equipment. Obsolete machinery parks of private cooperatives as well as the machinery and tractor stations that still exist represent some of the only sources for machinery services for the small-scale private farmers. The shortage of machinery is a serious constraint for agriculture. According to Agra Europe No. 183 (1997), the shortage of combine harvesters led to harvesting losses of around 600,000 tons of cereals in 1997. A recent FAO report called for a comprehensive policy approach toward mechanization. Obviously the mechanization of privatized farms should be facilitated by the government; however, it is not a government function. The consolidation of the farms and the improvement in rural financial services need to be the major force behind expansion in farm mechanization. The establishment of Western European type of service cooperatives should also be considered for resolving the mechanization problems on the small-scale farms.

Table 32: Available Agricultural Equipment in 1990–97

Type of mechanical equipment	1990	1997	% of 1990
Tractors	52,375	38,928	74
Seeders	14,499	11,346	78
Grain combine	8,358	6,507	78

Source: MAFAR

Input supply. The system of input supply has also gone through significant changes. In general, however, the availability of inputs for agricultural production do not seem to represent a significant problem, though their high costs due to import tariffs increases costs of production significantly for farmers (see Chapter 2). The provision of quality seeds and planting materials has been maintained without significant interruptions in the process of privatization. The government has now removed all requirements for registering new varieties that are listed in the EU Common Catalog. The supply of fertilizer and plant protection chemicals is progressing well towards complete privatization. A few fertilizer companies provide a comprehensive service involving the

spread of fertilizers and chemicals, soil injection, and advice. The absence of financial resources and high costs represent the major problems in input use rather than the lack of physical availability.

Irrigation. Before 1990, there was 1.1 million ha of irrigated land (27% of total arable land in Bulgaria). The transition has brought a drastic reduction in irrigated areas, which is, according to optimistic estimates, around 10% of the initial irrigation capacity. According to estimates, about 40% of the original 1.1 million ha can be rehabilitated, and economically irrigated. The government is assisting in the rehabilitation of irrigation facilities and has expedited the transfer of responsibility for operation and maintenance of small-scale irrigation facilities to water users associations (WUAs). While this transfer has been made to a few associations with assistance from the Bank's pilot project, the process has been stalled for some time, with the Irrigation Systems Company (ISC) reluctant to make further transfers which would erode its power base. The MAFAR has now issued an order stating that in the future, operation and maintenance responsibility for these assets will be transferred on demand by the WUAs, with authority to approve the transfer moved from the ISC to a unit in MAFAR, with no depreciation charges, and with the MAFAR (not the ISC) as arbiter of disputes arising under the transfer contract. On-farm assets irrigating around 100,000 ha (out of about 600,000 irrigated ha) have been transferred to 42 WUAs, which have submitted applications under the World Bank pilot program. Furthermore, the longstanding log-jam in transferring ISC-owned assets was broken, and assets associated with around 22,000 ha have now been transferred. However, both the functioning of existing WUAs and the formation of new ones are impeded by the absence of an appropriate legal framework. The Bank has been supporting a "think tank," which is drafting a water users law that will be supportive of WUAs. Once this law is in place, the government plans to continue this process with individual WUAs and to facilitate the transfer of infrastructure, for example, canals and pumping stations that service large areas. It is also training MAFAR staff to help organize WUAs and assisting them in applying for transfer, thereby instituting the work until now carried out only by the World Bank pilot project unit.

For the future development of WUAs, the following actions are necessary:

- Pass acceptable law for Water Users' Associations (WUA).
- Define targets for transfer of ownership for off-farm assets to WUOs.
- Continue training MAFAR staff to be promoters for formation of WUOs, and place the staff in the field as appropriate (currently underway).

Wholesale Marketing

The network of wholesale agriculture marketing enterprises remains weak in several sub-sectors of agriculture. The development of wholesale markets for the sale of fresh produce is still ongoing. An effective wholesale market is functioning in Sofia and other, more basic, wholesale markets are operating in Parvenec, near Plovdiv, and Varna. There has been little or no development of assembly markets where producers can market

their produce either jointly or through intermediaries to traders who further transport these goods to wholesale markets in other parts of the country. An EBRD loan has been contracted to support the construction of six wholesale markets and ten producer assembly markets. The wholesale market at Slivenis is the first of these.

The case of the cereals sub-sector illustrates one of the reasons why a thriving and competitive wholesale industry has not emerged. The lack of financing for domestic traders and millers restricts their purchases to relatively small quantities at a time producers often need to sell their products soon after the harvest to repay their loans. They also lack adequate storage facilities. The only buyers who are able to finance significant purchases are foreign exporters, and, as a result, larger producers prefer to sell their grain for export. Another cause for such delays comes from the poor development of agricultural marketing and processing cooperatives in most of the sub-sectors analyzed in this study. The legal definition of cooperatives appears to need a thorough review in the light of best practices in the rest of the world so that legal constraints to their development and their effective management can be minimized. In particular, marketing cooperatives play a useful role in maintaining a higher level of competition for agricultural commodities and in helping farmers, by pooling together their products, creating economies of scale, higher leverage in the bargaining for better prices, and improved management of price and client relations.

The poor development of competitive agricultural markets at the wholesale level creates quite a significant impediment in terms of installation of the institutions of the Common Agricultural Policy (CAP) in Bulgaria. One of the main characteristics of the CAP is the fact that price and market support is mostly done at the wholesale level and not at the farmgate. It is often forgotten that in the CAP, price intervention constitutes only an indirect support to farmers as the intervention agency does not buy directly from farmers; it buys from wholesalers and marketing cooperatives. As a result, farmers in the EU benefit most when wholesale markets are competitive and the commercial margins taken by the wholesale marketing agents remain minimal, thanks to a high degree of competition. If, as is sometimes the case in Bulgaria, a small number—sometimes only one—buyer is active in a region, there is not much pressure on this buyer to minimize his/her commercial margin nor his/her costs. The rent created by the intervention of the state (CAP) in such a case is likely to remain with the local monopoly rather than being passed on to its suppliers.

The role of agricultural markets in Bulgaria is limited, and it is in particular confined to the exchange of products and the exchange of information. In a market economy, markets can also be used to develop the exchange of price-related risks. Price instability in agriculture is traditionally a major impediment to the development of the sector. Price fluctuations often become a great incentive for governments to intervene and reduce, or stop through administrative measure, such fluctuations. When prices fall, this is usually the traditional price intervention measure to protect farmers at the expense of consumers and taxpayers; when prices increase, this is used to protect consumers at the expense of farmers and taxpayers. In the EU, the resulting price stabilization of the CAP also prevented such risk management instruments to really develop further beyond their initial level of forward contracting (i.e., contracts in which prices are set but delivery and payment are deferred to a later date). With the opening of a wide range of possible price

fluctuation (intervention prices having been decreased after the McSharry reforms of 1992, while threshold prices for imports were being kept mostly at the same level), the need to further develop such risk management instruments started to be felt, and a few new futures contracts were created in Great Britain, France, Holland, Germany, and Spain. In Hungary, the Budapest Commodity Exchange started to trade again in December 1989, after about a fifty year interruption. In Bulgaria, commodities exchanges have not strongly emerged during the 1990s.

With regard to such instruments there is a temptation to develop a new modern futures market in each country. The problem with this is that future markets require very high volume to be viable. Another approach at a time of market globalization and regional free trade zones, would be to assess how Bulgarian farmers and entrepreneurs could access existing risk management instruments either locally or in foreign countries, perhaps, by using electronic trading. At the time of this study, no mention of any substantial effort in this regard has been made and this might indicate a real need in terms of training and information about these techniques: e.g., forward trading, over-the-counter trading and swaps, futures and options.

Finally, the poor development of private wholesale marketing institutions creates a significant constraint to the further development of the food industry. It is already quite clear that medium- to large-scale food processing enterprises will be attracted by the cost-effective services and guaranteed sorting and quality standards provided by foreign suppliers. In a competitive environment (like the EU), wheat millers will have to secure their raw material (wheat) at the lowest cost possible. Being part of a cartel will not guarantee survival since their output (wheat flour) will also compete with the EU milling industry. Bulgarian millers will then be more open to foreign suppliers—e.g., from Hungary or France—to buy a full train of wheat of a certain type/standard than to please comparatively ineffective local suppliers. In the absence of adjustment of the constraints to its development, the weaknesses of the wholesale marketing industry could become a main weakness of the agricultural sector as a whole when Bulgaria will enter the EU.

Critical Issues for Product Markets

With regard to agriculture services, the following actions are recommended:

- a review by specialized experts of the legal framework of cooperative to assess the impediment it creates to the creation of marketing and processing cooperatives and to their effective management. In this regard, the analysis of the cooperative laws should be performed from the view point of agency theory;
- for fresh produce and livestock, the strengthening of a network of private regional exchanges, with or without the support of local municipality, should be undertaken. Their role in terms of facilitating price information and development of a competitive market intermediation should be developed. Such commodity exchanges could become elements of the information network that the CAP needs for products in the livestock, fruit and vegetable sub-sectors;

- a review of the level of competition at the sub-sectoral level and the implications of the market support policy on competition would be important to launch with the ultimate goal of alleviating this major constraint observed on the future development of agriculture (in particular in the context on an enlarged EU); and
- the development of a program of analysis of price related risks taken by entrepreneurs in the agricultural and food marketing chain, their costs, and the transfer to private sector from the SFMR of the management of such risks; and education and training on agricultural marketing and price/risk management in agriculture.

Cereal Marketing and Food Security

Apart from general issues in wholesale and retail marketing, the cereals subsector has some unique problems, which are relics of its previous state-dominated structure. The state-owned enterprise until recently charged with purchasing and processing grains is Zarneni Hrani (ZH). Although ZH's *de jure* monopoly position in grain trading and milling was changed several years ago, it continued to dominate the market, making the playing field for the private sector far from level. Intervention by ZH has been substantial and has created uncertainty for private traders while crowding out their involvement in the grain market. For example, in 1996 when international and local traders were preparing imports of corn and wheat to relieve local scarcities, ZH bought imported corn and wheat, selling it in the domestic market at a price below the cost of imports. In addition, ZH's buying and selling have in the past compressed intra-seasonal price variation, thereby reducing incentives for storage, and further crowding out the private sector.

Past mechanisms for crop financing biased the marketing system in favor of ZH and other state enterprises. State mills using government guarantees had access to credit, putting them at an advantage vis-a-vis private mills who had to use their own assets in order to obtain credit. Private mills thus obtained only a fraction of their needs in working capital during the 1997/98 crop season. In addition, farmers obtaining credit through the State Fund for Agriculture (SFA), the government's agricultural credit facility, were committed to selling their crop through forward contracts mainly to state mills and enterprises, or directly to the SFA.

These problems are not unique to Bulgaria; the experiences of other countries that have such intervention systems in Eastern Europe and elsewhere has not been any more encouraging. Grain intervention agencies in Poland, Croatia and Turkey, among others, have encountered severe financial difficulties in defending minimum prices. More importantly, their actions have de-stabilized markets (notwithstanding their legal mandate to do the opposite) and discouraged the evolution of a well functioning private sector.

Inadequate market information is another problem that reduces market efficiency in the sector. The chief market information system, AMIS (Agricultural Marketing Information Service), is hardly used by farmers. The major complaint with the AMIS is that information is considered too outdated to be of real value. Rather, market participants tend to rely on their own informal contacts for their information. As in many

other agricultural systems, smaller farmers have poorer access to accurate, timely market information.

To encourage private sector development in this market the Government has followed a four-track strategy: 1) dismantle ZH and ensure that it is not replaced by another similar intervention agency; 2) ensure that the State Reserves and Wartime Stockpile is not operated in a market-disruptive way; 3) remove regulatory obstacles to private traders, and 4) support the development of a private warehouse receipts system to encourage storage and trade and to unlock private financing for producers, traders and processors.

First, the Government has now taken irreversible steps to abolish ZH as a legal entity. Of the assets owned at the beginning of 1998—including about 924,000 tons of warehouse space—almost one-half has been privatized, with the exception of around 180,000 tons of capacity transferred to the State Reserves. Progress was especially impressive during late 1998 and 1999. The Government has closed the Sofia headquarters of ZH, and all that remains of the company now are a few regional offices which are overseeing the completion of the privatization of company assets. Privatization will be completed and ZH terminated as a legal entity by the end of 1999. Although the Grain Law (and previously the State Reserves Act) authorizes the Government to set up another intervention agency with functions similar to ZH, it has pledged not to do so. To lend credibility to this commitment, the Government has amended the State Reserves Act to remove references to such an agency, and has also pledged that it will in the medium term amend the Grain Law to remove the clause authorizing an agency with this function (with the exception of the agency needed to implement the Common Agricultural Policy).

Second, ceilings have been set on both the storage capacity of the State Reserves and the amount that it will actually store.³ These were set at levels that would meet legitimate security needs, while not creating an “overhang” large enough to threaten market stability. The State Reserves has also committed itself: 1) to carry out any purchases or sales via the commodity exchange or by competitive tender to make transactions transparent and minimize rent-seeking opportunities; and 2) to limit transactions to 50% of the maximum stock level on an annualized basis. The Bank is helping the Government think through other alternatives to meet its food security concerns in the most efficient way possible.

Third, with technical support from the EBRD, USDA, ACDI/VOCA and the Bank, the Government has made significant progress in setting up the institutions necessary for an efficient private trading system. One cornerstone of this is the warehouse receipts system. This system, which greatly enhances efficiency of grain markets in most developed economies, facilitates the issuance of receipts for stored grain. These receipts verify title and can be used to secure loans and to transfer ownership without physically moving the grain. The Government has passed legislation and regulations to enable licensed warehouses to issue receipts, to enter into commercial contracts using stored grain as collateral, and to establish a privately managed and funded indemnity fund to

³ It is necessary to have capacity larger than actual storage needs to allow for stock rotation.

secure depositors of grain against fraud or other losses. The licensing is carried out by the National Grain Service, and agent of the MAFAR, but with participation by the private sector in formulating conditions for licensing and in licensing decisions. Several warehouses have been--or are in the process of being--licensed and a few receipts have been issued and used as collateral under a pilot program; thus, the system has begun to function, though so far on a small scale. The EBRD has put in place a credit line to be used for loans secured by warehouse receipts. Implementation was slow for several reasons, among them that the printing of the physical receipts was delayed. As a result, the system was not able to become operational in time for the wheat harvest, but should be in place for other fall crops. As private marketing channels develop, the threat of ad hoc state interventions diminishes, and real interest rates decline, it is likely that more and more users will take advantage of the system. There is, however, some concern that relatively high fees will deter warehouses from applying for licenses to issue warehouse receipts. This in turn raises the possibility that if only a few warehouses are licensed, their fees to grain storers may be non-competitive. But at this point, the system is too new to really know for sure whether these will emerge as important constraints.

Perhaps a more serious concern is that all grain storage facilities—not only those that issue warehouse receipts-- are required to be licensed. This seems overly restrictive and unnecessary, since users are perfectly capable of judging the quality of physical storage facilities, which is the main attribute that is used as the basis for licensing. (In contrast, the rationale for licensing warehouses that will issue warehouse receipts is that users are not able to judge their financial condition, which is a highly material characteristic.) The danger in requiring licenses is that this may serve as a barrier to market entry and help preserve localized uncompetitive conditions in the market for storage. Because of what the Government views as past abuses and involvement of a criminal element, the National Grain Service also requires registration of grain traders, which is another unnecessary obstacle to market entry. As with warehouse licensing, the MAFAR has tried to ensure that this is not a significant barrier by involving the private sector in formulation of registration criteria and in licensing procedures. Still, it would be better to substitute voluntary certification for the mandatory licensing. This would put the value of the NGS's inspection to a market test, to see if it is really worth the cost of carrying it out.

An additional constraint on market performance is that associations of private grain farmers and traders are at a rudimentary stage of development in Bulgaria. Lack of voluntary private associations is an impediment to market efficiency that hinders the market involvement of small operators, both farmers and traders.

Grain Reserves

While Zarneni Hrani has been dismantled, the State Reserves continues to make quite large purchases and sales. The Government has adopted some operating rules that have as their objective to minimize the degree with which the State Reserves interferes with market development, but some further steps would be useful. What is needed is to:

- Better define the operating rules for the State Reserves purchasing and sales so as to limit their impact on market prices, and make the impact more predictable;

- Gradually reduce the overall size of the stocks;
- Shift some storage to private facilities (thereby improving quality of storage and encouraging private warehouse development);
- Eliminate in-kind grain loans.

In the medium term, the government should gradually reduce the strategic stockpile. In the longer term, these should be eliminated altogether. Food security concerns should instead be met by restoration of Bulgaria's productive capacity, or if needed, by maintenance of modest financial reserves to allow adequate imports in times of need.

AGRO-PROCESSING INDUSTRY

Privatization and Restructuring of Agro-Processing Industry

An agro-processing industry which is capable of producing internationally competitive food products is an essential precondition for the recovery of primary agriculture. The privatization of Bulgarian agro-processing is almost fully completed. Unfortunately, most of the new owners do not have the financial resources for technological improvements. The amount of FDI is almost negligible. As a result, the inherited, over-sized, technologically out-dated plants work with low level of capacity utilization and efficiency. This agro-processing industry is not able to be the engine of the agricultural development in the country. There is a need for a significant post-privatization restructuring including the down-scaling of most of the industry. The promotion of FDI should become a high priority.

In the past, state enterprises have dominated Bulgaria's economy. The country has built up a sizable agro-processing industry to transform the surplus of Bulgarian agriculture into products which could be exported. A range of state-owned food plants were established around each of the larger urban centers for processing the local agricultural production. These plants, in addition to satisfying domestic demand, produced goods for export, primarily to the Soviet Union and other markets in the socialist countries. As a result of this policy a large over-capacity of agro-processing remains compared to the current output of primary agriculture. Lack of investments during the 1980s and 1990s has left most of these plants with outdated equipment; most of which is now in a poor state of repair and ill-equipped to meet the challenges of a comparative market. In many instance, the quality and range of products they are able to offer are poorly suited even for the less demanding Eastern European market. Also, unit costs of agricultural raw materials appear to be low in comparison with other countries. Notwithstanding these low raw materials prices, inefficiencies in processing and marketing often result in a finished product cost that is relatively high in relation to quality. Consequently, Bulgarian agro-processors have lost most of their markets, even inside the Eastern Bloc. At the same time, domestic food consumption also decreased significantly. It is not surprising, therefore, that the utilization of current agro-processing facilities is at the level of 30%-40% of technical capacity.

Status of Privatization

The privatization of the sector began in the early 1990s with the sale of the less politically sensitive enterprises. Progress in the government's overall privatization program was very slow until 1997. From 1992 to 1997 only 18% of long-term statement of expenditure assets were privatized. (A firm is defined as privatized when at least 67% of its shares are privately owned.) The pace of privatization increased from 1997 onwards. Progress was still hampered by valuation procedures that sometimes lead to the setting of unrealistic minimal bids, and by slow procedures for reducing these. Demand for the assets has been low partially because of the generally depressed state of the economy. The result of both these factors had been that many agro-industrial assets have not attracted bidders when put initially into the privatization program.

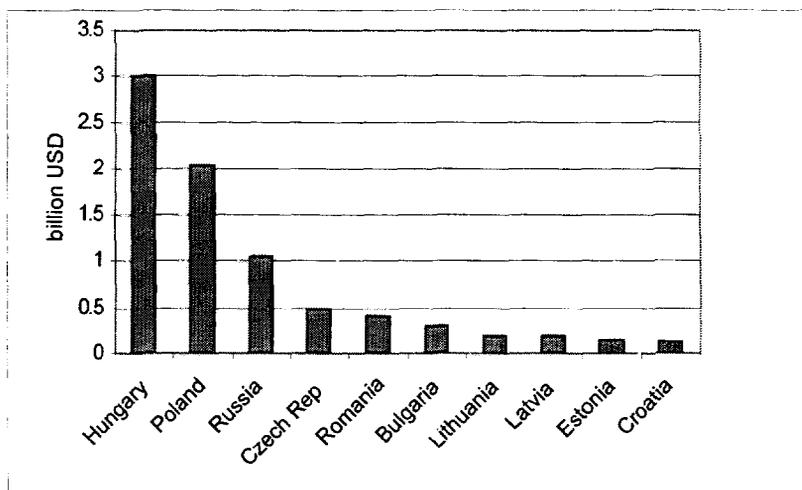
However, recent privatization policies introduced several changes in legislation and thereby addressed key issues of and obstacles to privatization. These include amendments to facilitate writing off the debts of companies, establish better division of responsibilities between the Privatization Agency and the branch ministries, limit the preferences given to management-employee buyouts, and change the treatment of investment vouchers. The result is very positive and at the end of 1999 privatization in agro-processing is close to completion (as of September 30, 1999, 88.9% of the assets of food and industry were privatized).

The process of privatization is being managed by the Privatization Agency, which is selling companies with an assessed value of over DM 1 million, and the line ministries, which handle the remaining small companies. Two methods are being used for privatization, namely, cash sale and mass privatization. About 10% of sales were management buyouts organized by the previous management and the employees. Many privatization contracts included commitments by the new owners to maintain employment or type of operation. According to the experiences of other countries, these commitments can represent a serious constraint on further restructuring and financial consolidation of the newly privatized firms.

Under the privatization process, an open, liberal policy has been applied toward foreign investors. Though there are no significant restrictions on foreign investments and there is a freedom to repatriate profits, the privatization process of agro-processing in Bulgaria has attracted relatively modest foreign investments. Bulgaria is lagging far behind other Central European countries in agri-food FDI (**Figure 24**).

With the exception of a relatively small number of domestic and foreign owned companies, the agro-processing industry shows signs of serious operational difficulties after privatization. A large number of companies were privatized without appropriate financial consolidation. The new owners, in many cases, lacked financial resources for investments and product improvement. There are significant difficulties with corporate governance, especially in companies owned by employees or investment funds. A significant number of enterprises are near bankruptcy.

Figure 24: Cumulative Stocks of Agri-Food FDI in Central and Eastern European Countries in 1997



Source: OECD

The traditional export structure of Bulgarian agriculture, characterized by fruits, horticultural based products, and cheese, has changed dramatically. Currently the tobacco and wine industries represent the branches of agro-processing which are the most important in foreign trade. The tobacco industry represents 30% of overall Bulgarian foreign currency income and for about 50% of the total food industry exports, while the wine industry adds another 10% to agri-food exports.

The tobacco sector is organized in a unique holding company: Bulgartabac. It controls cigarette factories, manipulation facilities, and trade. Moreover, despite all transition difficulties, it has remained among the six largest tobacco companies in the world. There is a comprehensive program to restructure Bulgartabac into a modern holding which must be privatized in the near future. The plan for privatization envisages the sale of shares in the company rather than the sale of individual production units. All of the wine companies have recently been privatized. Most of the privatizations involved management buyouts with very little foreign investment. As a result of privatization, the industry shows the first signs of recovery. Over 80% of domestic wine production is exported with increasing success on foreign markets.

Critical Issues for the Agro-Processing Industries

A working and efficient agroprocessing industry capable of producing products for domestic and international markets, and efficient rural services, are critical elements for the improvement of the agricultural sector in Bulgaria. Further actions are needed to create independent and private owners of agroprocessing who can efficiently control management and bring in additional investments. Priority should be given to promotion of FDI and rural SME development. To achieve this, the following actions should be taken:

- Complete privatization of all assets in the privatization programs of the MAFAR and Ministry of Industry, except those involved in court actions which prevent privatization. (Tobacco company assets under the Ministry of Trade and Tourism should also be included under a separate timetable.)
- post-privatization programs, including the revision of initial commitments regarding production and employment, should facilitate the restructuring and consolidation of ownership in the newly privatized processing companies;
- the emergence of secondary markets for ownership of agroprocessing enterprises should be promoted and facilitated, including the promotion of foreign investment;
- strictly enforced bankruptcy legislation should be used to consolidate the newly established private sector; and
- the emergence of rural small and medium agroprocessing and service enterprises should be facilitated by improved registration procedures and advice.

The Management of Quality of Agricultural and Food Products

The quality of food products represents one of the major obstacles to increasing exports to western, and even eastern, markets. Bulgarian State Standards (BSS) and technical specifications have not been harmonized with internationally accepted standards, such as the Codex Alimentarius or EU standards. In practically all instances, the quality criteria are lower than international standards and require extensive revision. As an example, the allowed bacteria levels for milk in the BSS are four times higher than the levels excepted in the EU. With very few exceptions, the facilities of Bulgarian dairies and meat processing complexes do not meet EU quality requirements.

The control of food quality and safety, apart from the significant progress made in recent years in Bulgaria, is still based on regulations originating in the 1970s and 1980s. The laws and control procedures of that system relied extensively on end product testing and state responsibility for quality rather than producer/manufacturer responsibility. Food control systems under this concept were not oriented towards food safety. The identification and analysis of critical control points were not part of the manufacturing practices in general. Currently, control services continue to rely on end product testing at most of the Bulgarian food processing enterprises rather than a quality assurance approach based on sampling for quality throughout the production process. While the role and importance of HACCP/GMP, under which producers and manufacturers carry greater responsibility for food quality, is recognized in Bulgaria, there are only a handful of multi-national food processors utilizing these systems.

At each stage in the agricultural and food marketing chain, farmers and entrepreneurs should have the responsibility of ascertaining the quality of the products delivered to their clients, in particular, in relation to potential health hazards, environmental impact, and other services attached to the product. The Government of Bulgaria is fully aware of the pending problems of harmonization with the EU system, of the legislation on these matters and of its enforcement. Among the decisions that have not benefited from a similar level of attention, one could list the transfer to private sector of a rather large number of tasks currently undertaken by numerous state agencies, and a

parallel reduction in the number and a substantial reassignment of the roles of implementing state agencies on standards, quality control, health safety. This new approach would include a significant change in the incentives given to food processing enterprises while adjusting to this new set of responsibilities transferred to them. During negotiation for accession to the EU, Bulgaria will have to demonstrate that the food legislation and the ability of the enforcement agencies are fully compatible with the EU directives on food hygiene, inspection and certification, and legal responsibilities of producers. Not only is such ability crucial in joining the single market (to avoid non-tariff barriers within the single market), but also in controlling the products imported in the EU from third countries through Bulgarian borders from non-EU countries.

While a great effort appears to have been made, in particular by the concerned departments of the MAFAR in adjusting the whole set of laws concerning food quality, standards, etc., it appears that the enterprises themselves have not benefited from the information, training and assistance to adjust to this new concept of quality management. A substantial educational effort is needed in reference to the implementation of the new legal environment. In Bulgaria, as well as in all the other countries of the region (in particular candidates to accession to the EU), one would recommend the following program of actions:

- a program of public information-awareness and data banks in real time open to scientists and lawyers, and in coordination with private trade association (see below). In addition, information to the rural population about the EU would need to be developed and/or strengthened;
- a program of collaboration between the private sector and state agencies, including the outsourcing of some of the activities of the public sector that could be easily implemented either by the private sector or in collaboration with foreign state agencies operating in the same field in other EU countries or in countries negotiating the accession to the EU;
- a plan for the completion of the restructuring of state agencies involved in consumer protection, animal and plant protection, agricultural research and extension, border control, farm registration, market information, market organization by sub-sector, and market intervention. The restructuring plan should address issues pertaining to the adjustment of the locations of various offices and laboratories (including creations, mergers and closures);
- a review and adjustment of the salaries and benefits paid to civil servants in agriculture so that they can remain competitive with the private sector. The government will need to strengthen its staff in view of the need to keep high standards of professional expertise, particularly in various areas related to the EU;
- a detailed training program for existing staff in the various specialties concerned and an exchange program of staff between Bulgarian and EU institutions. This training program should not only be undertaken for civil servants but should be designed, in collaboration with the concerned trade associations to address the needs of private sector in the various sub-sectors;
- a recruitment program by the restructured state agencies (in particular in areas where the *acquis communautaire* imposes new types of activities on the country); and

- an investment program to strengthen technology related to quality control and new food processing techniques incorporating technologies related to quality enhancement and environmental protection. The program could have two major components that would have to be consistent with each other: one for the financing of private sector (e.g., loans for priority actions for the implementation of the new legal framework, financed under the SAPARD program) activities; and one for the financing of the restructured state agencies (see above) in office technology, information networks, laboratory building and equipment, etc.

Representation of the Private Sector

The representation of private interests for each profession in the various agricultural and food subsectors constitutes an important missing element. This gap is a strikingly common feature in Eastern and Central European countries, with the exception of Hungary, where such representation is highly developed in a large majority of agri-food sub-sectors. In the EU, such representation is a crucial element of the implementation of the CAP. It contributes to a better understanding of private interests by the European Commission and the governments in the EU, and of government policies by the concerned private sector. In addition, many decisions related to trade, research and technology, market information, training could be taken in common by operators belonging to the same profession or to the same marketing chain (the so-called inter-professional associations, or, like in Hungary, the "product councils"). In Bulgaria, these private professional associations and inter-professional associations, independent from government, are mostly missing, or when they exist (e.g., dairy industry), they are weak.

Among the services of general interest to be offered and performed along the various sub-sectoral marketing chains by these private representative bodies--services currently mostly lacking to agriculture and agroindustries--one can list the following elements:

- Consultation with state agencies intervening in the sub-sector;
- Analysis and information on markets and regulations (domestic and foreign);
- Organization of technical and commercial training programs;
- Contracting for research on issues of common interest with domestic or foreign institutions;
- Organization of first instance arbitration of trade conflicts (this can be done also in coordination with the Chambers of Industry and Commerce); and
- Development of facilitating procedures and instruments for the exchange of products.

The development of such organizations should be promoted and facilitated. Technical cooperation with similar foreign organizations could be explored to develop a good understanding of the role of such organizations. However, when created they should be sufficiently scrutinized in the light of the competition laws to avoid any risk of sub-sectoral collusion.

IV. EU AGENDA FOR INSTITUTIONAL DEVELOPMENT

PUBLIC INSTITUTIONS FOR AGRICULTURE

The Government Administration

Bulgaria inherited a Soviet-style agricultural administration designed to implement central planning objectives and direct a command economic system. After independence, the Governmental institutions in the sector have been reorganized several times. The Ministry of Agriculture, Food-processing, and Agrarian Reform (MAFAR) became the main institution responsible for agricultural policy. MAFAR, under the current structure, operates mainly according to the needs of a market economy and has regulatory, policy development, and service functions. At the same time the regional agricultural administration structure has to adjust to the needs of a market economy, by reducing their scale and restricting their operation to strictly regulatory functions.

MAFAR and the agricultural administration fulfill a wide range of task and functions: First, many functions of MAFAR are related to agricultural and food production. The Ministry:

- implements the national policy for development of plant growing, animal breeding, forestry and fisheries;
- implements the national strategy for food safety in cereals, fodder, dairy, meat, fruit and vegetable sectors. MAFAR also creates and maintains information systems and data basis and makes analysis referring to the developments of the agricultural, fisheries and forestry sectors;
- implements the national policy in developing irrigation in agriculture;
- co-ordinates and manages the regional agricultural offices and forestry services;
- co-ordinates the work on new quality standards on agricultural products; and
- prepares programs for conservation and restoration of land, etc.

Second, MAFAR is in charge of the restitution of agricultural land and forests and is responsible for maintaining and updating the legal and cadastral documentation on restituted land. Third, MAFAR has to fulfill environmental tasks by implementing the legislation on conservation of land and forests, by taking measures against erosion, etc. Fourth, it also promotes the restructuring of the agricultural sector by managing the privatization of some public and municipal agricultural enterprises; and by supporting the establishment of private farms, cooperatives, and associations as well as promoting market institutions like the stock exchange or wholesale markets. Fifth, in the area of economic and trade policy, MAFAR undertakes analysis and programs for development of agriculture, fisheries and forestry; makes proposals on policy measures such as institutional prices, taxes, duties, insurance, credits and guarantees; implements the adopted national investment policy in agriculture, forestry and fisheries; and prepares

situation-outlook reports on the agricultural markets. A sixth role of the state in the agro-food sector is that of research and development.

Another very important area of functions is that of integration policy, foreign trade and international relations. In short, MAFAR organizes the work on and implementation of the basic legal framework for harmonization with the *acquis communautaire*; and provides the mechanisms for the enforcement of this legislation. The most important areas of integration are discussed below. In addition, the Ministry also takes responsibilities in the agricultural part of other bilateral and multilateral negotiations, and represents Bulgaria in a number of specialized international organization and bodies.

Specialized functions are carried out by several subordinate bodies. These bodies might have a separate budget such as the National Veterinary Service and the National Crop Protection Service, but report to MAFAR. In total, the staff of these subordinate bodies amounts to almost 7,000. Furthermore, a staff of another approximately 6,500 is responsible for education.

The agricultural administration has recently undergone considerable changes in the light of EU accession, including a change in its name to Ministry of Agriculture and Forestry. The new organization is shown in Table 33.

Table 33: Number of Employees in Agricultural Administration

MINISTRY OF AGRICULTURE AND FORESTRY

	No.
MINISTER	
<i>POLITICAL CABINET</i>	
HEAD OF CABINET	1
DEPUTY MINISTERS	4
PARLAMENTARY SECRETARY	1
HEAD OF PUBLIC RELATIONS DEPARTMENT	1
CHIEF SECRETARY	1
<i>GENERAL ADMINISTRATION</i>	
1. FINANCIAL-ECONOMIC ACTIVITIES AND OWNERSHIP MANAGEMENT DIRECTORATE	25
1.1 Accounting Department	6
1.2 Economic Activity Department	17
2. LEGAL – ADMINISTRATIVE AND INFORMATION SERVICES DIRECTORATE	35
2.1. Office Work and Records Sector	23
2.2. Public Relations Sector	2
2.3 Human Resources Sector	5
2.4. Defense-mobilisation Sector	3
TOTAL	60

SPECIALIZED ADMINISTRATION	
1. STRUCTURAL POLICY CHIEF DIRECTORATE	326
1.1 Agro-statistics Department	7
1.2 Regional Policy Department	10
1.3. Information Services and Technologies Department	15
1.4 Regional Offices on Agriculture, Forestry and Agrarian Reform	292
2. LEGAL DIRECTORATE	21
3. FINANCIAL POLICY DIRECTORATE	18
3.1. Budget	10
3.2. Investments	6
4. LAND AND LAND OWNERSHIP DIRECTORATE	55
5. MARKETING AND TRADE POLICY DIRECTORATE	22
5.1. Marketing	7
5.2. Trade Policy and Analysis	14
6. INTEGRATION POLICY DIRECTORATE	30
7. INTERNATIONAL RELATIONS DIRECTORATE	14
8. RURAL DEVELOPMENT DIRECTORATE	17
8.1 SAPARD	7
8.2. Investments in Agriculture	8
9. AGRICULTURE DIRECTORATE	22
10. PRIVATISATION, RESTRUCTURING AND STATE OWNERSHIP DIRECTORATE	25
11. EDUCATION, SCIENTIFIC RESEARCH AND ADVICE DIRECTORATE	14
12. INSPECTORATE	9
TOTAL	573

The 1999 budget of the MAFAR is shown in **Table 34**. The “general budget” column shows the amount that each agency gets from the treasury, and the “own revenues” is the amount that the agency collects in fees for its services which it is allowed to keep to fund itself. The table indicates that quite a large share of the operating expenses of many of the sections of the MAFAR are covered by fees. In general, this is poor budgetary practice. Fees collected by government agencies should go into general revenues, and each agency should be funded at an appropriate level, which would depend on considerations largely independent of its revenue-generating capacity. In addition, many (though not all) activities with substantial revenue-generating capacity should be considered candidates from privatization. This is an important issue, given the size of some of the own-revenue funding of some agencies. The tendency for own-revenue funding has evolved because of Bulgaria’s very scarce budget resources, and it has shown some trend toward reducing reliance on own revenues. But in any case, this should be addressed in MAFAR’s reorganization plans.

Veterinary and Livestock Services

A great share of EU legislation in this area has already been adopted, although some areas, in particular animal registration, remain. Adopting legislation intended to improve the veterinary control, to provide for the fulfillment of the sanitary and hygiene requirements to the production and trade in meat, milk, meat products and milk products, and to effect measures for animal health protection and eradication of animal diseases is a priority in the process of alignment with the Internal Market Acquis. The Law on Veterinary Activity (SG 42/5.05.99) sets the legislative framework and provides a legal basis for further introduction of the key veterinary legislation of the EU. It regulates the subject and range of veterinary activity, the financing of veterinary activity, veterinary education, science and diagnostics, basic norms for veterinary activities, etc.

The legislation is mainly institutionalized through the National Veterinary Service (NVS), a state body responsible to the Agriculture Minister, but financially separated. Its main function is safeguarding both animal and public health. Public health protection is mainly focused on the observance of strict hygiene requirements and the technical innovation of the agro-food industry, which some view as having been completely neglected in recent years.

Within NVS, Bulgaria is divided into 28 regional veterinary services employing 2880 staff in total, of whom 1514 are veterinarians. Public health control units employ 1164 people, 703 of whom are veterinarians. There are 263 employees in the Border Veterinary Control Inspectorate, of which 149 are veterinarians. These units are responsible for the control of food and other products of animal origin. Procedures are underway to transfer public health control of animal products to producers themselves. At a later stage producers will certify the quality and safety of their produce once the HACCP system has been implemented in their establishments.

Table 34: Budget of MAFAR Departments

Budget Credits Users	1999 Budget			
	Total	General budget	Own revenues	% of budgetary financing
MAFAR - Head Office	65,223,591	55,181,254	3,917,124	84.60
Agricultural Academy	49,498,181	11,036,899	38,403,710	22.30
National Veterinary Service	32,040,642	5,281,585	26,659,057	16.48
National Service for Livestock Selection & Breeding	6,994,949	1,515,772	5,479,177	21.67
National Forestry Department	674,116	624,116	50,000	92.58
District Departments Agriculture, Forestry & Agrarian Reform	1,283,267	1,283,267	0	100.00
National Soil Service	205,119	174,119	31,000	84.89
National Service for Plant Protection, Quarantine & Agro-Chemistry	9,789,185		9,789,185	0.00
National Grain Service	571,710	0	571,710	0.00
State Sorts Commission	1,371,864	569,355	802,509	41.50
Chief Inspectorate for Field Testing and Seeds Control	698,062	540,173	157,889	77.38
Chief Land Reform Department				
Institute on Rose, Essential Oils Plants and Herbs	373,828	0	373,828	0.00
National Agriculture Council				
National Service for Wines and Alcoholic Beverages Licensing				
State Testing Centers for Agricultural and Forestry Machinery – Plovdiv and Rousse	340,072	305,072	35,000	89.71
State Fisheries Inspectorate	750,319	348,819	401,500	46.49
Hale Control Department	5,138,252	4,686,742	541,510	91.21
Technical Control Inspectorate	486,497	265,497	221,000	54.57
Vocational Schools	22,791,256	21,796,289	994,967	95.63

* Ministry of Agricultural Forestry and Agrarian Reform.

Implementation of the veterinary acquis will provide a basis for the introduction of GMP, the basis of the HACCP system. NVS will monitor the implementation of the HACCP system, provided staffs have undergone the needed training. At present, neither producers nor public health inspectors have adequate knowledge and competence to apply the HACCP system. The HACCP system and zoonosis control practices must be implemented in the agro-food sector. Bulgarian veterinary authorities have successfully drawn up a Residue Monitoring and Sampling Plan that has been approved by EU experts and is currently in operation.

Plant Protection

Control of the production and trade in plant protection preparations and of laboratory and diagnostic activities is a top priority. Their importance stems from the future role of Bulgaria as an external border of the enlarged EU. The National Plant Protection Quarantine and Agro-chemistry Service (NPPQAS) is responsible for the organization and exercise of phyto-sanitary control, import and export quarantine measures, production and storage requirements and the movement and trade in plant

products. The NPPQAS laboratories in Sofia are very well equipped and staffed. The control service carries out analytical checks on seed materials, plant products, agricultural chemicals, soil and water.

Seeds, Crop Protection and Fertiliser

Quality of seed production is controlled by the 439 staff and 26 regional inspectorates of the Implementing Agency for Variety Testing, Certification and Seed Control (IACTASC)), an organization under MAFAR. The organization carries out the full range of activities normal in a modern seed certification system: field inspection, seed sampling, seed testing, post-control, approval of seed lots and enforcement of the seed laws.

It is also responsible for variety testing and national listing. IACTASC has been successful in ensuring that seed quality is maintained, and in some areas, e.g. hybrid maize and sunflower, improved, during the seed industry's transition. The outcome of the transition process are a large number of private seed producers, processors and traders. The role of these agencies will need to be evaluated in light of Bulgaria's automatic acceptance of varieties in the EU Common Catalog.

The privatization process of the fertilizer and crop protection chemicals industry will soon be completed. Few fertilizer companies provide a comprehensive service involving spreading or soil injection, and advice of integrity. The market seems to demand such a service. The National Agrochemical Centre has a research and an extension role, the latter one being largely self-financed.

Food Safety and Control Services

The following bodies carry out activities related to food control within MAFAR: 1) National Veterinary Service (NVS); 2) Public Health Control Service (PHCS); 3) State Veterinary and Sanitary Inspection (SVSI) (28 regional districts); 4) Border Veterinary Control Inspectorate (BVCI); 5) State Fisheries Inspectorate (SFI); 6) National Animal Selection and Reproduction Service (NASRS); 7) National Service for Plant Protection, Quarantine and Agrochemistry (NPPQAS); 8) National Grain and Grain Feed Control Inspectorate (NGGFCI). The State Sanitary Control (SSC) and the Hygienic-Epidemiological Inspectorate (HEI) are reporting to the Ministry of Health. Under the Ministry of Economy there is the National Committee on Trade, Registration Regime. The Ministry of Economy controls licensing and control of production of wines, alcohol and alcoholic beverages. The Committee on Standardization and Metrology (CSM) controls registration under the Bulgarian Standardization Institute (BSI).

The Public Health Control Service (PHCS) is responsible for the safety and quality of food production, storage and sale of raw materials and products of animal origin as well as the avoidance of zoonoses. It has the responsibility for veterinary and sanitary surveillance of animals, food products of animal origin, raw materials, animal feed, and the establishments where these products are produced, processed or stored. In addition, PHCS is responsible for certifying the quality of exported and imported products of animal origin.

At present, there are 109 public health control laboratories, 34 of which are located within establishments on a permanent basis. Most of the equipment in these laboratories is outdated, which limits their ability to meet the control responsibilities placed upon them by the Government. PHCS laboratories scattered throughout Bulgaria have been reduced from 150 to 109 and the trend is for further reductions and further strengthening of the capacity of the remaining laboratories.

The recently adopted Veterinary Act provides public health control on a permanent basis in slaughterhouses, large meat and poultry meat processing establishments, dairies and food canning establishments. These inspectors will be MAFAR salaried and trained controllers rather than personnel provided by the plant, as was the practice in the past. Public health control in small and medium-size meat and poultry processing establishments, dairies, food canning and honeybee production establishments will be on a day-to-day basis of scheduled inspections.

General Agricultural Statistics

The development of a reliable and systematic statistical data base is defined as a key priority of the legislative and administrative program due to the fact that this statistical information forms an essential basis for the implementation of agricultural policy, including the implementation of the structural measures and the implementation of the CAP mechanisms. In October 1998 the results from an area frame sampling survey, on the Bulgarian agricultural and economic activity (a survey on the usage and level of occupancy of the territory) were obtained. A nomenclature, compatible with the Land Use part of the EU New Cronos nomenclature was produced. The methodology and the results were approved by EUROSTAT. In April 1999, the MAFAR adopted a new structure for its agricultural statistics departments to implement the legislation and practice of EU in the field of agrostatics. A Memorandum of Understanding between MAFAR and the National Statistical Institute was signed to clearly divide the tasks. This has to be seen as an important step in regard to ensure the sound functioning of the overall agricultural statistics. A Plan for the Development of the Agrostatics Until the Year 2002, setting out priorities, aimed at structural improving of the agrostatics, and introduction of the surveys, required by the EU legislation. The Plan has also been approved by EUROSTAT. Additional databases important for EU integration are the following:

- Farm Accountancy Data Network. This network is in the process of being established. An agricultural census took place in 1993; and the next is foreseen in 2000. A register of farms in receipt of subsidy will be set up and a new classification of farms will have to be established. The size of farm samples (150 in 1997) is expected to rise to 500 farms in the year 2000. Many other parts of a complete FADN still has to be created, improved or harmonized with EU standards.
- Economic Accounts for Agriculture. The Bulgarian MAFAR has compiled Economic Accounts for Agriculture (EAA) according the EUROSTAT methodology since 1994. For setting up EAA the new EUROSTAT approach is already applied. Therefore Bulgaria is one of a few central and East European Countries which are applying the EAA approach in full accordance with the EU approach. This allows the comparison

of the economic results of Bulgarian agriculture with those of existing EU-member states and neighboring CEEC's. Economic Accounts for Agriculture are set up in close collaboration between the Ministry of Agriculture and the Statistical Institute.

- **Market Information.** In 1993, an Agricultural Market Information System with 8 regional offices was established. It is collecting, processing, analyzing and providing daily information on fresh fruit and vegetables prices; weekly information on regionally differentiated prices of main agricultural products; monthly price information on the prices of fertilizers, chemicals, seeds and seedlings, machine services, water for irrigation, agricultural machinery. In addition, the Agricultural Market Information System is providing consultancy and marketing research services on commercial terms. The system functions well, but is not used to its full potential because of the perception that information (especially on prices) is not timely.

Agricultural Advisory Services

The agricultural extension system in Bulgaria, most importantly the **National Agricultural Advisory Service (NAAS)** is subordinated to MAFAR and was established, in its present form, only at the end of 1995. There are 130 people working for the NAAS, none of whom is a professional extensionist, because up to 1998 there was no extension or training system for these tasks. Rather, extension staff are part time or adapted academics and researchers. A three tier structure for extension is currently being put in place. It is composed of 30 Local Advisory Offices each staffed by three professionals, 9 Regional Advisory Offices corresponding to the nine administrative regions of the country, each staffed by five professionals, and a national level, administration by the MAFAR Research and Education Department, Extension Service Section, which is to be advised by a Consultative Council for Co-ordination of Extension Activities. In addition, there are four national centers: a Training Center, an Information Center, an Agribusiness and Accountancy Center, and a Soil Analysis Laboratory, and three specialized services: Plant Protection, Irrigation and Drainage, and Wine Regulation.

The NAAS uses four specific methods in its daily work: mass media, meetings, training courses, conferences, etc., and demonstration farms and fields. Personal meetings are a desirable goal but not widely affordable at present, and may never be unless farmers are prepared to pay for them. Although this structure promises to be a solid foundation in the long term, certain negative factors have to be addressed urgently if the NAAS is to be converted into something that emerging private farmers recognize and value. The main improvements needed are a division of present staff according to their strengths, better time management, and a clearer definition of the roles of extension and research. In addition, the NAAS is currently supported entirely by the State, with ongoing technical and financial support from PHARE; this situation may not be sustainable. Pursuing a considerable share of self-financing of the advisory services could make the NAAS more sustainable and, by being more responsive to demand, of greater value to farmers. An FAO study found that a number of farmers would indeed be willing to pay for good extension service. In the medium term, the Government extension service should be downsized to encourage development of private sector provision of extension services.

Much of the extension work to large commercial farmers would then be carried out on a fee-for-service basis by former employees of the NAAS, acting as private agents.

Agricultural Research and Education

Bulgaria has a well-developed agricultural research system which was created according to the needs of a centrally planned, command economy. The system includes 66 research institutes, including 22 experimental stations. This system is definitely oversized and not attuned to the needs of private agriculture. In general, they are underfunded and poorly equipped. Their current activities are dominated by efforts to solve funding problems rather than carrying out longer-term research projects.

The reform of agricultural research system is an immediate priority. A PHARE-funded comprehensive study on agricultural research and extension prepared in the early nineties proposed radical and far-reaching reforms. These recommendations, however, have not been implemented and the agricultural research system is still waiting for a comprehensive reform which has already been accomplished in most of the front-running, CEEC EU candidate countries.

The current government and the MAFAR is engaged in a dialogue on the reform of the agricultural research system. There are several proposals which indicate that MAFAR is seeking a solution under the umbrella of the Ministry. The other CEE experiences highlight the importance of a comprehensive reform of the whole research system including its financing and institutions. The agricultural research cannot and should not be treated separately from the rest of the national research systems.

In the reforms in other CEE countries, the future of the Agricultural Academy of Science is being handled as a part of an overall package which also includes the redefinition of the role of the Ministry of Agriculture. The activity of the Ministry of Agriculture is being restricted to partial funding and priority setting, and does not include direct involvement in research management. At the same time, the Agricultural Academy of Science, as a research management organization, is being dismantled. The representation of agricultural science is being moved to the general Academy of Science while competitive financing becomes the major mode of financing of the remaining institutes.

In Bulgaria, there have been more changes made in the realignment of agricultural education to the needs of the new conditions than there have been in the research area. According to a recently adopted law the Agricultural Academy will be restructured and called Centre for Agricultural Sciences. The job, however, has not been completed yet. There is an increasing interest in vocational schools and other forms of training which provide courses for private farmers. There is also a need for a comprehensive program in agricultural education to prepare the country for EU accession.

THE INSTITUTIONAL CHALLENGE OF EU MEMBERSHIP IN AGRICULTURE

According to the European Council in Copenhagen in June 1993, EU membership requires the institutional ability to fulfill all the obligations of membership. The new member countries, including Bulgaria, have to be able to implement all the rules and regulations (the '*acquis communautaire*') of the Union. As noted above, Bulgaria has advanced rapidly in many areas, including adoption of legislation in the field of veterinary and livestock services, and establishment of an EU-conforming statistical system. But there is action required in a number of other institutional areas to meet the requirements for accession, as outlined below.

General Requirements

The establishment of the '*acquis communautaire*' requires the legal adoption of primary and secondary EU laws as well as the institutional setting for their execution. At the core of EU legislation are the four freedoms (free movement of goods, services, capital, persons). Bulgaria's liberal price and trade approach will assure no difficulties in adopting EU legislation concerning the abolishment of barriers with the EU. At the same time, Bulgaria will face considerable problems in establishing effective customs control for trade with third countries. Since some of its land borders will become EU borders at the point of accession (Yugoslavia is not an EU association country, Turkey will not participate in the current round of EU negotiations on accession) Bulgaria will have some difficulties in effectively protecting its long borders, especially ensuring adequate veterinary infrastructure to manage livestock inspections and control disease.

More important, there are many more requirements for the establishment of a common and well functioning market than to abolish internal barriers and protect the market at its borders. A wide range of institution building is necessary to meet the rules on competition and tax measures (competition law, establishment of anti-trust and state aid monitoring authorities), the opening-up of public works, supply and service contracts, harmonization of the rules on intellectual property (including the European patent), harmonization of the rules on company law and accountancy, protection of personal data, transfer of proceedings and recognition of judgments. According to the Agenda 2000 assessment of Bulgaria, the main efforts have to be made in the fields of the process of approximation in the area of public procurement, of meeting all the requirements of the Public Procurement Directive, and in the fields of intellectual and industrial property.

In the area of food and agriculture, the most important issue for the free movement of agricultural products is the standardization and conformity assessment, as well as implementation and enforcement of veterinary and phyto-sanitary requirements, and protection of the EU external borders according to these requirements. In order to comply with these general requirements in the food and agricultural sector, legal harmonization, institutional development, and investments are equally needed. The fragmentation of livestock units and poor farm registration and animal identification systems are serious obstacles, especially because of the threat of the spread of exotic diseases from the

Mideast, via Turkey. Bulgaria has a long way to go in reaching full compliance with these requirements.

The harmonization of national law with EU law requires not only immense efforts at the level of food processing but also in agriculture. This requires the harmonization of Bulgarian law in the fields of regulations on veterinary health, plant health, and animal nutrition. According to local estimations, the legal harmonization for food safety and standards is only about 60% completed. There have been several drafts prepared for additional legislative improvements and EU directives are often implemented without a legal basis. Legislation for biotechnology and genetic engineering is missing, and an improved legislation on animal welfare is a further requirement for EU accession is under preparation. According to the Agenda 2000, legislation has to be further harmonized in the fields of animal nutrition, plant protection products and organic farming; pesticide residue monitoring has to be improved.

The implementation of these laws can only be achieved by the enlargement and improvement of a net of laboratory facilities and an efficiently functioning official veterinary service. New institutions must enforce EU legislation in the internal market to implement effective certification procedures, animal identification systems, and to impose controls at border inspection points. There has been significant progress in setting up institutions and border stations for veterinary, phyto-sanitary, and food control which meet EU standards. The bulk of the work has yet to be undertaken, however. Significant EU-PHARE support has been provided for these tasks. For example, with the help of EU-PHARE, Bulgaria is in the process of establishing the Hazard Analysis Critical Control Point (HACCP). PHARE has also recently approved a 3.6 million Euro grant for new information systems and laboratory equipment related to veterinary laboratories and another 1 million Euro for twinning arrangements with veterinary services in Italy to develop norms for border controls and relevant policies. The overall assessment however, indicates that while progress is being made, improvements required in administrative structures and capacities are still needed.

Institutions Necessary for Implementing CAP

The information system, including the monitoring of developments in the sector, as well as changes in the markets, is another critical component of the institutional framework. The current needs of managing agricultural markets and the EU accession specifically, require a speedy development of a modern, EU-conforming agricultural statistical information system. Some elements of the EU-conforming information system are already in place, however, the current situation is far from adequate. The information provided is not fully reliable and not up-to-date, resulting in delayed and inaccurate policy decisions. Immediate improvement is needed and can be achieved by the use of survey methods to get information on evolving farming structures and changes in the supply and demand situation.

In the near future, the implementation of the CAP will be the most significant new challenge for the evolving national and regional agricultural administrations. Although the CAP is solely decided at the EU level, it is implemented in the member countries and partly administered by national authorities. Therefore, Bulgaria has to be able to execute

the CAP at the time of accession. Moreover, the CAP does not cover all areas of agricultural policy. Some are left to, and determined by, the member countries (social policy, e.g. insurance system for farmers, etc.) and others are in the competence of both the EU and the member countries (environmental measures, structural measures). These national policies cannot be contradictory to the CAP. Furthermore, in recent years a tendency can be observed to reinforce national measures and to broaden the degree of freedom of the individual member countries for implementing EU decisions on the CAP.

Bulgaria has a modest support program for agriculture which is, in general, not based on CAP like policy instruments. Bulgaria has a partially restructured administrative structure and limited administrative capacities for the implementation of the CAP. However, management and control of main CAP market instruments (dairy quotas, base area, set-aside, compensatory payments, premiums for male cattle) as well as certain rural and structural development programs require sophisticated administrative systems. An administratively strong Ministry of Agriculture, including regional institutions and operating based on a different philosophy than is currently used, is needed for the adoption of the CAP.

The implementation of CAP requires an ability to oversee and manage all CAP instruments in a consistent manner and to be able to interact with Brussels to fully obtain all EU funds due to Bulgaria. In order to achieve this, eventually a controlling center, such as an intervention agency, must be established and made operational. It is essential that up-to-date information is available on the operation and status of the farming sector. This requires the establishment of a farm registry which would cover all farms and methods of production to clearly identify the beneficiaries of the various EU support programs. In addition, other information databases like an appropriate land register and cattle identification and registration systems, are also of vital importance to give MAFAR the ability to provide information for Eurostat.

All this cannot be achieved without considerable strengthening of the administrative structures. It is important to remember that Bulgaria is still in the first phase of this process. It cannot be overlooked that the administrative costs of implementing EU regulations in the field of agriculture are immense. The EU enlargement will mean a considerable increase in both the number of administrative staff and their education, in particular in the fields of EU legislation. One should also emphasize that a delay in institutional preparation in agriculture would lead, at a minimum, to a delay in obtaining CAP funds, but might also lead to a delay in the overall accession. But, at the same time, it must also be noted that in Bulgaria's current economic situation, there should be no rush to implement CAP-like support programs, particularly since it is very unclear what these programs will be like in the EU at the time of Bulgaria's accession. The focus should be on setting up the administrative infrastructure, rather than the beginning implementation.

V. RURAL DEVELOPMENT FRAMEWORK AND THE SPECIAL ACCESSION PROGRAMME FOR AGRICULTURE AND RURAL DEVELOPMENT

RURAL DEVELOPMENT FRAMEWORK FOR BULGARIA

Rural Areas and Regional Differences

Bulgaria has significant regional disparities in economic development, employment, incomes, and social indicators. Many of these regional differences are highly correlated with the share of rural versus urban population. For example, the rate of unemployment in rural areas is considerably higher than in urban areas. The data from NSI for March 1999 presented in **Table 30** clearly shows drastic unemployment rates for the rural areas. The differences in economic activity of rural and urban region is also reflected in value added or production value.

Consequently, people, especially younger ones, migrate from rural to urban regions. Rural population is decreasing at a considerably greater rate (-1.4% in 1997) than urban population (-0.4%)¹; and the average rural population in Bulgaria is considerably older (43.8 years) than the urban one (37.3 years, Statistical Yearbook 1999, p.6). The considerable depopulation of rural areas is a main concern and an important reason for political support in these areas.

Socio-economic differences exist not only between urban and rural areas, but are also relatively large within rural regions. This is partly caused by variances in agricultural productivity. Yields as well as production shares of various agricultural products in total agricultural output vary considerable among regions.

While production of and employment in the agricultural sector is shrinking, opportunities in other sectors are still relatively rare in rural areas. Nature, climate and resources offer opportunities for diverse rural area businesses in industry, tourism, forestry and transport. However, the transition to a highly diversified economy in rural areas still needs time and policy support. For example, rural areas are relatively badly endowed with roads, other transport infrastructure or other public goods and services. To mitigate the disparities between urban and rural areas in Bulgaria is a main task of the Government and on its way to EU integration.

Rural Development Strategy

National Development Strategy

Based on the Regional Development Act, the National Development Plan (NDP) for the 2000 to 2006 period was prepared as part of Bulgaria's EU pre-accession strategy.

¹ About one third (32%, 1997) of total population is classified as rural, two thirds (68%) as urban. The average population density in Bulgaria is 75 persons per square kilometer.

It defines “sectoral and regional programmes based upon an analysis of overall national development and a common development strategy.” (Republic of Bulgaria, 1999b)

According to NDP (Republic of Bulgaria 1999a), considerable deficiencies exist in terms of regional policy, such as ‘no unified concept-based and long term policy, poor national level sectoral coordination on regional problems, insufficient local and regional initiatives and activity,’ and ‘a dearth of timely and reliable regionally differentiated data.’ These problems are now being tackled starting with the NDP itself. It defines the long-term regional policy objective as ‘to reform inland processes and utilize local growth factors by using market mechanisms and state coordination, with a view to integrate Bulgaria into Europe.’² This aim is based on the regional policy objectives defined in the Regional Development Act for the 2000 to 2006 period:

- * creating conditions for stable, sustainable and balanced development of the individual regions;
- * reducing regional disparities in employment and income;
- * opening up Bulgaria and solving regional and local development challenges through cross-border cooperation.

One priority of regional development policy efforts is to attain balanced and sustainable development in **rural regions**.³ This priority will be achieved through a national rural development policy which emphasizes an integrated development approach, fosters positive rural values such as family traditions or rural regions’ cultural and historical peculiarities, emphasizes rational and sustainable use of natural resources, and uses targeting funding to rural regions which are able to absorb resources.

With regard to **agriculture**, the NDP sees as key sectoral strategic objectives: an efficient farm production and an competitive food processing sector, rural development by diversified employment opportunities, environmental sustainability, technical manufacturing and market infrastructures in agriculture for sectoral market orientation, and continued agricultural state support policy.

² ‘This calls for:

- guaranteeing balanced regional development and laying down inter regional regulating mechanisms
- stimulating accelerated development in Growth Regions by adhering to concentrated decentralization principles
- creating conditions for staged reinstatement and stabilization of industrial decline regions
- applying preferential policies towards peripheral, border, highland and underdeveloped rural regions aimed at overcoming long term underdevelopment and creating growth conditions.’ (Republic of Bulgaria 1999)

³ Rural regions are defined as areas with largest towns with not more than 30,000 inhabitants, a population density of under 56 persons per square kilometer, a farm and forest land share more than 20 per cent greater than the national average, and farming and forestry employment share more than 20 per cent greater than the national average. 34 rural regions with low per capita earning and high unemployment are identified for integrated development support.

National Agricultural and Rural Development Plan

Based on NDP, Bulgaria recently has prepared a National Agricultural and Rural Development Plan (NARDP). It was initiated by the requirement for eligibility of the Special Accession Programme for Agriculture and Rural Development (SAPARD) of the EU which specifically called for identification of priorities and designing of measures for rural development. The plan was coordinated by MAFAR, which established a SAPARD task in late 1998.

The preliminary NARDP draft has been widely discussed. In accordance with the principle of partnership, the discussion was attended by representatives of the European Commission, MAFAR, regional MAFAR offices, the Central Co-ordination Unit, representatives of the State Fund Agriculture, associations of agricultural producers, regional development agencies, etc. The priorities and measures set out in this plan, are in full compliance with the National Program of the Adoption of the Acquis (NPAA) (European Commission 1999g).

The overall objective of the plan comprises an economic and a legal aspects of developing agriculture in Bulgaria: The economic aspect aims at the development of an 'effective and competitive agrarian sector complying with the economic EU membership criteria'. The legal-administrative aspect comprises the 'harmonization of Bulgarian legislation in the field of agriculture, veterinary and phyto-sanitary control with the *acquis communautaire* and preparation for systematic introduction and implementation of the mechanisms of the Common Agricultural Policy (CAP)' and 'aligning the administrative structures and procedures with the EU membership requirements'. With respect to financial support for the period 2000-2006, NPARD defines the following priorities:

1. To develop efficient agricultural production and a competitive food processing sector through improved market and technological infrastructure and strategic investment policy, ultimately aiming at reaching EU standards.
2. Sustainable development of the rural areas, consistent with best environmental practices, by facilitating alternative employment, diversification of economic activities and establishment of the necessary infrastructure. This will lead to improved living conditions, increased income generating capacity and employment opportunities for those living in the rural communities.

The concrete areas for support defined in the NPARD are based on its objectives, as well as on an analysis of the general situation and the strengths and weaknesses of the agriculture and rural sector in Bulgaria, and an overview of the ongoing Government or donor supported programs in this area. The most important area of support is the improvement of the production, processing and marketing of agricultural, forestry and fishery products in compliance with European standards. More than 50% of the amount is allocated to this so-called 'priority area 1'. In addition, four more priority areas are identified: an integrated development approach of rural areas (priority area 2), environmental aspects of agriculture (priority area 3), investment in human resources (priority area 4), and technical assistance (priority area 5).

The National Agricultural and Rural Development Plan restricts the geographical scope for these five priority areas based on the National Regional Development Plan and defines the measures to be financed under SAPARD. The most important ones for the development of agriculture are the four main measures are designed under priority area 1: investment in agricultural holdings, improving the processing and marketing of agricultural and fishery products (food processing plants and marketing of fruit and vegetables), setting up of producer groups, and water resource management.⁴

In summary, with NARDP Bulgaria developed a comprehensive agricultural and rural development strategy which can serve as a base for concrete policy measures to be financed by SAPARD and other funds.

EU PRE-ACCESSION SUPPORT: SAPARD

Description of SAPARD

SAPARD is part of the EU's pre-accession aid for the accession countries for the 2000 to 2006 period. The program will help candidate countries to deal with the implementation of the *acquis communautaire* as it relates to the CAP, as well as with the structural adjustments of their agricultural sectors and in their rural areas. Its main objectives are 'to establish a Community framework for supporting sustainable agricultural and rural development in the central and eastern European applicant countries (CEECs),' 'to solve problems affecting the long-term adjustment of the agricultural sector and rural areas,' and 'to help implement the Community *acquis* in matters of the common agricultural policy and related policies.'

To qualify for SAPARD, the Commission requires an Agriculture and Rural Development Plan according to a scheme presented in the European Commission Aide Memoire regarding the preparation of SAPARD. This requirement has been met by NARDP. In addition, the recipient country needs to establish a functioning 'paying agency' through which the program including Government co-financing funds are administered. As discussed below, Bulgaria is in the process of converting SFA into such an paying agency.

Based on certain criteria, 34 priority regions for SAPARD were identified in Bulgaria.⁵ NARDP defines the measures to be financed under SAPARD; they are a subset of the list of eligible measures under this program. SAPARD is budgeted for the

⁴ Under priority area 2, two measures are defined: development and diversification of economic activities, providing for multiple activities and alternative income; and renovation and development of villages and the protection and conservation of the rural heritage and cultural traditions and development and improvement of rural infrastructure. Under priority area 3, forestry protection and afforestation as well as agricultural production methods designed to protect the environment and maintain the countryside are envisaged. Investment in human resources (priority area 4) will be achieved by improving vocational training.

⁵ Support for integrated rural development will select projects from the 34 less developed rural areas as defined in the Ordinance For Identification Of The Areas For Specific Impact And Their Boundaries (No. 105/2.06.99) of the Ministry For Regional Development And Public Works. (source: NRDP)

period 2000 to 2006.⁶ The total funds for all ten CEEC accession countries amount to EURO 520 Million (at 1997 prices) per year (European Commission 1999a).⁷ How much each candidate country will be allocated under SAPARD will depend on objective criteria such as farming population, agricultural area, gross domestic product (GDP) in purchasing power, specific territorial situation. A first indicative calculation of the European Commission allocated 10% of the total funds or Euro 52 million per year to Bulgaria (see **Table 35**).

SAPARD is financed under the Guarantee Section of the European Agricultural Guidance and Guarantee Fund (EAGGF) and budgeted on a yearly bases, i.e. funds are not transferable to the next year if they are not fully utilized. However, the program will start later in 2000 than planned. This is due to a slow preparation process of SAPARD, mainly caused by the EU itself. For example, due to long administrative procedure, NARDP will not be approved by the Commission before April 2000. Moreover, the regulations of how to set-up implementing agencies for SAPARD were not determined by the European Commission until the end of 1999. Since the financial year under EAGFL is closed on October 15, the first fiscal year under SAPARD would effectively last less than half a year. As a consequent, it is planned that for financial purposes, the first two SAPARD years are merged.

Under SAPARD, the EU generally contributes up to 75% of the total eligible public expenditure of particular intervention measures. In the case of revenue-generating investments, total public aid is reduced to 50% of total eligible costs of the action.⁸ The potential sources for these co-financing funds need to carefully assessed. The generally 25% co-financing for public expenditures needs to be allocated in the national, regional and/or local budgets. Moreover, it is important to facilitate capital access for private investors. In the current situation, a 50% share of an investment might still be hard to contribute by private entrepreneurs.

⁶ However, candidate countries may only benefit through SAPARD between the year 2000 and the time they join the EU, i.e. when a candidate country joins the EU and it becomes eligible for assistance under Community policies, and notably the Structural Funds, its share of SAPARD funds would go to the remaining candidate countries still in the pre-accession stage.

⁷ With the adoption of the financial Perspective for 2000 to 2006 the European Council in Berlin decided to allocate a maximum annual amount of Euro 520 million (constant 1999 prices) for the seven-year period.

⁸ The Community will not normally contribute more than 75% of the total eligible public expenditure. In certain specific cases, it may, however, cover 100% of the total eligible. For revenue-generating investments, public aid may cover up to 50% of the total eligible cost, with the Commission contributing a maximum of 75%. The Community contribution will not exceed the ceilings on rates of aid and cumulation laid down for State aid.

Technical assistance, and similar activities undertaken at the initiative of the Commission, can be financed up to 100 per cent of total costs. However, this is limited to 2 per cent of the total annual budget allocation.

Table 35: Indicative Allocation of SAPARD Funds from EU, Maximum Amount in 1000 Euro, 1999 Prices, per Year

	Amount	Share of Total
Bulgaria	52,124	10.0
Czech Republic	22,063	4.2
Estonia	12,137	2.3
Hungary	38,054	7.3
Lithuania	29,829	5.7
Latvia	21,848	4.2
Poland	168,683	32.4
Romania	150,636	29.0
Slovenia	6,337	1.2
Slovak Republic	18,289	3.5
Total	520,000	100.0

Source: European Commission (1999f)

SAPARD Administration and Implementation

In Bulgaria, as in most of the CEEC, it was decided that the Ministry of Agriculture will be the responsible institution for the development, establishment and co-ordination of the SAPARD. To fulfil this task, a **SAPARD task force** of 15 officials was established at MAFAR, following a Decision of the Council of Ministers on October 19, 1998. Five officials are employed on a full time basis.

This unit co-ordinates the activities within the SAPARD. It is further responsible for the supervision of the Regional Offices of MAFAR, whereas these offices will be responsible for the detailed implementation and administration of the Programme. The principle tasks for the SAPARD unit are to

- determine the areas to be covered by SAPARD
- prepare the National Plan for the development of agriculture and rural regions
- ensure the establishment of an appropriate legal basis for implementing the program
- ensure adequate co-financing by the MAFAR, other ministries, agencies of municipal authorities
- identify or set-up a Paying Agency
- guidance on establishing appropriate project selection criteria and appraisal procedures
- ensure adequate publicity about the Programme⁹
- establish a network of 'facilitators', ie trained staff operating at regional level to assist potential applicants prepare project plans and applications for grant
- arrange for the monitoring and evaluation procedures

⁹ Until now, two national seminars have been conducted under SAPARD, jointly organized by MAFAR and the European Commission: an Introductory seminar for government and non-government organizations on the main objectives, principles and mechanisms of the EU structural policy and the SAPARD Draft Regulation; and a seminar for discussing the priorities and measures of the Rural Development Plan for the period 2000–2006.

- provide a secretariat to the Programme Monitoring Committee
- prepare annual reports on progress for the European Commission
- regular liaison with European Commission officials.

As mentioned above, a second condition for SAPARD eligibility, besides an acceptable agriculture and rural development plan, is the establishment of a so-called 'paying agency,' which function as channel for EU funds and as a co-financing institution of SAPARD and ensures the implementation of SAPARD project. Bulgaria decided to use the SFA as such institution. Therefore, a program for considerable restructuring of SFA is necessary to be implemented. The restructuring of SFA has two objectives:

First, to allow the State Fund Agriculture to provide national co-financing for the measures defined under the National Agriculture and Rural Development Plan, and, second, to develop the conditions for establishing SFA as a Paying Agency for the management and control of SAPARD funds. The Rural Development Plan outlines a very detailed proposal for the structure of the future Paying Agency. However, the EU Regulation regarding the detailed mechanisms for the implementation of the institutions necessary for and the management of the SAPARD funds have not yet been adopted.

Other Pre-Accession Aid

While between 1992 and 1999, Phare played the main role of EU pre-accession aid to the CEEC accession countries, aid will be considerably increased in amount and scope for the period 2000 to 2006. Phare continues to be the main channel for the EU's financial and technical support. The aims of Phare have been re-worked to take account of the candidate countries' specific priorities as they prepare for accession. Phare activities now concentrate on two priorities: The first priority is to help the administrations of the partner countries acquire the capacity to implement the *acquis communautaire*.¹⁰ The second priority is to help the candidate countries bring their industries and major infrastructure up to Community standards by mobilizing the investment required.

In addition to Phare, two new instruments will be introduced between the year 2000 and 2006 or each country's date of accession. One is the assistance to agriculture and rural development (SAPARD) described above, the other is a new instrument for regional policy called *Instrument for Structural Policies for Pre-Accession* (ISPA).

Under ISPA Bulgaria can expect to get 8% to 12% (corresponding to Euro 83 million to euro 125 million) of total the total allocation (see **Table 36**). The allocation is based on criteria like population, GDP per capita and surface area. instrument, ISPA will be similar to the Cohesion Fund as it operates today and will be targeted at two areas: the environment, to help candidate countries meet the investment requirements needed to conform with Community legislation; and transport, to improve connections between the

¹⁰ In addition, a Special Preparatory Programme (SPP) has been designed to help the legal and administrative preparations needed prior to the introduction of structural programs. The so-called twinning program gives technical assistance from institutions in the EU member countries to equivalent institutions in the accession countries.

CEECs and the trans-European networks, and their extension eastwards. ISPA's financial contribution can account for up to 85% of public expenditure. Part of funding under ISPA will be used for the rural areas (European Commission 1999b) and therefore is also of great importance for rural development in Bulgaria.

Table 36: Indicative Budget Allocations for All Three Pre-Accession, in Million Euro per Year (1997 prices)

	Total	Of which Bulgaria
SAPARD	500	52
ISPA	1,000	83-125
Phare	1,500	101
Total	3,000	236-278

Source: European Commission (1999).

Defining the Rural Development Program and SAPARD Implementation

The MAFAR has constructed an impressive rural development program that will serve as the framework for use of SAPARD funds. It is vitally important that these funds be used in the most cost-effective way possible to maximize their benefit in restructuring the sector. SAPARD is a program, which is quite flexible. While this flexibility is on balance a positive characteristic of the SAPARD, it also creates the potential that SAPARD could be used for measures that are not optimal or not even conducive to market development. It will be important to design and implement the program in ways that allow market forces to decide the directions in which the rural economy evolves, rather than having the government "pick winners" through excessive focus of support on narrowly defined sectors or economic actors that are selected *ex ante*. While the current draft rural development strategy and SAPARD investment plans were clearly drafted with this consideration in mind, and will allow considerable latitude for market forces to work, some consideration should be given to implementing the plans in ways that will set very broad eligibility criteria and allow self-selection of efficient producers and institutions as recipients of grants. For example, rather than setting the self-contribution at the minimum level of 50% (for income-generating activities), or setting different rates for different activities, consideration should be given to setting a uniform self-contribution rate within broad categories of recipients or activities. This level could be set at a level which would ration the available funds and ensure that they go to recipients who are more willing to put their own funds at risk, or could persuade a third party to put funds at risk. This would not eliminate the need to have a review process for grant applications, but would reduce frivolous applications. It would also allow more grants to be made. This rate could later be adjusted if it were found that demand for the funds were too low.

In summary, it can be concluded, that through SAPARD and other EU pre-accession instruments, Bulgaria is strengthening the capacity of its agricultural and rural sector to integrate into the EU. The preparation of NPARD done in view of SAPARD already initiated necessary discussions on the development of agriculture and rural areas,

identified and more narrowly defined a strategy for development and EU integration, and set priorities for public support.

The measures financially supported by the EU, in particular under the SAPARD funds, will help Bulgaria in meeting EU requirements in the area of agriculture and in alleviating negative impacts of the transition to a market economy in the rural areas. Investments to be supported under EU pre-accession aid are targeted towards Bulgaria's main problems on its way to complete EU integration. The challenge for the agricultural sector is, above all, to considerably increase its ability to cope with the market forces in the EU. Measures supported under SAPARD, like investments into agricultural holdings or food processing units to meet quality and other EU standards, as well as training and organization of producers and processors, are clearly of dominant importance to achieve this objective. The financing of public goods like infrastructure in rural areas under ISPA can complement these efforts.

Nevertheless, SAPARD or any other Government supported support scheme can only support, but by no means replace or even partially substitute for private activities. Hence, a favorable policy framework for the private sector is of utmost importance for successful enterprises to develop. This clearly calls for a continuation of a stable and liberal macroeconomic framework in Bulgaria. Moreover, experiences in other CEEC show that additional efforts to attract foreign investments can accelerate the transformation As well as EU integration Process.

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ANNEX 1: DESCRIPTION OF SELECTED MEASURES

FOR PROTECTION

This annex provides a brief outline on some methodological aspects of this measurement. In principle, the quantitative analysis of protection intends to measure the relative deviation of observable market prices of commodities from their shadow price equivalents, i.e. the deviation of private (financial) prices from social (economical) prices¹. Generally speaking, these measured price differences occur from two principal sources², as there are policy effects (positive or negative) and market effects (positive³ or negative). Market effects occur because of the specific characteristics of (markets for) particular goods or services, or because of the production technology for that good or service. Since these effects lead to actual prices that deviate from their efficiency equivalents they are also referred to as *market failures*. Consistent with the accepted criteria in welfare economics, governments need to intervene to restore "socially optimal" production, consumption, and pricing. Thus, government intervention may have two principal intentions, as there are to offset existing market failures or to affect the income of consumers, producers, or the state budget not necessarily with regard to currently existing market failures. By this token, any "non-optimal" intervention by the government results in so-called *government failure*, constituting interventions that do not correct for market failure, or interventions that actually make society worse off⁴.

There are two main categories of support policies for agriculture that should be taken into account – market price interventions and government subsidies. Market price supports (positive or negative) operate directly through price-related interventions supported by foreign trade barriers such as import tariffs, export subsidies, and quantitative restrictions on imports or exports. The second type consists of subsidies for capital investment, credit subsidies, land improvements, direct payments, research and extension, and others, that do not directly affect market prices. By this token, budget outlays that are part of price support programs (such as price intervention purchases) are to be excluded since the price-related measures capture the effects of such programs.

Consistent with the accepted criteria in trade policy analysis, in computing the market price-related interventions, the current study compares the prevailing agricultural prices with the border (world) equivalent prices of tradable outputs and inputs. That is, the counterfactual for the analysis of the impact of price and trade policy is defined as farmers paying and receiving prices similar to those that would prevail in the absence of any policy intervention. Conceptually, the key indicators for measuring the price wedges are the Nominal and the Effective Rate of Protection (NRP and ERP, respectively). The

¹ Economic values reflect the values that society would c.p. be *willing* to pay for good (or a service), whereas financial values are the prices that people *actually* pay.

² In this context we do explicitly not take account of a possible third source of price differences: the existence of merit goods or demerit goods.

³ Even if, generally speaking, market effects do have negative impacts on aggregate welfare, they may have positive income effects on some economic agents (e.g. increased rents of producers that are monopolists).

⁴ see Ward, Deren, 1991.

indicators this study are estimated on the assumption that Bulgaria is a 'price taker' in world markets for the products analyzed. For NRP and ERP estimates, producer prices and border price equivalents are both measured at the same point in the marketing channel.

Nominal tariffs (or tariff equivalents) expressed as NRPs, apply to single commodities. In order to examine the impact of policies on resource allocation and farm income, we estimate the effect of price intervention in the return to primary factors (i.e., value added activities) by accounting for the effect of intervention on the prices of both outputs and intermediate (internationally tradable) inputs. Value added, it will be recalled, is defined as the difference between the value of gross output and the value of intermediary inputs, or in terms of factor payments, the returns to land, labor and owned capital. This study emphasizes value added as an appropriate proxy for the income of primary producers because the available cost data indicate that value added per unit on average does not exceed 35% of gross output value. The ERP accounts for the combined effect of price distortions on output and input markets. For example, in the case of pork or beef production, farmer returns (value added) will be influenced by the level of protection (NRP) on feed grains, as well as by the cost and protection of inputs such as fuel, agrochemicals, machinery and equipment, etc. When applied across the sector, ERPs describe the relative incentives within the sector.

As in most studies on the subject, the interpretation of the agricultural support measures must be interpreted as rough indicators of the order of magnitudes and not as exact measures. Furthermore, by using the direct price comparison approach to estimate the price wedges, the study estimates an "equivalent tariff" and not just the formal tariff that applies at the border. This implies that part of the wedge observed in the NRP and ERP value, for example, captures implicitly some elements of market structure distortions in addition to explicit government policies on trade barriers such as import duties or export taxes. Therefore, a further step of analysis was carried out in addition to the "standard" calculation of the aforementioned price divergences in order to separate the effects of the various sources of price divergences. For this purpose, the analyses were extended by the so-called *Divergence-Separation-Module (DSM)* approach⁵ that is based on the following concept: As it was mentioned earlier, the total divergences between domestic prices and their border price equivalents consist of effects of policy distortions and effects of market failure (or market imperfection)⁶. Since the majority of existing *direct* policy interventions and subsidy programs influencing the input and output markets of the analyzed activities can mostly be identified from official sources, a separation of quantitative effects of these instruments is to be carried out. Assuming that the sum of divergences (b_t) for each activity is the result of observable policy distortions (b_p) and structural distortion (b_{st}), $\{b_t = b_p + b_{st}\}$, and b_t is known from the results of the protection analysis, the methodology of separation can be characterized as an identification of b_p and subsequent computation of the residual b_{st} . By this token, b_p is defined as the set of all directly observable policy influences, as there are for example direct subsidies to factors and products, taxes (import taxes, tax^I ; excise taxes, tax^V),

⁵ For details see Kray, 1997.

⁶ Here it will not be discussed to which extend market failures are the result of (existing or missing) policy interventions.

tariffs (*tar*), import surcharges (*sur*), export subsidies (*sub*), and quotas of importation. Consequently, b_{st} is defined as the sum of all influences that are not directly observable and is thus for the most part consisting out of market failure influences spill-over effects of policies not intended to influence the analyzed price directly.

Following the definitions of price theory the private domestic price of a good at a border location B (p^P_B) equals the border price equivalent (social price) of identical goods at the same location (p^S_B) if markets for tradables⁷ are assumed to be perfect and undistorted. The existence of a difference b_t , $\{ p^P_B - p^S_B \neq 0 \}$, implies the existence of distorting influence inducing private prices to differ from their border price equivalents. equivalent. If this difference b_t is totally explicable by the set of observable policies, all distortion can be characterized as direct policy distortion b_p , leading to the identity $b_t = b_p$ and implying that there is no existing structural distortion b_{st} . Using the p_t that can be derived from the "standard" protection analysis and in order to identify the levels of b_p and b_m for the analyzed activities, the following steps have been carried out:

The observed private prices of tradables at farm-gate location (p^P_F) are converted into private border prices (p^P_B) by adding (in a net export situation) or subtracting (in a net import situation) the costs of interregional transportation and processing ($t_{F \rightarrow B}$ or $t_{B \rightarrow F}$, with B indicating the border location and F indicating the farm-gate location). Doing so leads on one hand to comparability at an identical location, and on the other hand domestic interregional transportation and processing costs are not taken into account for the following calculation of tariff influences. In the so-called '*Divergence-Separation-Module*' (DSM), a withdrawal of influences of border instruments such as import tariffs, import quotas at reduced tariffs, import surcharges, export taxes and subsidies on domestic prices is carried out on basis of p^P_B . The results are displayed as so-called *corrected private border prices* (p^C_B). A subtraction of social border prices of the tradable good p^S_B from its corrected border price p^C_B thus will display the level of distortions left after trade policy withdrawal. The rest distortions after only trade policy adjustment are indicated by the abbreviation b_{st}^* . If no other influences on domestic tradable prices exist, the p^C_B will equal p^S_B , all distortions can be explained to be direct trade policy distortions b_p and no rest distortions b_{st}^* will be observable. If, in addition, direct subsidies are paid on tradables⁸, a further adjustment for these payments has to be carried out, resulting in b_{st}^9 . By multiplying the results by the physical unit of factor use (x_i) the total level of policy and rest distortions of the analyzed activity are computed¹⁰.

Thus for a tradable, (net) imported commodity the DSM becomes

⁷ For both, products and tradable inputs, a similar methodology has been used. They will be named as *tradables* in the following description.

⁸ In this context direct taxes are introduced as direct negative subsidies.

⁹ As domestic factors, by definition, are non-tradable, no direct trade policy adjustment can be undertaken. Since the present study did only assess the effects on producers' value added, divergences in pricing of domestic factors have not been taken into consideration.

¹⁰ If subsidies are not paid directly for the use of one tradable input, but for general purposes of reduction of tradable input costs, the multiplication by technical coefficients has to be carried out first, followed by adjustment for subsidies (step 3 and 4 disordered).

$$b_{st}^* = \sum_{i=1}^n \left(\frac{p_{Fi}^P - t_i^{B \rightarrow F}}{(1 + T_i + T_i \text{tax}_i^I + \text{sur}_i)(1 + \text{tax}_i^V)} - p_{Bi}^S \right) x_i \quad \text{with:} \quad T_i = \frac{\sum_{r=1}^m \text{tar}_i^r q_i^r}{\sum_{r=1}^m q_i^r}.$$

For a tradable, (net) exported commodity the equation becomes

$$b_{st}^* = \sum_{i=1}^n \left(\frac{(p_{Fi}^P + t_i^{F \rightarrow B})(1 + \text{tax}_i^E)}{1 + \text{tax}_i^V} - \text{SUB}_i^E - p_{Bi}^S \right) x_i \quad \text{with:} \quad \text{SUB}_i^E = \frac{\sum_{r=1}^m \text{sub}_i^r q_i^r}{\sum_{r=1}^m q_i^r}.$$

ANNEX 2: CAP FRAMEWORK FOR

COMMON ORGANIZATION OF MARKETS (COMS)

COM for cereals: Since the 1993/94 marketing year, compensation payments per hectare became the main mechanism of this COM. Direct area payments to cereal producers set in ECU per ton were introduced to compensate farmers for reductions in price support. To receive such compensation farmers must withdraw a percentage of their land from production (15% for the 1993/94 and 1994/95 marketing period and 10% since then). Small farmers (total output of less than 92 tons) are exempt from set-aside as a compulsory requirement to receive compensation payments. For the 1999/2000 marketing period these direct payments are fixed at 54.34 EUR/t of the historical yield (an 'average yield measure' for determining the average regional productivity).

For the marketing period 1999/2000 the intervention price and the compensatory payments decided in 1992 remain applicable¹. As shown in Table 1, the single intervention price at which the EU is expected to purchase all types of cereals offered is set at 119.19 EUR/t. This intervention price applies to a predefined "standard quality" (regulations concerning moisture content, specific weight, etc.)². During the intervention period (November 1 to May 31 in most of the Member States) the Union authorities are obliged to purchase all grain offered to them. In addition to the intervention price, a monthly increment of 1.00 EUR/t is paid in order to adjust the intervention price for costs of stockholding. Even though the intervention price plus increment is supposed to be the minimum price, the farm gate price can be lower due to transport costs and delays in payment by the intervention agency.

Under EU commitments under the WTO, the EU can levy an import duty on cereal imports from third countries which is payable by the Community importer. Within the limit of the agreement the duty cannot exceed the intervention price increased by 55% (184.74 EUR/t since 1995/96) less the representative c.i.f. price. Under the regulation of these specific rules, the EU is allowed to vary the tariffs for cereals over time. As a supplement to keeping the domestic price of exports above world market prices through tariffs, export refunds are granted to cover this price difference. EU export refunds are generally fixed by invitation to tender and are uniform throughout the EU. Refunds are also possible for food assistance outside the EU and, in certain circumstances, for processed products.

Under the provisions of Agenda 2000³ the cereals intervention price is to be reduced by 15% in two equal steps of 7.5% in the marketing years 2000/01 and 2001/02.

¹ Governed by Regulation (EEC) No 1765/92 establishing a support system for producers of certain arable crops.

² Governed by Regulation (EEC) No 2731/75 fixing standard qualities for common wheat, rye, barley, maize and durum wheat.

³ Governed by Regulation (EC) No 1253/1999 amending the aforementioned Regulation (EEC) No 1766/92 and repealing the aforementioned Regulation (EEC) No 2731/75. Furthermore, Council Regulation (EC) No 1251/1999 establishing a support system for producers of certain arable crops applies. The provisions of this Regulation have been further elaborated in Commission Regulation (EC)

Calculated on the basis of the 1999/2000 intervention price this corresponds to a reduction to 110.25 EUR/t in 2000/01 and 101.31 EUR/t from 2001/02 onwards⁴. The principle of monthly increments is maintained without changing the application period (November to May). In this context, the regulation of "standard quality" for common wheat, rye, barley maize and durum wheat has been repealed. The European Commission will nevertheless continue to set minimum standards (e.g. moisture and impurity content) that cereals will have to meet to be eligible for intervention. Direct compensatory payments for cereals are increased from 54 EUR to 63 EUR⁵ per ton of reference yield and are put, in a final stage, at the same level for oilseeds, thus becoming a non crop-specific area payment⁶. Compulsory set-aside is retained as an instrument. Its base rate will be set at 10%; the effective rate may be adapted according to market conditions. Furthermore, the payment period for aids (previously 16 October to 31 December) has been changed, and now extends from 16 November to 31 January. As has been the case in the current CAP, producers may set aside more than 10% ("voluntary set-aside") up to a maximum which has been left for EU Member States to decide. Extraordinary set-aside is abolished.

As regards trade interventions, the European Commission can decide to apply export levies as a safeguard measure in exceptional cases 'of extreme urgency'. These levies are payable by the Community exporter and are aimed at stabilizing prices and restoring balance to the internal market.

COM for oilseeds: Already the McSharry-Reform removed the system of institutional prices for oilseeds (i.e. rapeseed, sunflowers, and soybeans), but since the 193/94 marketing year their producers also qualify for compensatory area payments. These aids are granted on basis of a Community scheme varying for the regions. It is calculated on the basis of a standard payment of currently 433.50 EUR per ha multiplied by the ratio of 'regional historical yield' and EU average yield (2.36 ton per ha). The area grown with oilseeds is taken into account in determining the individual farmer's set-aside obligation (see regulations described for cereals). As a prerequisite for the imposition of specific oilseed production provisions, production area constraints for the member countries have been implemented under the *Blair House agreement*. This agreement includes a system of reduced aids for regions where the predetermined agricultural areas is exceeded. For certain varieties of oilseeds (non-edible oilseeds for industrial use) special regulations apply (e.g. set-aside areas may be planted to several oil-bearing crops for industrial purposes). Currently, there is no regulatory levy on imports, as the Common Customs Tariff rates apply.

No 2316/1999 laying down detailed rules for the application of the aforementioned Council Regulation (EC) No 1251/1999.

⁴ Depending on the further development of grain market conditions the 2001/02 price level may be subject to further reductions. The Berlin Council decision states, that "... market development as of the marketing year 2002/03 will be analyzed closely in order to establish whether further reductions are required".

⁵ This represents 50% compensation of the overall price cut (but compensates the first of the two-staged price cuts in 2000/01 in full).

⁶ In addition, a supplementary amount of 19 EUR/t will be payable in Finland and the arctic regions of Sweden, as a compensation for the "specific drying costs of cereals and oilseeds" in these regions.

Under the provisions of Agenda 2000 the compensatory payment system is aligned with the one applicable for cereals. The basic amount of direct aids per hectare, will be brought down to the level for cereals and set-aside (i.e. 63 EUR/t)⁷. The provisions of the Blair House Agreement will remain in force during the period 2000/02, although the basic amount of aid finally paid to producers may not fall below the amount applicable to cereals and set-aside.

Sugar: The EU sugar market is highly protected. Besides protection at the border, the CAP policy on sugar is implemented through a marketing quota system. Sugar beet quotas are allocated to and administered through sugar refineries (on basis of equity shares). The intervention price for refined beet sugar currently is set at 631.9 EUR/t in order to guarantee a basic price for sugar beet of 47.7 EUR/t. Furthermore, the COM is based on a system of sugar and isoglucose production levies to cover the cost of storage and production refunds for the manufacture of certain chemical products. These regulations are complemented with import tariffs and warrants of export refunds. Agricultural areas planted with sugar beets are not eligible for compensatory area payments and are not subject to set-aside obligations.

Agenda 2000 provides no specific changes to the sugar market regime.

COM for fruits and vegetables: In late July 1996 the European Council reached a political agreement to reform the fresh and processed fruit and vegetable sector. The reform is based on improved organization of supply by strengthening producer organizations (POs), tightening up the criteria for recognizing POs, setting up an operation fund co-financed by the EU for promotion and quality campaigns, and the cessation of farming operations that are not covered by Community compensation schemes which, with this reform, will provide non-retributive compensation, i.e. will not encourage production.

A transition period of five years was introduced for POs to adapt their programs on the basis of trade criteria, to reduce compensation for set-aside and to support conversion to other crops. Special solutions have also been introduced for particular problems with specific products of local or regional economic importance. In the case of citrus fruits, the Council of 16 and 17 September 1996 reached political agreement on reforming processed fruit. The regulation provides for processing contracts to be drawn up between POs and the processing industry establishing a raw material price on the basis of supply and demand. POs will receive a Community aid enabling them to obtain an agricultural income, facilitate negotiations with the industry and promote the concentration of supply. Maximum processing thresholds will be laid down, leading to reductions in aid if they are exceeded or penalties if the contracts are not carried out.

COM for the wine-growing sector: Wine growing is based on two kinds of measures: (a) withdrawal from the market (storage and distillation) of amounts decided on in each marketing year; and (b) a grubbing-up premium scheme, linked to a ban on new planting, with the aim of reducing production potential to reach market equilibrium.

⁷ The oilseed area payment is to be cut in three stages. Payments will be 81.74 EUR/t for the 2000 harvest, 72.37 EUR/t for 2001, and settle at 63 EUR/t for the 2002 harvest and following.

A distinction should be drawn between QWPSR or quality wines and table wines, since the mechanisms for this COM do not apply to the former except in the case of measures under the grubbing-up programs and for distillation of the sub-products of wine-making.

On 22 July 1993 the Commission presented a communication on the development and future of wine-sector policy (COM (93) 380) and has subsequently submitted a proposal for the reform of this COM, in (COM(94) 117 of 11 May 1994. Both documents provoked a good deal of criticism and reform of this sector was held up for four years. The Commission finally submitted a fresh proposal in 1998 as part of the Agenda 2000 proposals (COM (98) 182 and 370) which is based on encouraging the adaptation of European production to reflect changes in the demand for wine, which is becoming increasingly quality-oriented. The Martin report criticised the inconsistencies in the Commission's proposal between the stated aims and the arrangements for achieving them, in three particular areas:

- * the proposal strengthens all the procedures which increase wine production potential and prevents the system developing in such a way as to enable the industry to respond to changes in the market;
- * the Commission proposes, with no prior assessment or compulsory procedure, that surpluses should be 'voluntarily' distilled; this means, unless the market is to be completely deregulated, that the price offered to producers will have to be high. As a result, over the medium term, there is a danger of both the structural surpluses and the budgetary cost of the COM rising;
- * there are no longer any provisions governing the conduct of producers with regard to high yields, which does not square with the Commission's stated aim of maintaining the market at its current level.

COM for tobacco: This COM strengthens the Community's commitment to tobacco growers: their income is, in general, largely dependent on premiums (aid) and it would be difficult to convert the approximately 150 000 hectares used for growing this labor-intensive crop to alternative crops (mainly market gardening and arable crops) without upsetting the stability of the markets in these alternative crops or running a serious risk of land being abandoned, resulting in a population drain in certain rural areas, which are often in the least developed regions of the Union. Against this background, and in the context of Agenda 2000, the Commission submitted a proposal in January 1998 (COM (1998) 19) for a new policy for tobacco designed to: encourage the production of higher quality tobacco, by varying a proportion of the premium granted to each producer depending on the quality of his produce determined by its purchase price; increase awareness of public health and environmental concerns, by increasing to 2% the deduction from the premium for financing the research and information fund on tobacco and by enabling measures to improve environmental protection to also be funded by the producer groups by means of the specific aid paid out to them; enable producers to convert to other activities, through a quota buy-back system for the benefit of producers who decide to leave the sector; make the quota system more flexible by making it easier to transfer production quotas between groups of varieties and between producers; simplify administration by replacing the present allocation of quotas to individual

producers by a system whereby quotas are distributed to producer groups every three years.

COM for milk and dairy products: The market for milk and dairy products is one of the most important (~18% of the total value of agricultural production) and most regulated markets in the EU. The current market regime comprises a target price for milk (1999/2000: 309.8 EUR/t) and intervention prices for butter (1999/2000: 3,282.00 EUR/t) and skimmed milk powder (1999/2000: 2,055.20 EUR/t), a producer quota system, support of prices by imposition of tariffs on dairy products, warrant of export subsidies, a guaranteed purchase and storage of butter and skimmed-milk powder through intervention agencies, and a milk quota system, introduced in 1984 (117.49 million tons EU total). Farmers who exceed this reference amount of their quota are subject to a payable levy. Since 1998, milk quotas are transferable from one individual to another within one EU member state through sale, lease, or inheritance. Further to the aforementioned measures, there is also a scheme for public intervention, private storage, production aids for using milk in animal feeding stuffs and processing milk into casein, special measures to reduce stocks and some aids to reduce and/or cease production. Import levies and export refunds are also applied.

The regulations⁸ under the Agenda 2000 proposals establish a new COM for dairy products. The proposals delay the implementation of dairy reform until the 2005/06 quota and marketing year. It is foreseen to review the future of the milk regime in 2003 with the aim of allowing the present quota system to run out some time after 2006⁹. Internal prices are reduced in order to improve marketing possibilities on both internal and external markets. From the year 2005 on, intervention prices for butter and skimmed milk powder are reduced by 15% in 3 equal steps of 5% each. Furthermore, benefits for farmers are to be expected by three complementary measures: (i) increase of available milk quotas by 1.5% in three equal steps over three years in parallel with the price reductions starting in 2005, (ii) retention of a crop premium for silage cereals, and (iii) the implementation of a new yearly payment for dairy cows. The latter is to be paid on a flat rate basis per ton of the quota¹⁰ held in the 1999/2000 marketing year, and amounting to 17.24 EUR/t in the final stages of reform (see Table 1). Provisions concerning private storage aids and marketing measures are adapted to the existing general rules and provisions on trade with third countries of previous CAP regulations will be continued.

COM for beef and veal: The EU market for beef and veal is highly regulated and protected. Support measures include support buying and private storage as well as premium payments. Intervention agencies are expected to buy specified categories of beef at administrative prices. Furthermore, for the marketing period 1998/99 the basic

⁸ Governed by Council Regulation (EC) No 1255/1999 on the common organisation of the market in milk and milk products. Furthermore applicable: Council Regulation (EC) No 1256/1999 amending Regulation (EEC) No 3950/92 establishing an additional levy in the milk and milk products sector.

⁹ An the other hand, the Member States agreed to extend the milk quota regime from the year 2005 on and keep in force until the year 2007/2008.

¹⁰ The original plan to pay aid per "virtual cow" has been scrapped.

intervention price was set at 3,475.00 EUR/t of carcass weight (for R3 classification)¹¹. Responding to actual market conditions, i.e. the actual difference between market price and intervention price, 'normal intervention' may be accompanied by different other types of intervention purchases (e.g. safety-net interventions, lightweight interventions). In 1992 the EU introduced a beef premium scheme for beef producers (bulls and steers) to compensate for reductions in price support. Payments can be received once animals reach an age of 10 months, a second payment can be received once the animal is 22 months old. Steer and young bull premiums are set at 108.7 EUR and 135 EUR per head. However, support is limited to a maximum of 90 animals per holding. Furthermore, there is a premium for suckler cows currently set at 144.9 EUR/t. The relatively high internal price support is complemented by measures affecting imports of beef and veal to the EU and by refunds on EU exports to third countries. A basic import tariff (less than 20% for most beef products) and an additional variable levy (ranging from 180% to 390%) are levied. According to the agreement with the WTO these levels are to be reduced in the future. Imports originating from specified groups of countries (e.g., Switzerland, ACP, and CEEC) are not subject to these general rules. Exports are subsidized, the refunds being set by the European Commission depending on world market conditions, the present and anticipated condition of the EU market, and the competitive environment in third-country markets.

Similar to the dairy sector, the regulations under the Agenda 2000 proposals aim to establish a new CMO for Beef. Among others, it is intended to replace the intervention system by a private storage system, which is inspired by that applied in the pork sector. Direct payments will be extended and made more flexible in application. The effective market support level of 2,780 EUR/t will be reduced by 20% by the calendar year 2002. This reduction is to be carried out in two initial equal steps over the period 2000-02 and on 1 July 2002, to be replaced in July 2003 by a storage subsidy of 2,224 EUR/t¹² paid as a one lump sum payment. Private storage aid may be granted when the average EU market price level is less than 103% of the basic price (as in the pork sector). Direct payments will be increased for male bovine animals and suckler cows by the year 2002. The basic special premium for male animals will be increased from 135.00 EUR to 210.00 EUR for bulls (payable once per lifetime) and from 108.70 EUR to 150 EUR for steers (twice in a lifetime, at agricultural enterprises 9 months and 21 months respectively). The annual suckler cow premium will be increased from 144.90 EUR to 200 EUR annually. In addition, a new slaughter premium is introduced at 80 EUR for bulls, steers, suckler cows and heifers over age of eight months, and of 50 EUR for calves (of more than one and less than seven months, with an upper weight limit of 160 kg)¹³. As a complementary measure, regional ceilings for the number of premium rights for bulls

¹¹ Intervention purchases are carried out when the observed market price reaches a level of 80 percent of the intervention price. Average prices paid for intervention purchases also correspond to 80 percent of the intervention price.

¹² In addition, there will be a 'safety net' intervention system from 1 July 2002 on. It will operate whenever the average market price for bulls or steers in a member state or region falls below the level of 1,560 EUR/t, thus representing an effective cut of 25% as compared to the current trigger level for 'safety net' intervention of 2,085 EUR/t.

¹³ This premium is payable upon proof that the animal has been slaughtered, or upon proof of export to a third country.

and suckler cows will be fixed. The total number of animals qualifying for the premium will be limited to 2 livestock units (LU) per ha of forage area. Extensive production (stocking density less than 1.4 LU per hectare) may qualify for an additional payment of 100 EUR per premium granted¹⁴

COM for pork: The EU pork market is considerably less protected than the one for beef and veal. Based on negotiations among the EU members a 'basic price' is set. For the marketing period 1999/2000 this price is 1,509.39 EUR/t of pig carcasses (see Table 1). Price support measures are used if the reference price (a weighted average of the national prices) is below or likely to be below 103% of the basic price. Private storage aid is being introduced in practice. Protection at the border is carried out through import tariffs for pork and pork products. Specific import duties range from 600 to 2,000 EUR/t, depending on the level of processing. Export refunds, however, have been drastically reduced for several products in line with the EU commitments under the Uruguay Round of the WTO.

Agenda 2000 provides no specific changes to the COM for pork.

¹⁴ In particular, member states may choose between two formulae for granting additional extensification premia on suckler cow and special beef payments: (i) a simple supplement of 100 EUR per premium where the stocking intensity is less than 1.4 LU/ha, or (ii) in 2000 and 2001: 33 EUR between 2.0 and 1.6 LU/ha, and 66 EUR if less than 1.6 LU/ha, in 2002: 40 EUR between 1.8 and 1.4 LU/ha, and 80 EUR if less than 1.4 LU/ha.

Table 1: Overview on prices and direct aids for selected agricultural products under the provisions of the current CAP and Agenda 2000

	CAP		Agenda 2000	
	current CAP	transitional period	2001	final stage
	1999	2000	2001	2002/2006
Cereals/maize				
- intervention price [EUR/ton of produce]	119.90	110.25	101.31	101.31 ^a
- monthly increment [EUR/ton of produce]	1.00	1.00	1.00	1.00
- direct aid [EUR/ton of cereal reference yield/ha]	54.34	58.67	63.00	63.00 ^a
Oilseeds				
- direct aid [EUR/ton of cereal reference yield/ha]	94.24 ^b	81.74	72.37	63.00 ^c
Seed flax				
- direct aid [EUR/ton of cereal reference yield/ha]	105.10	88.26	75.63	63.00 ^a
Fiber flax				
- fixed direct aid [EUR/ha]	815.86	815.86	815.86	815.86
Protein crops				
- direct aid [EUR/ton of cereal reference yield/ha]	78.49	72.50	72.50	72.50
Potato starch^d				
- minimum price [EUR/ton of starch]	209.78	194.05	178.31	178.31 ^a
- direct aid [EUR/ton of starch]	86.94	98.74	110.54	110.54 ^a
Silage grass				
- direct aid [EUR/ton/ha of cereal reference yield]	none	58.67	63.00	63.00 ^a
Set-aside				
- direct aid [EUR/ton/ha of cereal reference yield]	54.34	58.67	63.00	63.00 ^a
Beef				
- intervention price [EUR/ton carcass weight]				
- special premium, bulls [EUR/head; once per lifetime]	135.00	160.00	185.00	210.00
- special premium, steers [EUR/head; twice per lifetime] ^e	108.50	122.00	136.00	150.00
- suckler cow premium [EUR/head/year]	145.00	163.00	182.00	200.00
- slaughter premium, bulls, steers, cows, heifers [EUR/head] ^f	none	27.00	53.00	80.00
- slaughter premium, calves [EUR/head] ^g	none	17.00	33.00	50.00
- extensification premium, bulls, cows [EUR/head; once]	36.00	100.00	100.00	100.00
- extensification premium, steers [EUR/head; twice]	36.00	100.00	100.00	100.00
Pork				
- 'basic price' [EUR/ton carcass weight]	1,509.39	1,509.39 ⁱ	1,509.39 ⁱ	1,509.39 ⁱ
	1999	2005	2006	2007
Milk and dairy products^j				
- direct aid [EUR/ton of milk quota]	none	5.75	11.49	17.24
- intervention price, butter [EUR/ton]	3,282.00	3,117.90	2,953.80	2,789.7
- intervention price, skimmed milk powder [EUR/ton]	2,055.20	1,952.4	1,849.7	1,746.9
- target price milk [EUR/ton]	309.80	292.3	274.7	257.2

^a May change from the 2002 on if the intervention price is lowered, in which case aid will be increased.

^b Subject to the reference price system.

^c May change from 2002 in the event of a reduction of the intervention price and/or an overall revision of the sector.

^d Subject to Member State quotas; compensation was increased to offset quota reductions.

^e Granted twice in the life of each steer: the first time at the age of nine months, the second time after age of 21 months

^f On application for bulls, steers, cows, and heifers from the age of eight months.

^g On application for calves >1 and <7 months old and of carcass weight of less than 160kg.

^h On application for bulls, steers, cows.

ⁱ Not subject to Agenda 2000 reform; settled on base of yearly negotiations; basic prices for >2000 not been decided yet.

^j See beef support scheme for slaughter premia that apply to milk cows.

Source: European Commission, 1999d and 1999e; European Council, 1999a; relevant Regulations indicated in Table 2

Table 2: List of selected support schemes fulfilling the criteria set out in Article 1 of European Council Regulation (EC) No 1259/99

Sector	Legal base	Type of support
Arable crops	Articles 2 and 5 Regulation (EC) 1251/99	Area payments including set-aside payments and including durum wheat supplement and special aid
Potato starch	Article 8(2) Regulation (EEC) No 1766/92	Payment
Grain legumes	Article 1 Regulation (EC) No 1577/96	Area aid
Flax	Article 4 Regulation (EEC) No 1308/70	Area aid (the portion paid to farmers)
Hemp	Article 4 Regulation (EEC) No 1308/70	Area aid
Dried grapes	Article 7(1) Regulation (EC) No 2201/96	Area aid
Tobacco	Article 3 Regulation (EEC) No 2075/92	Production aid
Seeds	Article 3 Regulation (EEC) No 2358/71	Production aid
Hops	Article 12 Regulation (EEC) No 1696/71 Regulation (EC) No 1098/98	Area aid Payments for temporary resting only
Rice	Article 6 Regulation (EC) No 3072/95	Area aid
Beef and veal	Articles 4, 5, 6 and 10, 11, 13 Regulation (EC) No 1254/99	Special premium, deseasonalisation premium, suckler cow premium (including when paid for heifers and including the additional national suckler cow premium when co-financed), slaughter premium, extensification payment, additional payments
Milk and dairy products	Articles 16 and 17 Regulation (EC) No 1256/99	Dairy premium and additional payments
Sheep and goats	Article 5 Regulation (EC) No 2467/98	Ewe and she-goat premium and LFA supplements
Agri-money	Articles 4 and 5 of Regulation (EC) No 2799/98 Articles 2 and 3 of Regulation (EC) No 2800/98	Payments to producers (including those under the transitional Regulation)

Source: Council Regulation (EC) No 1259/99, establishing common rules for direct support schemes under the CAP, Annex

Remark: All aforementioned Regulations are accessible through internet, EUR-Lex Consolidated Legislation, http://europa.eu.int/eur-lex/en/consleg/ind/en_analytical_index_03.html

ANNEX 3: BULGARIA POLICY MATRIX

Total Population	8.5 mil.	Food and agriculture in GDP (1998)	21%	Agricultural output in 1998 in percent of 1989-91 level	64%
Rural Population	32%	Food and agriculture in active labor (1998)	25%	Livestock production in 1998 in percent of 1989-91 level	59%
Total Area	11.1 m. ha	Food and agriculture in exports (1998)	19%	Share of livestock in agriculture (1998)	43%
Agriculture area:	6.2 m. ha	Food and agriculture in imports (1998)	90%	Share of independent private farms in total arable area (1997)	79%
Arable land	44%	Traditionally net exporter: tobacco, sunflower seed, dairy products, wine, fruits and vegetables.			
Orchards	3.2%				
Irrigated	28%				
Forested	30%				

ISSUE	STATUS OF REFORMS	OBJECTIVES PROPOSED ACTIONS
1. Macro-economic Framework for Agriculture	<ul style="list-style-type: none"> • Most prices are liberalized; relatively free trade policy; currency board has controlled inflation, starting in 1998. • Previous systems of price and profit margin control and of "negotiated prices" were ended and most prices were fully liberalized in 1998. • Price and trade restrictions and impediments, especially export taxes and licensing have been largely eliminated. • Most farm gate prices show relatively low rates of markets or policy distortions. 	<ul style="list-style-type: none"> • Continue policy of stabilization and liberal markets. • Continue policy of low price distortions, extend liberal policy to tobacco, and focus on other means of supporting agriculture.
A. Prices/Subsidies		
B. Trade Policies	<ul style="list-style-type: none"> • Taxes on all agricultural exports and discretionary import duty exemptions have been eliminated; non-automatic and automatic licensing for agricultural exports largely eliminated. • Import tariff regime provides fairly high and non-uniform protection, especially for processing industries. Some tariffs, including fertilizer, are high. • Member of WTO since Dec 1, 1996 • Member of CEFTA since Jan 1., 1999 	<ul style="list-style-type: none"> • continue liberal trade regime, at least until date of EU accession is defined. • continue compliance with WTO principles. • Reduce tariffs on fertilizer imports and other agricultural inputs. • Adopt a lower and more uniform tariff structure. • Fully eliminate non-automatic and automatic licensing for all agricultural exports. • Extent trade liberalization to all products including tobacco.
C. Taxation	<ul style="list-style-type: none"> • Single 22% VAT also applies to food in general, but exceptions. 	<ul style="list-style-type: none"> • End VAT exemptions, particularly on flour and dairy products

ISSUE	STATUS OF REFORMS	OBJECTIVES PROPOSED ACTIONS
<p>2. <u>Land Reform and Farm Restructuring</u></p>	<p>While privatization of state and collective farms is close to completion, restructuring of private farming remains largely unfinished.</p> <ul style="list-style-type: none"> • Initiated in 1991, the protracted process of land restitution and liquidation of collective farms has devastated most farm assets. • Almost all farmland has been restituted, and about 18% formally land titled. • Since 1991, “collectives in liquidation” are a widespread business form in primary agriculture. • The land market is dormant, although short-term land leases are widespread. • The new government is committed to finishing the restitution of farmland and extending it to forest lands, but the process has yet to be finished due to lack of funding and some institutional and regulatory obstacles. 	<p>Accelerate liquidation of collective farms.</p> <ul style="list-style-type: none"> • Promulgate a national cadastre law based on best practices successfully tested elsewhere. • Promulgate a land lease law based on best practices successfully tested elsewhere. • Complete land registration, information and cadastre to guarantee security of tenure and information on land transactions. • Promote an active land market and the use of land as collateral to improve access to long-term credit. • Eliminate limits on maximum holding size and permit land purchases by foreigners. • Maintain neutral policy toward all legal forms of business association. • Complete liquidation of collective farms by auctions of remaining non-land assets. • Promote improved utilization of irrigation systems by transferring ownership to users.
<p>3. <u>Competitive Agroprocessing and Services for Agriculture.</u></p>	<p>Policy drift in privatization of agroprocessing and services has brought the sector into a deep crisis.</p> <ul style="list-style-type: none"> • Privatization has moved recently and is almost completed. • Some progress in establishment of warehouse receipts system. • A number of start-up companies in the food processing industry went bankrupt and some foreign investors have threatened to back out, mainly due to unstable and insecure business environment. • Beginning to transfer operation and maintenance responsibility for small-scale irrigation infrastructure to water users' associations. 	<p>Competitive, private agroprocessing and input supply in a stable macroeconomic environment.</p> <ul style="list-style-type: none"> • Finalize privatization and or liquidation of state-owned enterprises. • Pass legislation supporting formation of participatory service cooperatives. • Improve market information systems and external trade infrastructure. • Further develop warehouse receipts system. • Expedite formation of water users' associations, and transfer irrigation assets to them.

ISSUE	STATUS OF REFORMS	OBJECTIVES PROPOSED ACTIONS
4. <u>Rural Finance</u>	<ul style="list-style-type: none"> • The banking system virtually collapsed as hyperinflation and dollarization of the economy spread. • High risk stemming from uncertain property rights, low profitability and poor credit history greatly limit access to credit. • Avoiding banks, virtually all working capital needs are met from farmers' own-sources. • Subsidized directed credit from government is available for certain uses, creating further obstacles for private sector credit market development. • Donor supported credit co-op network is small, but successful. 	<ul style="list-style-type: none"> • Restoration of profitable conditions to farming as the first essential condition for improved access to rural credit; integration of the rural financial system within the overall financial system • Restore profitability to agriculture by eliminating price and trade restrictions, and avoid ad hoc interference in commodity pricing. • Restore confidence in Bulgarian banks by financial sector reform and effective bank supervision. • Restructure SFA to focus on role as counterpart agency for EU SAPARD funds; eliminate short-term direct credit, followed by long-term direct credit, and interest subsidies not connected to SAPARD-funded projects.
5. <u>Institutional Framework</u>	<p>Agricultural institutions including research and education have drifted into irrelevance, destroyed by policy drift, brain drain and inflation.</p> <ul style="list-style-type: none"> • Instead of guiding agriculture to a market-based system, MAFAR has focused only on ad hoc actions often motivated by a crisis or pressure from a special interest lobby. • Statistical information is unreliable, but improving. • Research establishment has been decimated. Financial resources barely cover salaries and are spread too thinly over rapidly declining number of centers, staff and projects. Little innovative research is underway, both technology and equipment are outdated. • Adjustment in agricultural education has been limited and public extension service does not exist. 	<p>Start with a narrow focus on essential priorities in public sector administration to ensure success.</p> <ul style="list-style-type: none"> • Develop a solid information database for agricultural policy decision-making. • Rationalize agricultural services by salvaging remaining valuable assets in research and education. • Cut losses and dispose of assets with no prospects for becoming profitable again such as most state-owned livestock farms. • Transfer assets to users, such as irrigation infrastructure, buildings, and equipment.

ANNEX 4: AGRICULTURAL POLICY TABLES: BULGARIA 1996 – 1999*

Section 1.1: Cereals Specific Policies for Producers

Policy	1996	1997	1998	1999
<i>Dom. Price policy</i>	generally liberalized price policy; wheat: minimum purchase price from 14,000 to 17,000 leva/t depending on classification	generally liberalized price policy; minimum price of 230,000 leva/mt	full liberalization of price policy	generally liberalized price policy; direct subsidy for storage of wheat, 1.5 leva/t/month (07/15 to 12/20), budgetary allocation for full term storage of 450,000 t
<i>Production subsidies</i>	only for wheat: 8.5 leve per hectare	only for maize: costs for materials 14 leve per ton, 20% from 1/2 from the BIR	none	none
<i>Input subsidies</i>	none	none	none	
<i>Credit subsidies</i>	only for maize: 1/2 from the Basic Interest Rate (BIR)	wheat: 1/2 of the BIR	50% from the BIR for wheat; 100% of BIR for maize	
<i>Export</i>	Export ban for all cereals	Export ban until end June '97 when export allowed with tax under licensing regime; export ban for rye	registration regime for wheat, barley, maize, free exports of rye	free trade regime
<i>Import</i>	25% general import duty for all cereals; wheat: 20% preferential rates; licensing regime; duty free import within quota; barley: registration regime - duty-free quota 50,000 t barley for brewery purposes and 100,000 t fodder; rye: 20% preferential duty; maize: duty free import within quota	25% general import duty for all cereals; wheat: 20% preferential rates; licensing regime; duty free import within quota; barley: registration regime, quota for duty-free import of 100,000 t up to 30 Jul 97; rye: 20% preferential duty; maize: duty free import within quota; all duties removed after 7/97	registration regime except for rye; 25% general duty for all cereals; wheat: 150,000 t tariff quota (15% duty), 100,000 t autonomous tariff quota (0% duty) (01/01 to 06/30), preferential tariff quota for Czech/Slovak Reps.; barley: 10,000 t tariff quota for brewery purposes (15% duty), 25,000 t autonomous tariff quota (0 % duty) (01/01 to 09/30), preferential tariff quota for import from Czech/Slovak Reps.; rye: 12.5% duty for imports from Czech/Slovak	wheat: imports from CEFTA: zero duty applies for durum wheat and 15% for wheat and rye-wheat mixtures; barley: 25% general duty, tariff quota of 10,000 t barley for brewery purposes with 15% duty, tariff quota for import of 100 t barley for brewery purposes from the EU with 17.5% duty, 18% duty for imports from CEFTA; rye: 25% general duty, 15% for imports originating from the CEFTA; maize: 25% general duty, tariff quota for import of 100,000 t with 5% duty, 15% duty for import of 2,000 t from Hungary

			Reps.; maize: 100,000 t tariff quota (5% duty), 50,000 t autonomous tariff quota (0% duty) (01/01 to 09/30)	
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Section 1.2: Cereals Specific Policies for Processors

Policy	1996	1997	1998	1999
<i>Dom. Price policy</i>	12% maximum allowable margin for flour and bread	maximum allowable margin up to 07/01, thereafter contracted prices for flour and bread	contracted prices until 8/98	full liberalization
<i>Export</i>	export ban for flour	export ban (01/01 to 06/30), registration regime and export tax (after 07/01)	registration regime	free export regime
<i>Import</i>	registration regime – duty-free quota 80,000 t, 25% general duty rate	registration regime, 80,000 t duty-free quota until 07/15), 25% general duty rate	registration regime, 10,000 t duty-free autonomous tariff quota (until 06/30), 25% general duty rate, preferential tariff quota for import from Czech/Slovak Reps.	25% general duty, 15% duty for imports from CEFTA

Section 2: Sunflower Specific Policies

Policy	1996	1997	1998	1999
Producers				
<i>Dom. Price policy</i>	liberalized price policy	liberalized price policy	liberalized price policy	liberalized price policy
<i>Production subsidies</i>				
<i>Input subsidies</i>				
<i>Credit subsidies</i>		50% from the BIR	100% from the BIR	
<i>Export</i>	Export ban	Export ban; removed in 6/97 and reintroduction of export taxes (US\$ 80 as of 6/97)	registration regime, 15% general duty rate, autonomous tariff quota of 50,000 t (01/01 to 09/30)	free trade regime, 15% general and 11% preferential duty rates
<i>Import</i>	15% general import duty with licensing	15% general import duty with licensing until 6/97 when duty removed		
Processors				
<i>Dom. Price policy</i>	maximum allowable margin for sunflower oil – 12%	Contract price system for sunflower oil after 01 Jul 97	Contract price system for sunflower oil up to Sep 98	liberalized price policy
<i>Export</i>	export ban	export ban [followed by] registration with	registration regime for	free trade regime

		export tax	sunflower oil and export tax up to 09/30	
<i>Import</i>	registration regime, 10% general duty for crude and 15% for refined sunflower oil	registration regime, 10% general duty for crude oil, 15% for refined oil, quota of duty-free import	registration regime, 10% general duty for crude and 15% for refined sunflower oil, autonomous tariff quota of 25,000 t for duty-free import from 01/01 to 09/30	10% general duty for crude oil, 15% for refined oil, 500 t tariff quota oil for Hungary (7 % duty for crude oil, 10% for refined), 500 t tariff quota for Turkey (10.5%)

Section 3: Tobacco Specific Policies (applied to Producers)

Policy	1996	1997	1998	1999
<i>Dom. Price policy</i>	Minimum purchase prices	minimum purchase prices	minimum purchase prices	minimum purchase prices
<i>Production subsidies</i>	Yes	yes	yes	yes
<i>Input subsidies</i>	Fund "Tobacco" distributes tobacco seeds to producers free of charge; provides cash subsidy to producers	Fund "Tobacco" distributes tobacco seeds to producers free of charge; provides cash subsidy to producers	Fund "Tobacco" distributes tobacco seeds to producers free of charge; provides cash subsidy to producers	Fund "Tobacco" distributes tobacco seeds to producers free of charge; provides cash subsidy to producers
<i>Credit subsidies</i>	None	none	none	none
<i>Export</i>	export ban for non-manufactured and non-fermented tobacco; 6,000 t quota for EU with 20% duty	export ban for non-manufactured and non-fermented tobacco; registration; 6,300 t quota for EU with 20% duty	export ban for non-manufactured and non-fermented tobacco; registration; 6,900 t quota for EU with 20% duty	export ban abolished; 7,200 t quota for EU with 20% duty
<i>Import</i>	import permission required, general duty tariff 10% to 40%, preferential duty (preferential duty 7% to 30%)	import permission required, general duty tariff 10% to 60%, preferential duty (preferential duty 7% to 45%)	registration regime; Duty Tariff from general duty rate 10% to 60%, preferential rate 7%, to 45%, 6,000 t tariff quota for the EU (7% to 28% duty rate)	no registration required, general duty tariff rate 10% to 60% (some product group 5%), preferential rate 7% to 45% (3%); 6,000 t tariff quota for EU (7% to 28% duty rate), 1,000 t tariff quota for CEFTA (5% duty), tariff quota for Turkey (28% to 40% duty).

Section 4: Dairy Product Specific Policies (applied to processors)

Policy	1996	1997	1998	1999
<i>Dom. Price policy</i>	Maximum prices, allowing up to 12% margin	up to June - maximum prices, from July on - contracted prices	contracted prices up to August	

<i>Export</i>		registration regime	registration regime	free trade regime
<i>Import</i>	Registration regime	registration regime, tariff quotas in compliance with WTO for import with reduced duty, quota for duty-free import of cheese Aug - Dec 97	registration regime, tariff quotas in compliance with WTO for import with reduced duty, quota for preferential rates by import from the EU, autonomous tariff quota for duty-free import of dry milk	free trade regime, tariff quotas in compliance with WTO for import with reduced duty, quota for preferential rates by import from the EU

Section 5: Cattle/Beef Specific Policies

Policy	1996	1997	1998	1999
Producers (Cattle)				
<i>Production subsidies</i>		11 leva/animal - 20% from the costs for nourishment	80 leva/animal	
<i>Export</i>	license regime; export tax of US\$ 500/mt		License regime; export tax of DEM 500/mt	free exports
<i>Import</i>	General duty 5% and additional duty amounting to 140 ECU/mt introduced; duty free import within quota for breeding stock; licensing regime	General duty 5% and additional duty amounting to 140 ECU/mt; licensing regime		
Processors (Beef & Veal)				
<i>Dom. Price policy</i>	Maximum prices, allowing up to 12% margin	up to June - maximum prices, from July on - contracted prices	contracted prices up to August	
<i>Export</i>	Registration regime	registration regime	registration regime	free trade regime
<i>Import</i>	Registration regime, quota for duty-free import	registration regime, tariff quota for duty-free import and quotas for import with reduced tariffs - in compliance with the WTO, from Aug - Dec 97 - reduced tariff rates	registration regime, tariff quota for duty-free import and quotas for import with reduced tariffs - in compliance with the WTO, quota with preferential rates by import from the EU	free trade regime, tariff quota for duty-free import and quotas for import with reduced tariffs - in compliance with the WTO, quota with preferential rates by import from the EU

Section 6: Pig/Pork Specific Policies

Policy	1996	1997	1998	1999
Processors (Pigs)				
<i>Production subsidies</i>	<costs for nourishment 3.7 leva per animal – 30%>	<costs for nourishment 8.1 leva per animal - 20% from 19 leva per piece>		
<i>Export</i>	Licensing regime			free trade regime
<i>Import</i>	General tariff replaced by 241 ECU/mt import duty; licensing regime; duty free import within quota	241 ECU/mt import duty; licensing regime		
Processors (Pork)				
<i>Dom. Price policy</i>	maximum prices, allowing up to 12% margin	up to June - maximum prices, from July on - contracted prices	contracted prices up to August	
<i>Export</i>	registration regime	registration regime	registration regime	free trade regime
<i>Import</i>	registration regime	registration regime, from Aug - Dec 97 reduces tariff rates	registration regime, autonomous tariff quota (unlimited quantities) for import with reduced duty	free trade regime, autonomous tariff quota (unlimited quantities) for import with reduced duty

Section 7: Sheep/Mutton Specific Policies

Policy	1996	1997	1998	1999
Processors (Sheep)				
<i>Dom. Price policy</i>		<1.1 leva per piece - 20% from the nourishment costs>	<16 leva per piece - 20% from the nourishment costs>	
<i>Export</i>	licensing regime and export tax USD 30 per metric ton	licensing regime and export tax USD 30 per metric ton	licensing regime and export tax DEM 50 per metric ton	free trade regime
<i>Import</i>	registration regime, quota for duty free import of breed animals	registration regime, from Mar 97 quota for duty free import of breed animals	registration regime, duty free import of breed animals	free trade regime, duty-free import of breed animals
Processors				
<i>Dom. Price policy</i>	maximum prices, allowing up to 12% margin	up to June - maximum prices, from July on - contracted prices	contracted prices up to August	
<i>Export</i>	registration regime	registration regime	registration regime	free trade regime
<i>Import</i>	registration regime	registration regime	registration regime	free trade regime

Section 8: Chicken/Chicken meat/ Eggs Specific Policies

Policy	1996	1997	1998	1999
Processors (Chicken)				
<i>Dom. Price policy</i>	<costs for nourishment 0.10 leva per piece - 15%>	<costs for nourishment 0.30 leva per piece ->	<costs for nourishment 3.6>	

		20%	leva per piece>	
<i>Export</i>	Licensing regime		Free trade regime	
<i>Import</i>	15% general import duty; licensing regime; duty free import within quota		Free trade regime	
Chicken meat (Processors)				
<i>Dom. Price policy</i>	maximum prices, allowing up to 12% margin	up to June - maximum prices, from July on - contracted prices	contracted prices up to August	
<i>Export</i>	registration regime	registration regime	registration regime	free trade regime
<i>Import</i>	registration regime	registration regime, tariff quotas in compliance with WTO for import with reduced duty, from Aug - Dec 97 - reduced duties	registration regime, tariff quotas in compliance with WTO for import with reduced duty	free trade regime
Producers (Eggs)				
<i>Dom. Price policy</i>	maximum prices, allowing up to 12% margin	up to June - maximum prices, from July on - contracted prices	contracted prices up to August	

Note: No consumer specific policy measures exist for any of the above products. Credit subsidies under SFA for 1999 are not included in the above tables.

ANNEX 5: OVERVIEW OF STRUCTURAL POLICIES OF THE EU

Following total financial allocation on the Common Agricultural Policy (~43% of total budget), the expenditure on structural operations is the EU's second largest single budgetary position (~38%). The largest portion of resources for structural operations is allocated on the Structural Funds (~ 92% of expenditure on structural operations), and a smaller portion on the Cohesion Fund. The EU Structural Funds are administered by the Commission to finance Community structural aid. The principle aim of the EU's structural policy is the redistribution of income from the relatively richer to the poorer regions of the EU.

The regulations adopted in 1993 for the period 1994-1999 established 6 priority Objectives (Objectives 1-5b). A further Objective (Objective 6) for the Structural Funds was created by the Act of Accession for Austria, Finland, and Sweden¹. Four of these priority Objectives address regional problems²:

- * Objective 1: promoting the development and structural adjustment of regions whose development is lagging behind, i.e. the individual region's GDP per capita is below 75% of the Union's average (accounting for 68% of total resources);
- * Objective 2: conversion and restructuring of areas seriously affected by industrial decline (11% of total resources);
- * Objective 5b: facilitating the development and structural adjustment of rural areas that do not fall under Objective 1 (4% of total resources); and
- * Objective 6: promoting the development and structural adjustment of regions with an extremely low population density, i.e. less than 8 inhabitants per km² (0.5% of total resources).

Three other Objectives are centered on specific problems rather than on regions:

- * Objective 3: combating long-term unemployment and facilitating the integration into working life of young people and of those excluded from the working market;
- * Objective 4: facilitating the adaptation of workers to industrial change and changes in production systems; and
- * Objective 5a: speeding up the adjustment of agricultural structures in the framework of the reform of the Common Agricultural Policy and facilitating the structural adjustment of the fisheries sector in the framework of the Common Fisheries Policy.

Altogether, the budget of the Structural Funds has quadrupled in the last few years, totaling 161b ECU for the period 1994-1999. In addition, structural operations are carried out by the Cohesion Fund and loans from the European Investment Bank (EIB), which are based on a project-financing approach and are governed by their own specific rules. The European Union maintains three main structural funds, namely the European Regional Development Fund (ERDF), the European Social Fund (ESF), and the Guidance section of the European Agricultural Guidance and Guarantee Fund (EAGGF).

¹ See European Commission, 1999f.

² The population covered by the regional Objectives amounts to 51% of the EU total. Some 55% of the total resources go to 16% of the EU population in four countries - Greece, Spain, Ireland, and Portugal - mostly through Objective 1 programs.

The Financial Instrument for Fisheries Guidance (FIFG) is not a Structural Fund as such, but finances structural actions in the fisheries sector within the framework of Structural Fund programs³.

As displayed in **Table 1**, the assistance of the ERDF is provided to less favored regions and is focused mainly on productive investment, infrastructure and development of small- and medium-size enterprises⁴. About 44% of the total spending on Structural Funds is allocated to the ERDF. Under current provisions, ERDF payments are granted to regions eligible for payments under Objectives 1, 2, 5b and 6. The ESF accounts for 27% of budgetary allocations to Structural Funds. Its main task is the financial support of vocational training and employment aids in less favored regions of the EU eligible under Objectives 1 to 4, 5b and 6. Promotional activities of agricultural structures and rural development measures under the Guidance Section of the EAGGF account for another 14% of Structural Funds. Its activities are limited to the regions eligible for support under Objectives 1, 5a, and 5b.

On 24 and 25 March 1999, the European Council in Berlin reached political agreement on the Agenda 2000 regulations. Regarding the framework to structural operations, it was decided to cut down the number of principal Objectives to three Objectives⁵:

- * Objective 1, for regions where development is lagging behind and per capita GDP is below 75% of the EU's average⁶ (i.e. the title of Objective 1 remained unchanged). Regions currently eligible under Objective 6, which have a per capita GDP of less than the 75% threshold, will be eligible in their entirety under Objective 1. The other Objective 6 areas will be eligible for Objective 1 and receive a transitional support. Current Objective 1 regions no longer qualifying for Objective 1 will have their assistance phased out gradually. Budgetary resources have been divided among the Objectives with the aim of significant concentration on Objective 1 regions. In total 69.7% of the Structural Funds budget will be allocated on Objective 1 regions (135.9b EUR), 4.3% of which to regions in transition.
- * Objective 2, for areas undergoing economic and social conversion. The Commission states that, as under Objective 1, the focus should be on the most seriously affected areas. The population covered by this Objective over the whole period 2000-2006 should be no more than 18% of the Union. The maximum possible reduction in population covered by the new Objective 2 in 2006 will be limited to one-third compared to coverage under current Objectives 2 and 5b (including areas receiving transitional support under Objective 1 which meet the Objective eligibility criteria). Areas currently eligible under Objectives 2 and 5b that do not qualify for the new Objective 2 criteria will see their entitlement phasing out, to end in December 2003. In total, 11.5% of the total Structural Funds budget

³ See European Commission, 1999f.

⁴ See European Council, 1993c, Art. 1.

⁵ See European Commission, 1998c, pp. 14.

⁶ Calculations will be based on figures for the last three years available from Eurostat.

will be allocated to Objective 2 regions (22.5b EUR), 1.4% of which to regions in transition.

- * Objective 3, for development of human resources, will fund the adaptation and modernization of policies and systems relating to education, training and employment. 12.3% of the total Structural Funds budget will be allocated to these regions (24.05b EUR). This will be funded outside the areas eligible under new Objectives 1 and 2.

The EU's contribution to structural funding is subject to cofinancing procedures, i.e. the government responsible for the regions that receives the support has to cover a predefined rate of the project volume in order to be eligible for Community participation. Under the provisions of the current (i.e. 1999) funding schemes, the levels of Community participation are subject to the following limits⁷: As far as projects in Objective 1 regions are concerned, a maximum of 75% of the total project cost and, as a general rule, at least 50% of public expenditure⁸. In Objective 2 and 3 regions, the ceiling is set at 50% of the total eligible cost, with a minimum of 25% of public expenditure. In cases of Community investments in companies, the cofinancing may not exceed 50% in Objective 1 and 30% in the other regions.

For the 2000-2006 period these general rate remain applicable, though some further restrictions apply. For investment in 'infrastructure generating revenue' the ceilings have been fixed at a maximum of 40% of the total cost in Objective 1 regions (50% in Member States eligible for the Cohesion Fund) and 25% in Objective 2 areas⁹. Furthermore, the rates of Community participation in investments in companies located in Objective 1 and Objective 2 regions have been limited to 25% and 15%, respectively.

⁷ See European Commission, 1999f.

⁸ In certain cases, the rate can rise to 80% (countries covered by the Cohesion Fund) or even 85% (most remote regions).

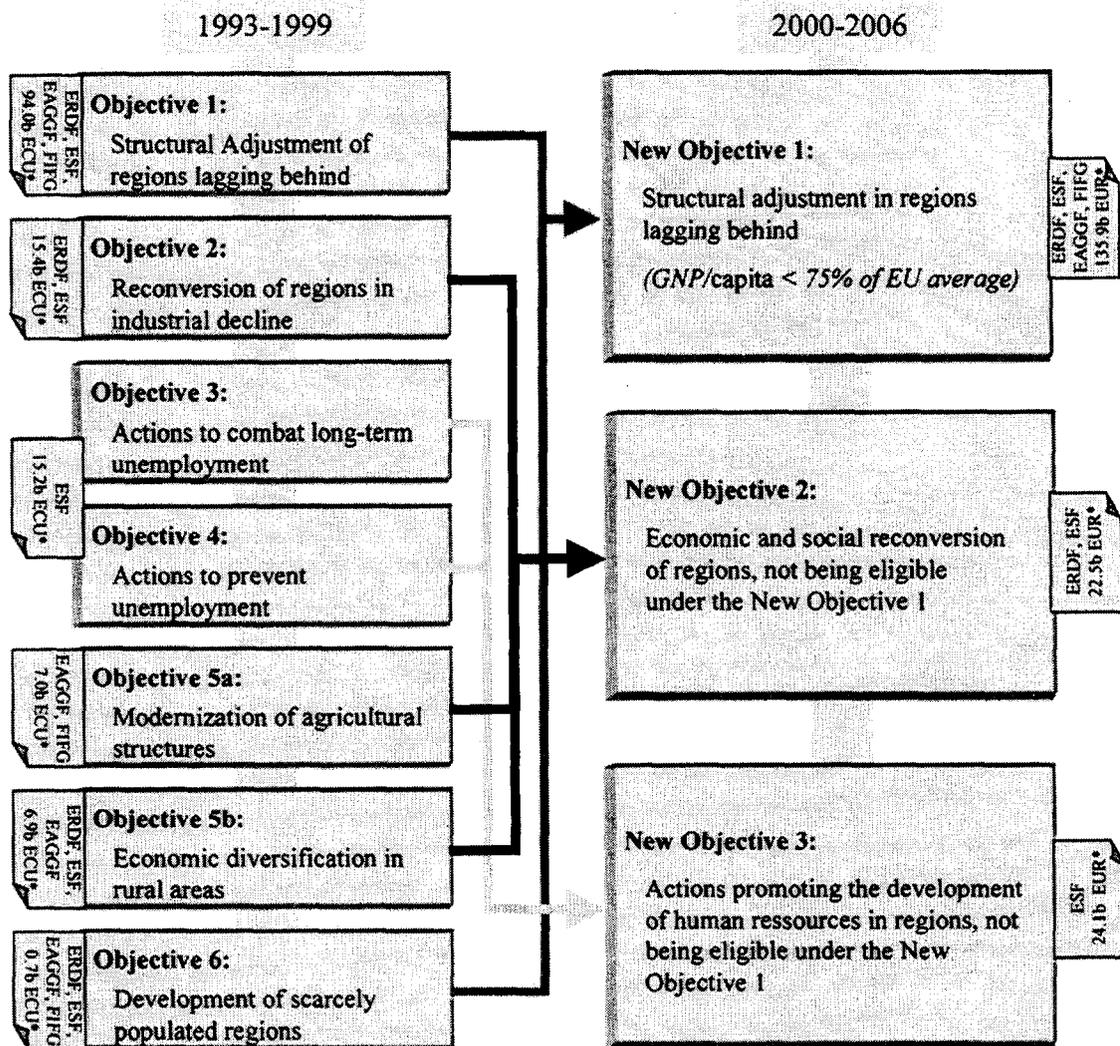
⁹ The regulations specify that these rates may be increased by 10% if the assistance is used for financial engineering.

Table 1: Conversion of Eligible Measures for Structural Fund Assistance

<i>Fund</i>	<i>1993-1999</i>	<i>2000-2006</i>
ERDF	<ul style="list-style-type: none"> - productive investment permittin the creation or maintenance of permanent jobs - investment in infrastructure, with a varying scope depending on the objective - indigenous development: local and SME development 	
ESF	<ul style="list-style-type: none"> - occupational integration of unemployed persons exposed to long-term unemployment - occupational integration of young people in search of employment - integration of persons exposed to exclusion form the labor market - promotion of equal opportunities on the labor market - adaptation of workers to industrial change - stability and growth in employment - strengthening human potential in research, science, and technology - strengthening education and training systems 	<ul style="list-style-type: none"> - <i>assistance for persons</i>: education and vocational training, aid for employment, higher education in science and research, new sources of employment - <i>assistance for structures and systems</i>: improving education and training systems, modernizing employment services, developing systems to anticipate qualification needs - <i>accompanying measures</i>: raising awareness, services, etc.
EAGGF-Guidance	<p><u>Measures linked to agricultural structures:</u></p> <ul style="list-style-type: none"> - supporting farming income and the maintenance of viable farming communities in mountainous or disadvantaged areas; start-up support for young farmers - improving the structural efficiency of holdings - encouraging the establishment of producers' associations - conversion, diversification, reorientation, and improvement of the quality of agricultural products <p><u>Measures encouraging rural diversification:</u></p> <ul style="list-style-type: none"> - developing rural infrastructure - encouraging investment in tourism - other measures such as the prevention of natural disasters, village renewal, protection of the rural heritage, development and promotion of forests, protection of the environment and the countryside and financial engineering 	<p><u>Measures targeting all rural areas in the EU:</u></p> <ul style="list-style-type: none"> - investment in agricultural holdings - start-up support for young farmers - professional training - support for early retirement schemes - compensatory allowances for disadvantaged areas - agri-environmental measures - processing and marketing of agricultural products - development and promotion of forests - measures for the adaptation and development of rural areas

Source: European Commission, 1999f, p. 24f.

Figure 1: Conversion of Priority Objectives of EU Structural Policies



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