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INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

THE ECONOMIC POSITION OF PERU

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PERU  
BASIC STATISTICS

<u>Area</u>	482,300 square miles
<u>Population</u> 1939	6.9 million
1949	8.1 million
<u>Currency</u>	No official parity; rate fluctuates around 15 soles to the U.S. dollar 1 sol = 6.67 cents 1 million soles = US\$ 66,667
<u>National Income 1947</u>	5,450 million soles (US\$ 838 million) (\$112 per head)

	<u>1948</u>	<u>1949</u>	<u>1950</u>	
		(Million US\$)	(June)	(August)
<u>Exports f.o.b.</u>	156.8	151.6	81.7	
<u>Imports c.i.f.</u>	167.7	167.1	68.6	
<u>Gold and Foreign Exchange (Dec.)</u>				
<u>Gross, all banks (I.F.S.)</u>	58.6	56.8	55.0	58.4
<u>Net, Central Bank</u>	12.8	10.2	10.7	
		(Million soles)		
<u>Government Revenue</u>	1021	1433	752	
<u>Expenditure</u>	1051	1390	711	
<u>Money Supply</u>	1780	1918	2018	2145
		(1937 = 100)		
<u>Wholesale prices, all goods</u>	396	553	616	633 <sup>1/2</sup>
<u>Cost of living index</u>	337	387	431	432 <sup>1/2</sup>

## SUMMARY AND CONCLUSIONS

### Production and Development

So far as can be determined, production increase over the past twenty years has not kept pace with population growth. More recent production growth, however, shows encouraging improvement.

Prospects for maintained improvement are mixed. In the financial field they seem good, with real possibility of stability with more effective investment rates. However, the political climate, although more favorable than formerly, may obstruct adoption and execution of objective and longer-range development policies. The underlying geographical and social difficulties inherent in the Peruvian scene continue to limit immediate possibilities as well as foreseeable potential. Peru cannot be classified with Chile or Colombia, whose more advanced development itself liberates opportunities not yet available to Peru.

### Recent Financial History

Since 1939 Peru has experienced an inflation as great as that of any Andean country. Its origin has been internal, due to budgetary deficits and to expansion of commercial bank credit.

Government revenues have been buoyant, and are fairly high in relation to national income. With the absence of extraordinary war-induced expenditures, it should be possible to avoid deficit while financing a

reasonable level of official investment. Emergent credit controls offer some possibility of diminished banking expansion.

Cotton, sugar, minerals and petroleum cover 80% of Peru's exports. Except for zinc, their volume has shown little growth, and their value has not kept pace with population increase. The regional distribution of trade confronts Peru with hard currency problems.

Imports have in the past proved flexible in total, giving continuous approximate overall balance of payments equilibrium; exchange reserves have shown greater stability than customary in Latin America. Accelerated economic development, with higher levels of equipment and raw material requirements, would induce greater import rigidity.

In November 1949 official exchange parity was abolished, all transactions being at fluctuating rates; results so far seem satisfactory.

The settlement upon external bonded debt has not been recommended by the bondholders councils. By December 1, 1950, however, 66.5% of dollar bonds had accepted the offer; sterling acceptances are negligible.

#### Creditworthiness

New lending to Peru involves sizeable risks, centering externally upon her ability to earn dollars both in trade with the United States and elsewhere, and internally upon her ability to achieve development and a consequential overall balance of payments position permitting not only enhanced debt service but also transfer of a considerable income upon direct investment. To the "program risk" there is added an external risk that total

trade may earn an insufficient proportion of dollars.

Possible programming in Peru should adopt objectives suitably limited both in scale and in direction, seeking regional improvement and balance of payments strengthening as a groundwork for longer-range future growth.

Assuming an appropriate and effective development program, and that 60%-65% of Peru's total exports will earn dollars so long as European currencies remain inconvertible, new lending to a total of US\$ 50 million over about five years could be undertaken, but no more than US\$ 25 million should be in United States dollars unless specifically directed to improvement of the dollar sector of the balance of payments.

## THE ECONOMIC POSITION OF PERU

### A. PRODUCTION AND DEVELOPMENT

#### 1. Retrospect

Estimates of Peruvian national income and accounts have been made for the period 1944-1947, but by methods which limit their international comparability. They indicate an average per capita income in 1947 of 725 soles, or US\$ 112 at the then official rate. This average figure is useful mainly as an initial starting point for appraisal, owing to marked differences in personal and geographical income distribution, and associated differences in the purchasing power of money to different people and in different regions.

The coastal region, both urban and rural, is relatively highly developed. Here lives only one-fourth of the population, producing about one-half of the total income. Average coastal income per capita was thus around the US\$ 220 mark in 1947. Perhaps one-half of the Peruvian population lives in a primitive economy, and disposes of something like US\$ 30 per capita in income, while the 25% in the non-coastal, non-primitive economy probably averaged around US\$ 170.

The content of estimates such as these is illustrated as follows.

#### NATIONAL INCOME AND SAVINGS, 1947 (soles converted at 6.50)

Area	Population (million)	Income		Net Savings	
		per head (US\$)	total (US\$ million)	per cent a/	total (US\$ million)
Coast	1.9	220	419	12.5	52
Primitive	3.8	30	114	nil	—
Other	1.8	170	305	9	28
Totals	7.5	112	838	9.5	80

a/ Assumed as plausible possibilities.

Maximum net saving from the 1947 Peruvian national income could not have exceeded US\$ 100 million, and was probably considerably less. Mobilization of more than US\$ 40-50 million equivalent in soles for total new productive investment, including private, could not be expected from 1947 domestic resources. This supports the conclusion reached later that annual budget investment sources are unlikely to exceed US\$ 10 million equivalent.<sup>1/</sup>

These income differences correspond to and arise from structural diversity within the Peruvian economy. Although wholly dependent upon irrigation, the coastal region is the most highly developed, possessing all export agriculture, the greater part of commercial food production, almost all present petroleum production, and the largest proportion of manufacturing. The coastal region is wholly within the modern monetary economy, while large parts of the Sierra or highland region are still upon its fringe.<sup>2/</sup> Outside mining, highland production has not so far supplied much to the rest of the country beyond a small flow of foodstuffs to the coast and some minor exports such as wool. The million or so people east of the Andes are upon the frontier of a modern economy, and many of them still wholly outside monetary influence.

Although little of its own production (except for minerals) reaches the coast, the Sierra provides an important source of manpower for the coastal

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1/ Despite the different years involved, real income will not have changed greatly, and inflation is taken into account by converting the 1947 national income at 6.50 and possible 1951 budget resources at 15. Upon base 1947 = 100, July 1950 wholesale prices were 201; with 6.50 as 100, 15 is 231.

2/ "The population of highland Peru is Indian in terms of race and Indian in terms of the attitudes and techniques of living." James, Latin America, p. 145.



economy. The seasonal labor requirements of coastal agriculture occasion a movement of workers from the highlands. Since by fortunate coincidence the timing of peak labor requirements is not the same on the coast and in the highlands, these migratory workers can meet seasonal needs in both areas, or can provide casual construction and general labor on the coast during periods dependent upon the highland agricultural seasons. This enables a level of production on the coast that would not otherwise be possible, at least without greater mechanization. At the same time, a migratory worker's saving from his coastal wage may represent a highland family's whole money income.

There is concurrently a steady gain of coastal population from the highlands. Between 1940 and 1947, total population grew 14% while coastal population grew 19%. With the growth of manufacturing, this is to be expected. Nevertheless, the Peruvian situation displays some peculiar features. The highlands have not yet been able to supply foodstuffs of the type and in the quantity required by the coast, particularly in wheat and meat.<sup>1/</sup> Thus the labor shifts associated with development have occasioned additional food imports, whereas it is possible that at least part of these requirements could be produced in Peru. Attention to the highland position is necessary, since irrigated coastal agriculture cannot provide wheat and meat economically, but rather the higher-priced crops for domestic consumption or export. Agricultural development in the highlands, leading to inter-regional trade, will encounter not only indigenous conservatism but also difficulties of crop and transport improvement, and perhaps questions of land ownership.<sup>2/</sup> But

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<sup>1/</sup> There are dietary differences between the coast and the highlands, whose main food crops are corn and potatoes.

<sup>2/</sup> Whether the highlands are at present to be regarded as over-populated seems to depend upon interpretation of the consequences of the present

neglect of feasible opportunities may lead to lag of agricultural techniques and output, and unbalanced development.

Comprehensive data are lacking for past long run trends in total Peruvian national income and production. All available evidence, however, suggests that growth has not outrun population increase. In agriculture there appears to have been little significant growth in total area under cultivation: a 1929 estimate was 1,463,900 hectares, and a 1943 estimate (by a different authority and therefore perhaps by different methods) was 1,486,000 hectares. If this be the case, growth of agricultural production would depend entirely upon increase of yield rather than area.

AGRICULTURAL PRODUCTION IN 1929 AND 1943  
(thousands of metric tons)

Commodity	1929	1943	Per cent change
Population (millions) .....	5.56	7.05	+ 26.8
Cotton .....	56.0 <sup>a/</sup>	67.0 <sup>b/</sup>	+ 19.6
Sugar .....	388.4 <sup>a/</sup>	432.6 <sup>b/</sup>	+ 11.4
Rice .....	42.4 <sup>a/</sup>	90.8 <sup>b/</sup>	+ 114.2
Barley .....	118.5	137.0	+ 15.6
Legumes .....	57.4	166.0	+ 189.1
Corn .....	451.5	354.0	- 21.6
Potatoes .....	820.4	654.0	- 20.3
Sweet potatoes and other tubers .....	232.8	225.0	- 3.4
Beans and peas .....	139.1	122.0 <sup>b/</sup>	- 12.3
Wheat .....	97.6 <sup>a/</sup>	92.0 <sup>b/</sup>	- 5.7

a/ 1926-1930 average.                      Source: "The Peruvian Economy,"  
b/ 1941-1945 average.                      Pan American Union, p. 7.

pattern of land ownership and use. The large holdings appear to be under-utilized, yet unable to obtain their labor requirements upon customary terms from rural workers intent upon cultivation of their own small and less productive plots during seasonal peaks. Mechanization of large holdings appears at present to be substantially more costly than labor, yet without it, or greater use of labor, production increase may lag. If there be no change of land ownership, the action of the large holders regarding mechanization or increased labor incentives will determine the future relative pressure of population upon resources in the highland valleys.

Production for export, which embraces part of agricultural production and all mining production, has not shown apparent growth.<sup>1/</sup> In point of fact, export production occupies a very small proportion of population; mining about 45,000, and export agriculture about 120,000, or 165,000 persons in all, about 6% of the occupied population. Over twenty years the value of exports in terms of "constant dollars" per capita has actually declined, being in 1949 a little more than half the pre-depression level.

EXPORT VALUES PER CAPITA

Years	Exports		U.S. whole- sale prices (1948 = 100)	Per capita exports (1948 dollars)
	total (US\$ millions)	per capita (US\$)		
1925-1929 .....	111.5	22.55	59	37.58
1935-1939 .....	75.8	12.94	49	26.41
1940-1944 .....	73.5	11.37	57	19.95
1947 .....	153.4	21.58	93	23.20
1948 .....	160.5	22.29	100	22.29
1949 .....	150.7	18.41	94	19.56

Source: "The Peruvian Economy," p. 217.

Thus fragmentary but significant data suggest that over the twenty-year period the ability to acquire imports has steadily deteriorated, while

<sup>1/</sup>

EXPORT VOLUMES PER CAPITA  
(Indices, 1929 = 100)

Year	Total export volume <sup>a/</sup>	Population	Volume per capita
1937 .....	119	115	103
1939 .....	97	120	81
1946 .....	107	137	78

<sup>a/</sup> Cotton, sugar, petroleum, copper, wool, hides and rubber.

Source: "The Peruvian Economy," p. 217.

production growth in the two main fields of agriculture and mining seems at best to have been no greater than population increase, and perhaps somewhat smaller. This, however, does represent a useful achievement in the face of a 40% increase in population from 1929 to 1949.

It is important to add at once, however, that progress over the past ten years has been better than during the past twenty years which include the depression. In agriculture, there has been an increase of staple food crops. The shift away from potatoes suggests improvement of nutrition standards. The growth of domestic wheat production has, however, been insufficient to meet demand, imports growing from 115,000 metric tons in 1934-1939 to 139,000 in 1947, 151,000 in 1948, and 215,000 in 1949.

AGRICULTURAL PRODUCTION  
(thousands of metric tons)

Commodity	1934-38	1947	1948	Per cent change to 1948
Population (millions)...	6.24	7.57	7.73	+ 23.9
Wheat .....	76	135	137	+ 80.2
Rice .....	86	207	145	+ 68.6
Barley .....	118	208	161	+ 36.4
Maize .....	452	612	621	+ 37.4
Potatoes .....	820	672	674	- 17.8
Milk .....	191 <sup>a/</sup>	300	318	+ 66.5
Sugar .....	382	479	489	+ 28.0
Cotton .....	84	67	64	- 23.8

a/ 1937.

Source: FAO Monthly Statistical Bulletins.

In mining there has been a sizeable increase of zinc output, offsetting a fall in copper. Manufacturing industry has greatly increased; one index of the volume of manufacturing gives a 40% increase between 1940

and 1945. Industrial electric power consumption in Lima and Callao increased from 36.4 million kwh in 1938 to 87.2 million kwh in 1947. Cement output has moved from 101,340 tons in 1938 to 255,640 tons in 1947. Road mileage grew from 23,610 kilometres in 1938 to 34,968 kilometres in 1948, with trucks increasing in number from 8,800 to 16,060.

Recent trends thus appear to be more promising than those apparent from longer-range retrospect; the growth curve may have steepened upwards, particularly in the postwar years.

## 2. Prospect

The Peruvian problem now is to endeavor to grasp the opportunity offered by relatively favorable postwar trends to overcome the obstacles which have prevented better long run achievement in the past, obstacles whose influence may recently have lessened somewhat but still underlie longer-range future prospects. In the field of finance, the present opportunities seem greater than the obstacles; in the political and modern social fields, the obstacles seem to have lessened, even if only temporarily; while underlying economic and social difficulties persist without as yet any real change. Each of these will be examined in turn.

### (a) Financial

Peruvian financial achievement has not been particularly encouraging. Inflation has been long-lived and severe. Yet it would seem that greater stability could be attained without real difficulty and at the same time more effective developmental investment accomplished if too much is not attempted.<sup>1/</sup>

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<sup>1/</sup> Financial matters are discussed in detail in the chapter upon "Recent Financial History."

It is important that the Peruvian tradition of budgetary deficit be overcome. The opportunity seems favorable. On the one hand the immediate "causes" of recent deficit, namely expenditures arising from world war and from food subsidies, should disappear. On the other hand, budget revenues have proved buoyant, and are probably adequate to support an acceptable level of official investment, particularly if that investment is restricted so far as possible to projects of real priority for economic development.

Embryonic credit controls are emerging in Peru; if the intelligent use of these be encouraged, and the Peruvian authorities recognize that here is a modern economic responsibility that cannot be abdicated, the second major source of domestic inflation should diminish.

Externally, Peru's short-term position is not unfavorable. The present "war status" of raw materials markets confers a windfall gain upon her, one far from being absorbed by rise of her import prices. Her recent policies in the exchange field should encourage export volumes, just as her cessation of price controls and subsidies should encourage domestic production of some important foodstuffs with consequential diminution of imports.

The financial changes arising from the recommendations of the Klein Mission<sup>1/</sup> appear on the whole to have been beneficial. A unitary exchange rate, even if fluctuating, and the absence of qualitative import controls is preferable to a more complicated situation whose administration is defective

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<sup>1/</sup> In August 1949 the Peruvian Government announced the appointment of an Economic and Financial Mission to "study the economic, monetary, fiscal and administrative systems of Peru." Dr. Julius Klein headed this mission of American experts, which was retained directly by the Peruvian Government.

and lacks firm policies. The abolition of preferential import rates and subsidies for foodstuffs permits full impact of price incentives to increase domestic agriculture. Provided the consequential wage increases can be smoothly absorbed, removal of subsidies should lessen inflationary dangers in the short run by reduction of budgetary burdens and in the longer run by encouragement to domestic production.

(b) Political and Social in the Money Economy

He would be rash who would predict prolonged political stability in Peru. Yet the present political climate may for a while permit consideration of economic policies with some freedom from short-term political necessities.

The relatively small group of owners and entrepreneurs in the monetary economy now seem far more ready to undertake active private investment and production than they did in 1948, at the time of the Bank's first mission to Peru. This, of course, is partially a reflection of present relative political stability. Present entrepreneurial expectations are probably for a minimum of Government policies affecting private enterprise, a factor which development policies in Peru should take into account.

(c) Social and Economic

Underlying and very real difficulties, however, remain, their recent influence perhaps temporarily lessened but certainly not overcome. These difficulties arise from physical, social and economic conditions of a kind not susceptible to rapid change.

The fundamentally inhospitable nature of the Peruvian geographical environment greatly influences her economic potential, increasing the cost of

much necessary investment. The fact that the whole coast is a desert compels irrigation. The Andean range not only creates transport difficulties, but limits the return to human occupancy of the area. Effective occupation of the selva east of the Andes is in its infancy, and will necessarily be a long-run and costly affair.

Socially, Peru is as highly regionalized as she is geographically. Perhaps half the population lives in a primitive economy whose response to modern incentives and techniques will be slow. Side by side with economic development, there should be a process of social as well as economic integration. The pace at which such integration occurs will partially control the rate of economic development, which indeed is only one of the basic problems confronting Peru as a nation. In this respect Peru differs from either Uruguay, Mexico or Chile, or to lesser extent Brazil.

These physical and social considerations have economic consequences. But there are additional and underlying economic factors likely to be only slightly less malleable. Ownership and control of production resources resides with a very small group accustomed to thinking in terms of monopoly. Incentives to increase output are weak or disregarded except in the relatively new industrial sector, and even there the more modern outlook must first displace the older.

The small group which comprises effective private initiative is also not accustomed to the exercise of modern economic functions of Government in a private enterprise economy. New policies of influence or control which threaten to be effective rather than formal are therefore likely to encounter resistance. On the other hand, in the short run such resistance may appear



justified, since Government in Peru has little experience of serious exercise of economic responsibility. Here again the situation differs from the Chilean position.

Even assuming, however, that real endeavor, both official and private, be made to increase output, the margin for maneuver is not great. The restrictions arise basically from the physical and social conditions already outlined. Peru cannot increase traditional exports greatly or quickly; export agriculture (already highly efficient) is upon irrigated land, and minerals, ultimately exhaustible, require heavy investment for access and/or partial processing. Once outside the export sector, real increase of rural output involves changing traditional cultivation practices, irrigation and probably road-building.

Real industrial expansion can occur so long as efficient domestic industries economically replace former imports. Heavy tariff protection or other restriction would induce an apparent industrial growth, but one not cumulatively adding to total real income. Once the limit of efficient import replacement is reached, further sound industrial development would be limited by growth of consumer purchasing power in the non-industrial sectors, which in turn follows from the integration and development of the monetary economy.

Peru thus presents far more visibly than many other South American countries the problems inherent in inter-related and reciprocal economic growth, implicit in the integration of an economy now segmented both geographically and socially.

B. RECENT FINANCIAL HISTORY

1. Internal

(a) Inflation

Over the past decade, sizeable inflation has occurred in Peru, which has since 1939 experienced an expansion of money supply as large as that of any Andean country.

INDICES OF GROWTH TO DECEMBER 1949

Country	Money supply		Cost of living	
	Base 1937	Base 1939	Base 1937	Base 1939
Peru .....	827	660	419	419
Chile .....	795	652	577	535
Colombia .....	714	625	310	263
Ecuador .....	515	477	---	373 <sup>a/</sup>
Bolivia .....	973	660	805	497
Uruguay .....	390	372	181	172
USA .....	376	307	163	168

a/ Wholesale prices.

Source: Calculated from IFS.

This situation was accompanied by the features customarily associated with inflation, notably export and import difficulties, depreciation of the external value of the currency, deficit Government finance, and subsidy policies to avoid social unrest. Yet there has been in Peru, in contrast with other countries, little loss of banking exchange holdings in the postwar

period. But neither has there been any increase of real national income per head over the period (1942-1947) for which estimates are available, and available production estimates suggest little growth over longer periods.

Over the past ten years, the growth of money supply has been mainly of internal origin.<sup>1/</sup> Two separate periods may be distinguished, that up to 1945, and that after 1945. In the first, inflation was mainly latent or potential; money supply increased 267%, while the cost of living index increased 83% and the velocity of circulation of checking deposits fell steadily. In the more recent period, money supply grew 80%, and cost of living rose 113%; the velocity of circulation of checking deposits rising, particularly in 1949.

On the external side, there is little to distinguish the two periods.

1/

GROWTH OF MONEY SUPPLY BY ORIGIN  
(millions of soles)

Origin	1939-45	1946-49	Total 1939-49
<u>Internal</u> Government <sup>a/</sup> .....	-16.6	17.8	1.2
Central Bank .....	459.4	119.7	579.1
Commercial Banks .....	<u>227.6</u>	<u>442.2</u>	<u>669.8</u>
Total Internal .....	670.4	579.7	1,250.1
<u>External</u> (net exchange <sup>b/</sup> ) .....	<u>104.5</u>	<u>272.5</u>	<u>377.0</u>
Total Money Supply .....	<u>774.9</u>	<u>852.2</u>	<u>1,627.1</u>

a/ According to Banco Central definition, viz, fractional coinage issued by the Treasury less Treasury deposits on current account.

b/ At balance-sheet values in soles.

Source: Boletín del Banco Central del Perú.

From 1939 to 1945 gross exchange holdings increased only US\$ 24 million;<sup>1/</sup> the annual dollar value of exports did not increase strikingly, and dollar import values increased almost in step. There was thus no marked wartime accumulation of exchange. Over 1945-1949, Peruvian banking exchange holdings have continued to grow, although at a reduced rate.

The principal sources of increased money supply in Peru have been the Central Bank and the commercial banks. Over the whole ten years, each contributed about equally; but the Central Bank's impact was greatest before 1945 while the commercial banks' main growth was after 1945. In the earlier period, almost the sole source of Central Bank credit expansion was loans to Government occasioned by deficit finance; while this continued in the second period, it was reinforced by loans to the development banks and commercial banks. Over the ten years as a whole, however, by far the main reason for the Central Bank's own contribution to monetary expansion has been its loans

1/

INCREASE, 1939 TO 1945

Country	Of gross	Of	
	exchange	annual	
	holdings	export values	
	(millions	(millions	(per
	of US\$)	of US\$)	cent)
Peru .....	24.0	36	58
Chile .....	76.7	74	58
Colombia .....	155.0	63	81
Ecuador .....	29.1	19	234
Bolivia .....	30.7	41.4	106

Source: Calculated from IFS.

to Government.<sup>1/</sup>

Peruvian inflation has thus been somewhat different in origin from that of neighboring countries. External influences operating through the balance of payments account for only 13% of the increase of money supply in Peru from 1939 to 1945, compared with about 80% in Colombia and 40% in Ecuador. This was mainly because Peru's wartime growth of exchange holdings was relatively small. Thus the fact that money supply increase was nevertheless as large as elsewhere indicates that internal influences played a larger primary role. In Peru, Central Bank loans to Government increased 467 million soles from 1939 to 1945, or 160% of money supply in 1939, compared with 23% in Colombia. Government deficit was thus a more important origin of inflation in Peru than elsewhere. This in turn seems to have been due to a relatively higher level of expenditures upon national defense and food subsidies.

Upon the basis so laid commercial banks were enabled to expand their credit operations, particularly in the period 1946 to 1949. It is clear that

<sup>1/</sup>

INCREASE OF CENTRAL BANK CREDIT  
(millions of soles)

Destination	1939-45	1946-49	Total 1939-49
Public .....	- 0.6		- 0.6
Development banks .....	1.7	73.3	74.9
Commercial banks .....	3.2	72.3	75.4
Government .....	<u>465.5</u>	<u>146.6</u>	<u>612.1</u>
Total .....	469.8	292.2	761.8

Source: Boletín del Banco Central, Peru (totals do not add because of rounding).

in the postwar period (1946-1949), characterized by vigorous commercial bank credit expansion, the authorities were not only unable to prevent this trend, but the Central Bank through its re-discounts actually supported it. The conclusion therefore emerges that the two critical foci of Peruvian inflation have been Government deficit finance and failure to control commercial banking policies. Each must therefore be considered more fully.

(b) Government Finance

The Peruvian budget has a tradition of continuous deficit; in the thirty years, 1915-1945, for example, there was a surplus only once, in 1935. In the period 1939 to 1945, total expenditures amounted to 2,651 million soles, and total deficit to 569 million soles, or 21% of expenditures.

Deficits were covered by credit operations. Since the cessation of borrowing overseas during the depression, such operations have necessarily been internal, and virtually wholly with the Central Bank. In the period 1939 to 1945, the internal debt reported by the Peruvian Government increased 622 million soles, of which 458 million was represented by increase of floating and short-term debt. Over the same period, Central Bank accommodation to Government increased 465 million soles, or at an average rate of 76 million soles annually.

Since 1945, Government deficit finance has somewhat slackened,<sup>1/</sup>

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<sup>1/</sup> Official budgetary and special account figures show a net surplus over the period (deficits: 1946, 8.0 million soles; 1947, 4.9 million soles; 1948, 29.8 million soles; and a surplus in 1949 of 43.2 million soles). There are, however, additional expenditures for which the latest information is 1946; in that year, such non-budgetary and special account expenditures were 54.3 million soles net, additional to 617.2 million of other reported expenditures. Central Bank figures therefore provide the best available guide to recent aggregate achievement.

Central Bank loans to Government increasing through 1949 at an annual average rate of 37 million soles. This average, however, conceals an improvement during the period; expansion was mainly in the first two years, while in 1949 there was an actual reduction, supporting the probability of net Government surplus in that year.<sup>1/</sup>

INCREASE OF CENTRAL BANK CREDIT TO GOVERNMENT  
(millions of soles)

Purpose	1939-45	1946-49	Total 1939-49
National defense .....	261.5	- 6.1	255.4
Food subsidies .....	46.6	98.2	144.8
Consolidated bank loan <sup>a/</sup> .....	157.3	9.2	166.5
Subscription to IBRD .....	-	2.2	2.2
Discounts <sup>b/</sup> .....	-	43.0	43.0
Total <sup>c/</sup> .....	465.5	146.6	612.1

<sup>a/</sup> Includes several credits for public works, plus consolidation of advances to Government on current account.

<sup>b/</sup> Under a Law of March 1946, these may total one-sixth of Government budgeted revenues.

<sup>c/</sup> Totals do not add because of rounding.

Source: Boletín del Banco Central del Perú.

Analysis of the purposes to which Central Bank loans to Government have been applied suggests the possibility that this source of domestic inflation might be avoidable for the future, provided the prewar tradition of deficit as acceptable in Government finance could be broken. With the economy in full employment deficit finance is highly inflationary, and not justifiable

<sup>1/</sup> Ostensible surplus, however, may be obtained by charging some expenditures to "profits" from gold revaluation. Central Bank loans to Government increased 60.3 million soles in 1946, 90.0 million in 1947, 15.2 million in 1948, and decreased 18.9 million in 1949.

as it is at times, particularly in industrial economies, to induce re-employment of real resources. Deficits on account of national defense and food subsidies have been known in the war and postwar period by countries other than Peru, and should in peace time be avoidable. Formerly extra-budgetary food subsidies were included to a total of 65 million soles in the 1950 budget with the intention that they should be covered by revenues. The Klein Mission recommended cessation of food subsidies, finally effected on October 10, 1950.

Whether inflationary deficit finance can be avoided in the future will depend partly upon the growth of Government revenue in relation to expenditure requirements, there being no non-banking bond market yet developed. Peruvian budget revenues have over the past ten years actually shown surprising increase. There is no fully satisfactory index available for reduction of current revenue figures to constant values; but using wholesale prices, 1949 budget receipts expressed in 1939 soles were 24% higher than those of 1939.<sup>1/</sup>

The present revenue structure, with relatively high reliance on

1/

BUDGET REVENUES

	1939	1942	1945	1947	1949
<u>Actual</u> (million soles) .....	180	275	431	816	1,175
<u>Wholesale prices</u> (all goods) .....	100	167	208	300	527
<u>Revenues deflated</u> (millions of 1939 soles) .....	180	165	207	272	223



direct taxation, suggests that revenues may continue buoyant.<sup>1/</sup> Moreover, the somewhat scanty evidence available indicates that Government revenues are running at a sizeable proportion of national income, and one which should be adequate if properly utilized to permit significant developmental expenditures.<sup>2/</sup> Thus the indications are that local currency for official development investment may have been reduced by high levels of Government expenditures for other purposes rather than by any crippling inadequacy or inelasticity of total Government revenues.

1/

COMPOSITION OF GOVERNMENT REVENUE  
(percentages)

Country	Income, excess profits, etc.	Customs		Consumption, production, turnover, etc.	Total tax revenue	Non-tax receipts a/
		Imports	Exports			
Peru 1928	6.6	28.7	6.6 <sup>b/</sup>	35.2	83.6	16.4
Peru 1948	20.2	6.0	16.9	19.7	66.9	33.1
Chile 1948	12.1	20.3	0.01	10.3	70.1	29.9
Colombia 1948	31.9	18.4	0.3	14.1	84.1	15.9
Mexico 1948	24.3	16.3	5.2	25.6	84.1	15.9

a/ Receipts from public domain, from operation of government enterprises, and able administration and non-tax receipts, not including proceeds of loans.

b/ The taxpayer may credit export tax payments towards payment of income tax; there should be some adjustment on this account, but its size cannot be determined.

Source: ECLA Economic Survey of Latin America, 1949, Annex L, Public Finance.

2/

	1942	1945	1947
	(million soles)		
Peru: National income .....	2,509	3,666	5,448
Government receipts (budget and special accounts) .....	357	541	930
Per cent .....	14.2	14.7	17.1

Actual Government expenditures by purposes are not known. Budgeted purposes, however, reveal a high proportion of expenditures in directions remote from the directly economic, and a high level of expenditures upon personnel.

PERUVIAN BUDGETED EXPENDITURES, BY PURPOSES, 1949

Purpose	Million soles	Per cent
<u>By Ministries</u>		
Police and armed services .....	403.0	35.0
Legislative and justice .....	56.6	4.9
Education .....	183.1	15.9
Public health .....	91.6	8.0
Finance and commerce .....	257.0	22.4
Public works .....	133.7	11.6
Agriculture .....	25.0	2.2
Total budget .....	1,150.0	100.0
(Actual expenditures) .....	1,140.0	
<u>By Service</u>		
Personnel .....	518.1	53.8
Material .....	141.2	14.6
Transfers subsidizing local activities ....	87.8	9.1
Debt service .....	81.6	8.5
Other .....	135.4	14.0
Total ordinary budget .....	964.0	100.0

Source: Presupuesto General, 1949.

Personnel expenditure is not primarily a matter of the size of the civil service, which in 1949 took only 125.9 million soles to cover 23,747 positions, compared with, for example, 154 million soles allocated to military personnel. Of the budgeted expenditures upon material, 38% (54.2 million soles) was upon consumption goods, and only 19% (27 million soles) upon "construction, repairs and installation." These figures, placed alongside those to be presented next, suggest that Government investment expenditures have contained a high element of payment to personnel as distinct from material.

The Mission was provided with a detailed statement of those official expenditures classified in Lima as "investment," covering the years 1947 to 1949, of which the next table is a summary.

INVESTMENTS EFFECTED BY THE PERUVIAN GOVERNMENT

Purpose	Actual (million soles)			Per cent		
	1947	1948	1949	1947	1948	1949
Increase of capital of development banks .....	4.5	7.1	28.5	0.5	0.7	2.1
Increase of capital of regional development institutions .....	18.2	24.9	43.6	2.0	2.4	3.1
Housing (a) Gov't. Bldgs..	7.1	1.3	9.2	0.8	0.1	0.7
(b) Military .....	7.0	4.3	36.7	0.7	0.4	2.6
(c) Other .....	6.1	5.1	3.9	0.7	0.5	0.3
Transport (a) Roads .....	0.8	30.6	43.9	0.1	2.9	3.2
(b) Rail .....	3.5	1.6	13.2	0.4	0.1	1.0
(c) Ports .....	6.0	2.9	1.1	0.6	0.3	0.1
Irrigation .....	4.1	6.2	31.5	0.4	0.6	2.3
Public works .....	2.9	3.6	6.0	0.3	0.3	0.4
Education .....	0.1	0.1	10.8	-	-	0.8
Health and water supply ..	4.5	5.2	4.3	0.5	0.5	0.3
Public welfare .....	0.2	39.5	44.9	-	3.8	3.2
<b>Total .....</b>	<b>65.1</b>	<b>132.4</b>	<b>277.6</b>	<b>7.0</b>	<b>12.6</b>	<b>20.1</b>
Total ordinary and special budget expenditures (actual) .....	934.9	1051.1	1389.5	100.0	100.0	100.0

Source: Data supplied to IBRD Mission.

It is noticeable that although these expenditures have steadily increased in the postwar years, they were in 1949 still relatively low at several points critical for economic development. Expenditure upon irrigation, for example, was less than that upon military housing. Total expenditure upon transport and irrigation combined was somewhat less than 150 million soles (US\$ 10 million) over the whole three-year period. The suggestion

is certainly strong that sensibly more could be undertaken in developmental investment if all other expenditure purposes were reviewed to secure economy.

A general although still tentative conclusion emerges, namely, that Peruvian Government finance should permit some expansion of official developmental investment without encountering immediate inflationary difficulties. In quantitative terms, however, the magnitudes involved are not great. Official investment resources in soles are very unlikely to exceed the equivalent of US\$ 10 million annually without special fiscal measures and reallocation of expenditures.

PUBLIC INVESTMENT RESOURCES  
(US\$ millions; soles converted at 15)

	1949 actual	1950 budgeted	1951 - 1952 hypothetical	
Budget expenditures .....	92.5	109.7	125.0	
Per cent devoted to investment <sup>b/</sup> .....	20.1	20 <sup>a/</sup>	(a) 20	(b) 25
Investment expenditures <sup>b/</sup> .....	18.5	22	25	31
Portion for transport, irrigation and public works .....	6.4	n.a.	8.5 <sup>c/</sup>	12.0 <sup>d/</sup>

<sup>a/</sup> Assumes 1949 proportion.

<sup>b/</sup> "Investment" of types shown in preceding table.

<sup>c/</sup> Assumes maintenance of 1949 ratios.

<sup>d/</sup> Assumes "investment" increases to 25% of budget, and half of increase allocated to items specified.

(c) Credit Control

It has already been seen that the commercial banks have contributed strongly to past increase in money supply, adding, for example, more in the period 1946-1949 than the other two "causal" sources<sup>1/</sup> combined. Their

<sup>1/</sup> The balance of payments, and Central Bank credits.

ability to do so may indeed have sprung from growth originating in these sources, but there is no evidence that their response has been restrained by an effective attempt at control.

In fact, however, some legal instruments appropriate for flexible credit control have been created only within the last two years. It nevertheless appears that the existing distribution of administrative responsibility obstructs swift and effective implementation of policy.

Beyond being able to require financial statements from banks requesting a loan, the Central Bank traditionally has not been specifically required to exercise qualitative credit control. Such quantitative control as existed depended largely on rediscount rate. Virtually all commercial banking operations are short term, i.e., are of one year maturity by law and a large proportion of such paper, namely Government paper and commercial bills up to ninety days maturity acceptable in New York, carries automatic rediscount right. While the Central Bank now has specific credit control powers in addition to its issue and rediscount functions, the administration of many important regulatory powers are vested in the Superintendent of Banks, and approval of important policy decisions relating to money supply appears to rest finally with the Ministry of Finance.

Prior to September 6, 1948, legal reserve requirements against commercial bank deposits were fixed without provision for change at 15% against demand deposits and 6% against time deposits.<sup>1/</sup> In September 1948 the Superintendent of Banks was authorized, "when the economic and credit situation of

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<sup>1/</sup> The Superintendency of Banks was, however, authorized to control the method of computing reserves, giving some small de facto flexibility.

the country justifies such action, and with the approval of the Ministry of Finance and at the request of the Directors of the Central Reserve Bank," to vary legal reserve requirements between 15% and 30% against demand deposits and between 6% and 12% against time deposits. Authority for change of minimum reserves then rested with the Central Bank, subject to Ministerial approval.

Later, in July 1949, the Superintendency of Banks was assigned the following regulatory functions, "with the knowledge of the Central Bank":<sup>1/</sup> to exercise close qualitative supervision over bank credit, to restrict the amount of credit to any one borrower in proportion to the borrower's existing indebtedness, to restrict credit extended by any one bank to a fixed proportion of its capital and reserves and to alter legal minimum reserves. No details upon regulations issued in implementation of these powers are available. Thus the Central Bank is at present an important authority in credit control, and, if the Bank's prior knowledge of the Superintendency proposed action is in fact administratively interpreted to involve consent, the principal authority.

Administration of these discretionary powers, created in the last two years, presumably suffers from some inexperience as well as from the awkward even if nominal separation of regulatory, administration and issue functions. There may have been in addition some recent misjudgment upon policies.

The events were as follows: in June 1949 minimum reserve requirements were raised to 17% for demand and 8% for time deposits, no great increase.

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<sup>1/</sup> This clause is interpreted by a Peruvian Embassy lawyer in Washington to mean that action of the Superintendent requires prior knowledge and consent of the Directors of the Central Reserve Bank.

Money supply contracted 3% from June 1949 to March 1950, which in official statements was attributed to credit restrictions. On April 3, 1950, reserve requirements were reduced to their former levels (15% and 6%) and money supply resumed its former growth.

The restrictive action of June 1949 was apparently undertaken following fears of excessive speculation in exchange certificates financed by bank credit. There were, however, independent deflationary factors, principally a budget surplus, whose influence does appear to have been taken into account by the monetary authorities.<sup>1/</sup>

The result of reduction of commercial bank minimum reserves appears to have been an almost immediate expansion of money supply and of commercial bank loans, the rate of expansion apparently reverting to the pre-devaluation rate.<sup>2/</sup> The Central Bank does, however, appear to have related its rediscounting to the change in reserve requirements.

1/ The September devaluations may also have occasioned trade and balance of payments movements in those months whose domestic effect was deflationary, even though for the whole year 1949 there was an overall balance of payments surplus.

2/ PER CENT CHANGES

	Whole year		First 8 months	June 30	to March 30	Mar. 30 to Aug. 31
	1948	1949	1950	1948-49	1949-50	1950
Money supply .....	+12.4	+ 7.7	+14.7	+12.6	- 2.9	+13.8
Commercial bank domestic credits..	+16.3	+19.7	+17.1	+16.1	+ 7.1	+13.0
Central Bank credits to other banks .....	+ 5.4	+17.8	+15.0	+13.0	+35.5	+ 1.6

Source: Calculated from IFS.

The conclusion thus seems justified that while there is now possibility of improved controls, both quantitative and qualitative, of commercial bank credit, the methods are so new in Peru that their use is likely to suffer from inexperience, both in prompt formulation of policy and in administration.

## 2. External

### (a) Overseas Trade

Peruvian exports are more diverse than those of other Latin American countries, although all export products react with notable similarity to the vicissitudes of world raw materials markets. In no case is Peru a dominant contributor to world supply.

#### EXPORTS

Commodity	Value (million US\$)			a/	Per cent			Main markets (Latest year, 1948 or 1949)
	1939	1948	1949		1939	1948	1949	
Cotton	14.2	42.8	46.4	19.8	26.4	29.9	1949: Europe 45%, U.S. 25%, India 7%, L.A. 20%.	
Sugar	7.7	35.0	25.5	10.7	21.6	16.4	1948: L.A. 65%, U.S. and Japan, 15%.	
Petroleum	20.8	28.9	23.3	29.0	17.8	15.0	1948: L.A. 80%, Europe 15%.	
Lead	4.5	14.6	14.5	6.3	9.0	9.4	1948: L.A. 28%, U.S. 63%, Europe 9%.	
Copper	13.4	7.6	9.7	18.7	4.7	6.3	1949: U.S. 82%.	
Zinc	1.9	6.0	7.7	2.6	3.7	5.0	1948: Canada 25%, U.S. 33%, Europe 41%.	
Other	9.2	27.4	28.0	12.8	16.9	18.0		
Total	71.7	162.3	155.1	100.0	100.0	100.0	1948: U.S. 25%, Europe 20%, L.A. 40%.	

a/ Calculated from trade statistics in soles, and liable to error due to 1949 exchange mixing system.

Source: 1939, Anuario Estadístico del Peru, 1939; 1948 and 1949, Banco Central de Reserva del Peru, April 1950. Market data chiefly from U.S. Foreign Service Reports, or U.S. and U.K. import data.



The major agricultural exports, sugar and cotton, together account for some 50% of postwar exports by value; mineral exports, of which petroleum, copper and lead are the most important, comprise about 30%.

In terms of volume, there has been no marked growth trend in any item other than zinc, and petroleum has shown significant diminution.

EXPORT VOLUMES  
(thousands of metric tons)

Year	Cotton	Sugar	Petroleum	Lead	Copper	Zinc
1939.....	77	277	1,449	41	35	17
1948.....	52	369	1,033	46	18	47
1949.....	56	282	1,099	53	28	60

Source: Boletin del Banco Central.

Wartime restrictions on non-food crops reduced acreage planted to cotton and prewar cotton production has not since been recovered. Domestic consumption of sugar is steadily increasing; in 1948 it was about three times the level of 1929, and took around 40% of production. Since both commodities depend heavily on irrigation, future production growth is primarily restricted by area of irrigable land. In the case of cotton there may, however, be opportunities for improving yields, and some displacement of food crops is also possible, although not necessarily desirable.

Petroleum exports have fallen partly because of some fall in production but primarily because of increase of domestic consumption. Unless petroleum production can be increased Peru may in the foreseeable future become a fuel importer. The difficulty resides in promulgation of an acceptable petroleum code (towards which some steps have been taken) and also in

revision of domestic prices for refined products, which have long been controlled at a low level. Drawbacks of primarily political nature have applied to production of other minerals following peaks achieved under the impetus of war, although substantial development of lead and zinc production since the war resulted in record output of these metals in 1949. Lead has displaced copper as leading metallic export by value during the last three years, and is likely to retain its pre-eminence if relatively large known lead reserves are tapped.

The make-up of imports is shown in the following table. It is noticeable that the reduction since 1925 in the relative importance of some consumer goods (textiles, paper, ceramics, and other) has been

PERCENTAGE DISTRIBUTION OF VALUE OF IMPORTS

Commodity	1925	1940	1948
Machinery and vehicles .....	15.3	20.3	27.5
Food products .....	23.9	12.0	24.6
Metals and manufactures .....	12.7	14.5	10.3
Textiles and manufactures .....	17.3	15.3	9.5
Chemicals and pharmaceuticals .....	7.3	15.1	9.1
Paper and manufactures .....	3.2	3.7	2.6
Ceramics (earth, stone, glass) .....	2.3	2.5	1.9
Tobacco and manufactures .....	-	.3	.6
Beverages .....	.1	.5	.2
Others .....	<u>17.9</u>	<u>15.8</u>	<u>13.7</u>
Total .....	100.0	100.0	100.0
Total in millions of dollars .....		51.7	167.7

Source: Division of Economic Research, Pan American Union, "The Peruvian Economy,"

accompanied by expansion of machinery and manufactures. The growth of food imports in the last decade <sup>1/</sup> is also very noticeable.

The geographical distribution of total trade since 1937 reveals some displacement of the United Kingdom by the United States, and of Germany by Chile, as export destinations; as a source of imports, the United States has steadily increased in importance at the expense of Germany while the United Kingdom and Argentina have virtually remained constant.

PER CENT OF TOTAL EXPORTS				PER CENT OF TOTAL IMPORTS			
	1937	1948	1949		1937	1948	1949
United States	22	25	29	United States	36	54	63
United Kingdom	22	16	15	Germany	20	—	1
Germany	14	—	1	United Kingdom	10	7	9
Chile	6	19	17	Argentina	8	18	5

Source: IMF, "International Financial Statistics," Country Notes.

The recent distribution of trade suggests that Peru will experience currency difficulties so long as European currencies remain inconvertible.

<sup>1/</sup>

PRINCIPAL IMPORTS OF FOODSTUFFS

Commodity	Volume (thousand metric tons)			Value (US\$ millions)	
	1939	1948	1949	1939	1948
Wheat and wheat flour .....	120.9	150.6	215.0	2.4	25.0
Milk, evap. & condensed ...	4.9	3.4	6.4	.7	1.1
Pork lard .....	-	2.3	2.3	-	1.5
Meat and meat products ....	.3	14.0	15.6	.1	5.4
Rice .....	21.0	5.5	-	.8	1.4
All other .....	21.6	20.9	22.8	1.8	10.4
Total .....	168.7	196.7	262.1	5.8	44.8

Source: Data supplied to the Mission by Direccion Nacional de Estadística. Dollar values obtained by conversion at official rates of values given in Peruvian soles.

Within her overall trade deficits, she has been earning dollars from Bolivia, Chile, Uruguay and Venezuela, which have partially financed her imports from the United States.

DISTRIBUTION OF TRADE  
(US\$ millions)

	Western Hemisphere		Europe	Other	Total
	U.S.	Total			
<u>1948</u> Exports f.o.b.	39.9	104.3	46.6	11.5	162.4
Imports c.i.f.	90.8	134.6	24.7	8.4	167.7
Balance	-50.9	-30.3	+21.9	+ 3.1	- 5.3
<u>1949</u> Exports f.o.b.	45.3	99.5	47.9	9.8	157.2
Imports c.i.f.	105.3	124.5	35.5	7.1	167.1
Balance	-60.0	-25.0	+12.4	+ 2.7	- 9.9

Source: Direction of International Trade.

In the modern world, the currency earned by trade may depend as much upon the commodity concerned as upon the direction of trade. A check<sup>1/</sup> by this method, however, indicates a hard-currency earning capacity, perhaps a little smaller but not greatly different from that indicated by exports to the Western Hemisphere.

(b) Balance of Payments

A noteworthy feature of the Peruvian balance of payments is its continuous approximate overall equilibrium. Over the war and postwar period, exchange reserves have shown greater steadiness than most Latin American

<sup>1/</sup> Taking as hard-currency earners all mineral and petroleum exports, 75% of sugar exports and 20% of cotton exports, plus one-third of other.

countries.<sup>1/</sup> It appears as if Peru simply imports to the limit of exchange receipts less other requirements in each period. During the period 1945-1949 this resulted from quantitative exchange and import controls (with a partial devaluation of the sol from September 1948) which succeeded in restraining total imports to exchange availabilities. In November 1949 the sol was depreciated, and controls reduced to enforcement of a prohibited list for imports utilizing hard currencies.

In 1947 a US\$ 20 million trade deficit replaced the customary surplus, but was offset by private capital movements; exchange reserves increased US\$ 3.1 million. In 1948 a trade deficit of US\$ 5.3 million included in a balance of payments deficit of about US\$ 8 million, was again accompanied by an increase of exchange reserves of about US\$ 8.5 million, owing to other compensatory finance.<sup>2/</sup> In 1949 there was a balance of payments surplus of US\$ 5.8 million (despite trade deficit of US\$ 9.9 million).

1/ GROSS GOLD AND EXCHANGE HOLDINGS  
(US\$ millions)

Year	Amount	Year	Amount
1937 .....	30.6	1946 .....	43.6
1939 .....	25.4	1947 .....	46.6
1941 .....	27.1	1948 .....	58.6 <sup>a/</sup>
1945 .....	49.4	1950 (July) .....	57.1

a/ This figure does not reconcile with the 1949 change in holdings shown in balance of payments statements.

Source: IFS.

2/ A loan of US\$ 5.6 million from the International Petroleum Company, deferred payment of US\$ 10.9 million of imports, and a credit from the Argentine.

Total import levels are thus apparently flexible. There are, however, two modifying considerations. Firstly, this flexibility may in part reflect the present rate and nature of economic development in Peru. Outside the category of foods, many present imports may be postponable, whereas once the economy is geared to higher levels of equipment and raw material imports the compressible margin will decrease.

Secondly, the overall figures conceal the difficulties resulting from currency inconvertibility. In 1948, for example, the increase of exchange reserves was in sterling, and other compensatory finance was necessary to cover the hard currency deficit. The 1949 balance of payments surplus probably resulted more from inability to spend soft currencies than anything else. The year closed with a lengthy prohibited list in force against imports from the United States, and no restrictions against sterling imports, a situation still obtaining.

Direct investment income remitted represents a sizeable amount, the annual average 1946-1949 being US\$ 12.8 million and exceeding average new direct investment inflow over that period by US\$ 5.0 million annually. Moreover, new direct investment has fluctuated considerably, being (in US\$ millions) 5.6 in 1946, 14.9 in 1947, 8.3 in 1948 and 2.5 in 1949.

(c) Exchange Rates and Policies

The then existing rate for the sol, 6.50 to the United States dollar, was declared official parity in December 1946. Subsequently the legal free rate applying to certain authorized transactions steadily depreciated, reaching 20.43 in July 1949.

In September 1948 a certificate system was instituted, leading to

multiple effective rates for both exports and imports. Exporters received part of their proceeds at the official rate and part in negotiable certificates. Private importers were required to present certificates to obtain exchange, and also to pay a surcharge for Groups B and C imports. Group D, or luxury imports, paid the free rate and a higher surcharge. The system was varied from time to time, partly to ease export difficulties and partly to influence imports.<sup>1/</sup> The effect was a gradual de facto devaluation of the sol. The effective rate for commodity exports fell from 6.50 before September 1948 to an average of 13.6 for 1949.

Quantitative import licensing had been instituted in 1945. It was the impression of the 1948 Bank Mission to Peru that import licensing was then operated (before introduction of the certificate system) was inefficient in administration and lacking in policy. The only criterion appeared to be protection of working exchange reserves. Imports were in fact held near total available exchange, but the composition of permitted imports did not appear to correspond to production and investment requirements.

Following recommendations made by the Klein Mission, a system whereby all transactions are conducted at fluctuating rates of exchange was instituted in November 1949, the par value of 6.50 no longer being applied to any purpose. No new parity has been proposed. All trade transactions were conducted at the certificate rate, exporters receiving negotiable certificates for all proceeds and importers presenting certificates for required exchange. All import controls were removed, except for a prohibited list against hard-currency imports. Such import controls as remain consist only of changes in

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<sup>1/</sup> A detailed historical account is given in the September issue of International Financial Statistics, Country Notes, Peru.

the prohibited list, which does not apply to any currency declared surplus.

As a result, the certificate rate fell from 19.04 in September 1949 to 14.20 in March 1950, and then rose gradually to 15.20 in September 1950, with corresponding movement in the free rate. The movement has been accompanied by some decline of exchange reserves, probably arising principally from free utilization of sterling which had been declared surplus.

(d) External Debt

Peruvian external debt in mid-1950 totalled US\$ 121.7 million dollars (US\$ 114.0 million in dollars), as shown in the table below. Apart from the bonds, whose default settlement was unilateral,<sup>1/</sup> two other items call for some comment. A recent Eximbank credit for US\$ 20 million to Cerro de Pasco for construction of a zinc refinery will probably be utilized only to US\$ 15-16 million; negotiations are not yet complete. Secondly, IBRD has no information upon the service terms of the US\$ 18.9 million Argentine 1947-1948 credit for foodstuffs.

EXTERNAL DEBT OF PERU  
(in thousands)

	Date	Amount Outstanding	
		Currency of pay't.	Expressed in US\$
<b>Dollar Debt</b>			
Total dollar bonds .....	(6/30/50, 12/31/49)		\$ 70,261
Total U.S. Government debt ....	(9/30/50, 6/30/50)		24,799
Argentine credit for foodstuffs .....	1947-48		18,893
<b>Total dollar debt .....</b>			<b>\$113,953</b>
<b>Sterling Debt .....</b>			
Sterling bonds (not converted to	12/31/49		
Series E \$ bonds) .....		£ 2,298	\$ 6,434
Guano loan 7-1/2%, 1922-48 .....	12/31/49	£ 470	1,316
<b>Total sterling debt .....</b>			<b>\$ 7,750</b>
<b>Total Debt .....</b>			<b>\$121,703</b>

<sup>1/</sup> External debt history is discussed in Appendix V.



As at September 1, 1950, 62% of defaulted dollar bonds had assented to exchange into new Series A to D dollar bonds, as shown below.<sup>1/</sup>

	US\$ millions	
Dollar bonds outstanding at time of 1947 offer .....	76.5	
Not assented to offer, at face value .....	<u>29.1</u>	29.1
Assented .....	47.4	
Subsequently retired .....	<u>9.6</u>	<u>37.8</u>
Outstanding .....		66.9
Sterling bonds under offer to exchange into Series E dollar bonds, at face value converted at 2.80 <sup>a/</sup> .....		6.8
		<u>73.7</u>

a/ At time of 1947 offer, sterling bonds amounting to £ 2.44 million (US\$ 9.8 million at 4.01) were outstanding. At December 31, 1949, only £ 144,900 (5.9%; US\$ 0.58 million at 4.01) had assented to exchange. The British Bondholders Council have objected to the January 1950 modification altering exchange basis for principal amounts from 4.01 to 2.80 conversion rate.

Estimated service payments upon present external debt are shown in the following table. It should be noted that;

(a) Service upon bonds is based upon the present offer. Modification to obtain consent of the bondholders councils would probably add US\$ 0.8 million annually. (See Appendix V.)

(b) The table does not include service upon the Argentine food-stuffs credit.

(c) The table assumes that Cerro de Pasco will utilize the whole of the recent US\$ 20 million Eximbank credit, although information from the borrower suggests disbursements will be less than this.

<sup>1/</sup> Latest information is that 66½% had assented as at December 1, 1950.

ESTIMATED DEBT SERVICE  
(US\$ millions)

Period	Dollar service		Total service	
	Amortization	Total	Amortization	Total
(5-year periods)				
1952-1956 .....	8.95	22.63	9.15	22.90
1957-1961 .....	17.47	28.23	17.68	28.41
1962-1966 .....	15.68	21.67	15.68	21.67
1967-1971 .....	10.73	13.15	10.73	13.15
(10-year periods)				
1952-1961 .....	26.42	50.86	26.83	51.31
1962-1971 .....	26.41	34.82	26.41	34.82
Total, 1952-1971 .....	52.83	85.68	53.24	86.13

## C. CREDITWORTHINESS

### 1. Present External Position

Despite the present low level of service upon Government debt relative to total exchange receipts, new lending to Peru involves considerable risk.

The external risks arise from the following considerations:

(1) The physical diversity of Peruvian exports is greater than that of other Latin American countries, but does not really carry any greater prospect of export stability. Prices of non-ferrous metals are likely to move roughly in step as one group; cotton and sugar are vulnerable in the longer run, and exported petroleum may steadily diminish in volume unless new fields are successfully developed.

(2) There is no clear prospect of spontaneous growth of export volumes.

(3) Although present total service is low in relation to total exports, it is almost wholly in dollars, whereas only some 30% of exports go to the United States. Service on dollar debt is a very high percentage of exports to the United States (around 15%), and if assessment be made on this basis alone, no creditworthiness for dollar loans remains.

Dollars are, however, at present earned outside the United States. On this basis, dollar debt service falls to around 6% of dollar earnings, a

figure more in line with Latin American standards. The acceptance of this basis, however, involves assumptions regarding the probability that dollars will continue to be earned in Peru's trade with Latin America (as well as the United States), or in general trade (including European) for some exports such as non-ferrous metals.

(4) Direct investment income remitted from Peru is high (7.1% of total exports) and on average over the past four years has exceeded new direct investment by US\$ 5 million annually. Special allowance must therefore be made for this in the Peruvian case. Total investment income and service then rises to around 9% of total exports, and 12% of dollar earnings.

(5) Not until the mid-1960's does service upon existing debt diminish significantly. Present amortization averages only US\$ 1.8 million 1952-56, and US\$ 3.5 million during 1957-61. There is thus no material possibility of loans which would be of useful size but not increase future total service burdens.

The table on the next page shows the statistical background to the preceding discussion. The external position does not disclose a safe margin of unexhausted creditworthiness.

Peruvian creditworthiness therefore becomes a matter of program creditworthiness, in the sense that the effects of investment become of central importance. This raises the internal risks involved in establishing and executing a program, the economic aspects of which are discussed in the next section on "Programming Possibilities."

SERVICE BURDENS  
(US\$ millions)

	Western Hemisphere		All currency areas
	USA	Total	
<u>Two-Year Averages (1948-49)</u>			
Exports f.o.b. ....	42.6	101.9	159.8
Exports, plus balance upon non-trade current account	<u>n.a.</u>	<u>n.a.</u>	<u>166.4</u>
Direct Investment:			
Inflow .....			5.4
Income remitted .....	8.5 <sup>a/</sup>		<u>11.3</u>
<u>Debt Service</u> <sup>b/</sup>			
1952 .....	3.4		3.5
1956 (peak year) .....	6.0		6.1
1952-56 average .....	4.5		4.6
1957-61 average .....	5.6		5.7
1962-66 average .....	4.3		4.3
<u>Percentages</u> <sup>c/</sup> (upon 1948-49 exports)			
Debt Service:			
1952-56 average .....	10.57 (12.44)	4.42 (5.20)	2.88 (3.38)
1956 (peak year) .....	14.10 (15.96)	5.89 (6.67)	3.82 (4.31)
1957-61 average .....	13.15 (15.02)	5.49 (6.28)	3.57 (4.06)
1962-66 average .....	10.09 (11.97)	4.22 (5.00)	2.69 (3.19)
Amended Debt Service plus net direct investment payments: <sup>d/</sup>			
1957-61 average .....	29.13	12.16	9.38
 <sup>a/</sup> Estimated.			
<sup>b/</sup> On basis of present settlement offer. Its amendment would add about US\$ 0.8 million to figures shown.			
<sup>c/</sup> Percentages in brackets include US\$ 0.8 million additional service upon an amended bond settlement.			
<sup>d/</sup> Future annual averages <u>assumed</u> to be (US\$ millions)			
		<u>U.S.</u>	<u>Total</u>
Income remitted .....		10.0	13.5
New investment inflow ...		4.0	5.0
Net payment .....		6.0	8.5

## 2. Programming Possibilities

From the economic point of view, proper development programming would carry advantages in Peru as elsewhere; improved resource utilization should result.

But in Peru programming is likely to encounter difficulties which are absent or less intense in countries such as Chile. The structural difficulties of the economy itself limit effective action. They cannot be overcome quickly, however enlightened the program, although their recognition and understanding should hasten their dissolution.

There is likely to be an initial absence of data upon which fully to establish a program. Technical assistance in establishing objective sector programs may well be required, while paucity of national income data may restrict quantitative development programming to the approximate or partial approach. This does not mean, of course, that the program approach is prevented, but that in the beginning the framework will be general rather than detailed.<sup>1/</sup>

The framework could be fairly rapidly filled out if the Peruvian Government recognized the importance, even for its own purposes, of the type of technical and economic information required. Here, however, political considerations begin to be relevant. Ideally, the Government should understand and accept its executive economic responsibilities, and not merely seek more

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<sup>1/</sup> The Klein Mission did not work upon development problems as such, and has not in fact produced a report. It was not, that is, a general economic or development mission, and its reporting was current and by topics. From September 1949 through April 1950 it addressed forty-nine communications embodying recommendations to Ministers. Its work continues, although apparently at lesser intensity and concerned primarily with improvement of fiscal administration; recently it was reported that the Mission was requested for assistance in formulating a program for improvement of ports.

or more rapid construction of major public works as a monument to its administration.

Even with the required framework of programming reasonably complete, it may not be politically (or even administratively) possible for the Peruvian Government to adopt the general economic policies which seem best designed to speed development. A politically and socially realistic program, that is, may fall short of full economic potential. The economic forfeit to achieve realism should, however, be truly justifiable and minimal, and this might be better assured if the examination of facts and alternatives were centered in a respected ad hoc body of the type of the Colombian Economic Development Committee.

Certain required characteristics of a Peruvian development program already seem apparent. The initial objectives should be fairly restricted; neither Peru's creditworthiness nor her domestic resources will permit high levels of new investment. They should probably also be restricted geographically, envisaging regional development rather than simultaneous overall national results.

The general tenor and philosophy of recommendations made by the Klein Mission has been reliance upon private initiative and removal of official controls. This trend, which in Peru is likely to be beneficial, should be recognized in a development program. Private investment initiative should be encouraged, and controls simplified. Special attention, however, will be necessary in credit control, to avoid heavy inflation without hampering productive investment.

Both the internal and external positions indicate that Peru cannot

afford to commit a high proportion of investment resources to prolonged construction projects. The investment program should therefore include a fairly high proportion of short duration projects leading to quick output increase.

The balance of payments position requires that a development program make every effort to strengthen the external position, again as quickly as possible. For developmental purposes, however, export improvement differs somewhat from import replacement. In the Peruvian case, as has been seen, export production directly affects only about 6% of the occupied population, and is of a nature (mining and intensive agriculture mainly upon large holdings) doing little itself to stimulate ancillary or complementary investment. Unless the growth of exports provides net exchange receipts to Peru in addition to service upon the original investment, there is no gain for finance of subsequent development. Efficient import replacement, on the other hand, not only directly increases the total of available goods in Peru, but is more likely to liberate additional investment opportunities cumulatively adding to complementary economy of domestic production. Careful balance of such considerations should be sought in a Peruvian program.

Any programming in Peru should be undertaken as a first conscious step towards sounder development, leaving for subsequent programs the things that can more readily be done later upon the foundations laid by the first program. Peru, it must be remembered, is at present less highly integrated and developed than Chile or Colombia, and the visible results of an initial program will be correspondingly smaller.



### 33. New Lending

#### (a) General Assumptions

(1) Creditworthiness for new lending depends upon the future effects of investment rather than upon the present balance of payments position.<sup>1/</sup> It is therefore assumed that development policies will seek balance of payments improvement, both in export promotion and import reduction.

(2) As a corollary, it is assumed that policies will minimize future inflation. It should be possible to achieve reasonable internal financial stability with more effective developmental investment. This may, however, enforce postponement of expensive projects of long construction period.

(3) An important but seemingly justifiable assumption is that Peru will continue to earn dollars in trade outside the United States so long as European currencies remain inconvertible, so that 60-65% of her total exports are dollar. The risk here may be envisaged either in terms of the probability of Western Hemisphere trade remaining wholly dollar, or that certain exports, wherever sent, will earn dollars.

(4) It is assumed (probably fairly conservatively) that new direct investment inflow will average at least US\$ 5 million annually, 80% in dollars.

#### (b) Conclusions

From these assumptions, and the preceding analysis, the conclusion emerges that new lending to a total of US\$ 50 million equivalent over about

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<sup>1/</sup> Underlying this are expectations that (a) no significant long-term growth of earnings from cotton and sugar can be foreseen, (b) growth of mineral exports and arrest of decline of petroleum exports will both require heavy investment, which, even if private, itself becomes part of future developmental investment requiring suitable policies. Possible present post-Korean price gains are thus treated as short-term windfalls.

five years could be undertaken in support of a program designed in part to improve the balance of payments position. No more than US\$ 25 million, however, should be in United States dollars unless specifically directed to improvement of the dollar sector of the balance of payments.<sup>1/</sup>

The rate at which new Bank lending could be absorbed without inducing inflation will depend principally upon the budgetary position. Indications are that an absorption rate of US\$ 10 million a year is as much or even somewhat more than can be foreseen at this time.

The recommended present limit for new lending should therefore be sufficient to offer maximum prospect for sound and balanced investment within the abilities of the Peruvian economy.

<sup>1/</sup> The service implications of new debt totalling US\$ 50 million, of which US\$ 25 million are in dollars, are shown in the following table; new service is calculated at 4½% interest upon loans repayable over twenty years.

	Western Hemisphere (dollars)		Total	
	US\$ millions	per cent	US\$ millions	per cent
Average exports, 1948-49	<u>101.9</u>	<u>100</u>	<u>160.2</u>	<u>100</u>
1957-61 averages:				
Service on:				
Present debt <sup>a/</sup> .....	6.4	6.28	6.5	4.05
New debt .....	<u>1.9</u> <sup>c/</sup>	<u>1.86</u>	<u>3.9</u> <sup>d/</sup>	<u>2.43</u>
	8.3	8.14	10.4	6.48
Net direct investment payments <sup>b/</sup> .....	<u>6.0</u>	<u>5.89</u>	<u>8.5</u>	<u>5.30</u>
	14.3	14.03	18.9	11.78

- <sup>a/</sup> Including amended bond settlement.
- <sup>b/</sup> Assumed.
- <sup>c/</sup> Principal, US\$ 25 million, in dollars.
- <sup>d/</sup> Principal, US\$ 50 million, in all currencies.

APPENDICES

- I. Cotton in Peru
- II. Sugar in Peru
- III. Peru--Trade in Metals and Ores
- IV. Peruvian Petroleum Development
- V. External Debt History

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APPENDIX I  
COTTON IN PERU

Conclusions

(a) Little expansion in the cotton production area is likely in view of the strong competition for irrigated land, the difficulty of extending the irrigated area and the major problems presented by development east of the Andes. Some increase may occur as a result of improved cultivation practices but this would not be very large and would occur slowly.

(b) Exports of cotton are not likely to exceed current levels of about 200,000 and 250,000 bales of 500 pounds gross (45,000 to 57,000 metric tons) owing to difficulties of expansion of production and to increasing domestic consumption.

(c) Exports are likely to continue to find their main markets in the United Kingdom, Continental Europe and sterling areas of Asia. Exports to Latin American countries should be maintained but are not expected to increase significantly. Exports to the United States are limited by quota, which is not likely to be increased.

(d) Foreign exchange earnings should be maintained at well above the 1949-1950 season's level during the next few years and should be mainly sterling.

## 1. Cotton Production

Peru occupies ninth place among the world's cotton producing countries. Most of the cotton in Peru is grown in irrigated valleys on large absentee-owned haciendas. The cotton farmers are reportedly not very efficient but enjoy excellent climatic and soil conditions for their crop together with fairly abundant cheap labor.

The area planted to cotton in Peru increased steadily between the Wars, except for a brief set-back in the depression years; in 1938 the planted area was 191,000 hectares. Following the loss of Peru's export markets on the outbreak of World War II, the United States entered an agreement with Peru to take all Peruvian cotton exports subject to a reduction in the area under production. In the last years of the war and the immediate postwar years food shortages caused the Peruvian Government to impose further restrictions on the area under cotton. At the present time there are no acreage restrictions on cotton in Peru but past restrictions combined with relatively low prices for cotton during the past two seasons have kept the area under cotton from recovering to prewar levels; the area planted averaged 151,000 hectares between 1940-44 and only 135,000 hectares between 1945-49. During the season 1949-50, the planted area was only 120,000 hectares but the very low acreage was partly due to a lack of irrigation water.

Cotton production in Peru is almost entirely confined to some twenty irrigated valleys on the Pacific side of the Andes. It is reported that there are large areas of land on which cotton could be grown on the Eastern slopes of the Andes, at the head of the Amazon basin, but lack of transportation has been a primary factor hampering the development of this region. The irrigated area in the valleys of the Pacific Coast, in which sugar and cotton are the two major crops, cannot be materially increased except at heavy expense. Thus, it appears that any recovery to the prewar planted area or expansion above that level can only occur as a result of a shift between crops. The expansion of the cotton area between the wars was almost entirely due to a substitution of cotton for sugar; over the next year or two relatively high prices for sugar should limit any shift into cotton.

The main type of cotton grown is Tanguis; this variety was introduced in 1918 and now accounts for about 90% of the total cotton crop. The next most important type is Pima which accounts for 8% of the crop and is grown almost exclusively in the north. Both varieties are long staple cotton but, while Pima has the longer staple, Tanguis has a whiter color and a special springy quality. 1/ Yields per hectare of Tanguis are between 20% and 28% greater than any other variety grown in Peru. Plantings take place from November to April, coinciding with the flood period of the rivers, but in valleys watered by permanent streams the cotton is planted between September and November. Production of three or four crops is obtained from one planting, the plants being cut back to the ground after each crop. The growing season is not precisely defined nor uniform; picking is in progress in some

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1/ Valued in the manufacture of tweeds and asbestos.

locality during practically every month of the year but the bulk of the crop is harvested between April and July. Although climatic and soil conditions are generally very favorable for cotton in Peru, lack of adequate rainfall restricts production to irrigated areas. Irrigation water has become increasingly scarce but many irrigation technicians consider that much of the water used on cotton fields is wasted with bad effects on the soil. Guano from neighboring islands is used as fertilizer. In spite of a declared shortage of irrigation water and no material increase in fertilizer use, yields have increased from 445 kgs. per hectare to 455 kgs. during the past decade. Some of the increase in yields is due to genetic selection of varieties and coordinated control of insect plagues in entire valleys but some can be attributed to the contraction of the cotton area which results in the retention under cotton of the higher yielding land.

Under a SCIPA program experiments have been undertaken in the Camana valley in southern Peru to encourage farmers to adopt improved practices. The Tanguis variety of cotton is generally grown in this area and the plant fully occupies the land for three years. Last season two field demonstrations were conducted in which Pima and Sokol varieties were grown. They matured in time for the ground to be plowed and planted to potatoes or beans; in November 1949 about 500 kgs. of Pima seed were distributed to Camana valley farmers to replace the Tanguis cotton formerly grown.

## 2. Consumption of Cotton

Domestic consumption of cotton has been increasing during the past quarter of a century. In the early thirties, about 10% of the cotton produced in Peru was locally consumed but by the early forties the proportion had increased to 15% and has recently been about 30%. However, owing to the reduction of production in the past decade, these figures do not indicate the true rate of increase in consumption which doubled in the thirties but only increased by 50% in the forties. If domestic consumption continues to increase without a recovery in production, Peru will be faced with the loss of her important position as fifth world exporter of cotton; production, however, is unlikely to increase except at the expense of food crops.

The manufacture of cotton textiles for the domestic market has been Peru's leading industry. There are five cotton spinning mills and eleven textile factories situated mainly at Lima but also at Arequipa, Cuzco, Ica and Sullana. The number of looms totals about 5700 and there are about 125,000 active spindles. The main goods produced are "tocuyos," drills and vichys. In addition to the domestic manufacture appreciable quantities of cotton fabrics are imported into Peru; in 1947 these imports were valued at 16 million soles, mainly of finer grades, and represented about 10% of Peruvian consumption of cotton textiles.

### 3. Exports

Peru is the world's fifth largest cotton exporter and the third largest in the Americas. However, since Peru produces only extra long staple (Pima) and long staple (Tanguis) she comes into competition mainly with Egypt and certain British Colonies in those staple lengths. In the category of cotton over 1-1/8 inches Peru accounts for a little over 10% of world production, against only about 1% of world production of all staple lengths.

The cotton trade of Peru is tied more closely to sterling than to the dollar. Before the war the principal markets for Peruvian cotton were the United Kingdom, Germany, Belgium and the Netherlands. During the war the United States increased her imports because of the agreement between the two countries. Several South American countries also increased their imports, particularly Chile and Colombia. Since the war the recovery of the European market has been slow. By 1949-50 continental European countries accounted for about 26% of the total exports compared with 40% prewar. The United Kingdom's share of the Peruvian market in 1949-50 was 30% of the total compared with about 48% prewar. India, a sterling area country, has entered the Peruvian market. Before the war India's share of the market was negligible, but since 1947 her share has increased steadily and in 1949-50 accounted for 14% of the total. India has the manufacturing facilities for long staple cotton and has purchased Pima cotton in an effort to improve its cotton fabrics. Import quotas limit entries into the United States and importers are only interested in top grades. India, the United Kingdom and Belgium now account for three-fifths of Peru's cotton exports. 1/

In view of the high export taxes 2/ on cotton, under which producers claim that they contribute a larger proportion of their income than any other producers or manufacturers, and limited availability and intensive use of irrigated land, together with increasing domestic consumption, the prospects of increased exports above current levels are not bright.

Peruvian cotton, being of long and extra long staple, does not enjoy the wide market of medium staple cotton. On the other hand the Tanguis variety enjoys a specialty market as raw material with peculiar qualities. The springiness and roughness of Tanguis gives it special qualities for the tweed and asbestos cloth manufacturer. Pima cotton also has a specialty market for industrial thread and other uses requiring high tensile strength but comes into more direct competition with Egyptian Karnak.

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1/ See table on next page.

2/ Export taxes have been levied since February, 1947. The tax is applied to the difference between the c.i.f. sales price and the cost of production as determined by the government.



Prospects for foreign exchange earnings from cotton appear to lie mainly in sterling. It is unlikely that materially increased quantities of cotton over postwar levels will be exported from Peru during the next few years. Since world supplies of long staple cotton can be adjusted relatively quickly to demand, prices for Peruvian cotton can be expected to follow fairly closely cotton prices in general. Further, since world prices for cotton are largely influenced by United States action in price support and financing of imports by non-dollar markets, no marked fall in cotton prices below 1949-50 levels is to be expected and re-armament demand should keep prices well above those levels for the next few years.

EXPORTS OF COTTON, PERU  
(thousand bales of 500 pounds gross)

	1934-38 average	1939-43 average	1947-48	1948-49	1949-50
United Kingdom ...	163	75	53	105	71
Germany .....	90	1	3	0	9
Belgium/Luxem- bourg .....	16	2	29	25	38
Italy .....	4	3	6	10	5
France .....	9	2	0	1	1
Netherlands .....	13	4	18	6	2
Sweden .....	a/	1	1	0	b/
Switzerland .....	0	1	19	7	6
Japan .....	29	59	0	a/	1
India .....	4	a/	13	17	32
United States ...	1	12	23	5	25
Argentina .....	1 c/	4	6	4	6
Chile .....	7	28	34	9	19
Colombia .....	b/	14	37	17	14
Ecuador .....	b/	2	6	0	b/
Venezuela .....	1 c/	3	2	0	B/
Others .....	2	17	17	3	2
Total .....	340	228	267	209	231

a/ Less than 500.

b/ If any, included in other countries.

c/ One year only.

Source: U.S. Department of Agriculture.

APPENDIX II  
SUGAR IN PERU

Conclusions

(a) Little expansion in the cane production area is possible or likely owing to a shortage of available irrigable land in proximity to the mills.

(b) Exports of sugar are not likely to exceed current levels of between 300,000 and 350,000 metric tons owing to difficulties of expansion of production and increasing domestic consumption.

(c) Over the longer term exports of sugar to Latin American countries should be maintained at current levels and might even increase slightly; exports to the United States should fall to about one-quarter of recent figures, which have been four times the basic Peruvian quota under the United States Sugar Act of 1948; exports to the United Kingdom cannot be expected to reach prewar levels, owing to the development of Commonwealth exportable surpluses; exports to all other countries combined should be at about the prewar figure.

(d) Foreign exchange earnings from sugar exports should be well maintained and may even increase over the next year or two but a sharp fall in the world free market sugar price may occur shortly thereafter.

## 1. Sugar Cane Production

Sugar cane is grown in Peru under unusually favorable climatic conditions by a comparatively small number of efficient producers enjoying relatively low production costs. About half the Peruvian sugar industry is owned or controlled by W. R. Grace and Company, as producers, millers, shippers, while the bulk of the remainder is owned or controlled by Gildemeister and Company.

Cane is grown on fifty large haciendas, which deliver their product to fifteen mills. The area planted does not vary greatly from year to year; during the past decade the smallest area was 47,750 ha., and the greatest area 54,950 ha., while the average for the period was 50,000 ha. The estimated area to be planted in 1950 is 50,000 ha., the bulk of which is in the Chicama and Santa Catalina Valleys. The small fluctuations in the year-to-year planted area reflect the limited supply and intensive use of irrigable land within reasonable proximity to existing mills. Thus, little expansion in the production area is likely or possible.

The variety of cane grown is P.O.J. 2878, originally developed in Java, and under Peruvian conditions is remarkably free from disease and damage by pests. Irrigation throughout the year is essential for best growth. The use of artificial fertilizer, mainly amonium sulphate from the United States, is heavy; during World War II producers tried Chilean nitrates but found that under irrigation they raised the alkalinity of the soil excessively. The cane is planted from October through December and the average period of growth is twenty months, ranging from eighteen to twenty-two months. Harvesting can be done in any month of the year and approximately 60% of the planted area is harvested annually.

## 2. Sugar Production

There are fifteen sugar mills in Peru. Owing to the practice of continuous harvesting, these mills operate throughout the year, being closed for only a month or six weeks between April and June for servicing and repairing their machinery. The plants are excellently equipped with up-to-date machinery and they are operated very efficiently, being virtually all owned or controlled by W. R. Grace and Company and Gildemeister and Company. It is generally reported that Peruvian mills obtain extractions of 94% to 97% of the sucrose in the cane. Three refineries operate in Peru and are located in mills so that direct production of refined sugar is possible at low cost.

The production of centrifugal sugar in 1950 is estimated at 475,000 metric tons, compared with 493,000 tons in 1949 and an average of 444,000 tons for the past decade. The bulk of this production is sold as raw sugar and the remainder is subjected to different stages of refinement. About half this remainder is fully refined, some 45% is sold as "consumption" sugar 1/ and about 5% is sold as washed whites 2/. In addition to the

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1/ Little better than raw sugar of grey-yellow color.

2/ Brown sugar, sulphite washed.

production of centrifugal sugar a low grade brown sugar, known as Muscovado, and a low grade cake of sugar, molasses and miscellaneous solids, known as Chancaca, are produced in a large number of small establishments and private homes. The production of sugar in Peru during 1949 was as follows:

	<u>Metric Tons</u>
Raw 96 .....	280,350
Refined sugar .....	100,300
Consumption sugar .	75,750
Washed whites .....	11,100
Chancaca .....	22,000
Muscovado .....	150

Source: Private estimate of London Trade.

### 3. Consumption of Sugar and By-Products

For the past twenty years the trend of domestic consumption of sugar has been upward. In 1939 about 23% of production was consumed locally but at present the proportion lies between 35% and 40%. Annual consumption now varies from 140,000 tons to 150,000 tons of sugar in the form consumed. These figures include all the "consumption" sugar, the bulk of the Washed Whites and half the Refined Sugar produced. In addition to sugar from the mills, all the Muscovado and Chancaca is domestically consumed.

Because of the scarcity of other foods during and after World War II, the rise in sugar consumption was accelerated in recent years. However, because high world sugar prices would have limited consumption of sugar by the bulk of low income Peruvian consumers, the Government has introduced a system of quotas compelling each mill to deliver specific quantities of centrifugal sugar for domestic use. At present, about 13,000 metric tons of this sugar are set aside for consumption in Peru. As a consequence of the retention of such a considerable volume of sugar for domestic use the price of sugar in Peru is relatively low. In spite of this, however, the consumption of refined sugar remains limited to the small high income group and the rise in sugar consumption has been largely in the form of "consumption" sugar and Chancaca. Some small increase in domestic use of sugar can be attributed to the recent establishment of soft drink and candy industries.

The by-products of the sugar industry have been increasing in importance. Formerly all final molasses was regarded as a waste product and was dumped into irrigation ditches to act as fertilizer. Recently several small distilleries have been established near the sugar mills and by 1946 about 8,000 metric tons of molasses were used for the manufacture of alcohol. Molasses is also being used in livestock feeds. These uses, however, account for only a small fraction of the total annual production of molasses which is estimated at 125,000 tons. In addition to the utilization of molasses a new use for bagasse has been developed. One of the mills (Paramonga) has

established a paper plant which uses bagasse together with imported wood pulp as raw material for the manufacture of kraft paper and paperboard. Owing to the high efficiency with which the mills in Peru are run and the high fiber content of the variety of cane grown, there is a considerable surplus of bagasse above fuel requirements and further development along the Paramonga lines might be possible.

#### 4. Exports

The exportable surplus of sugar varies from 300,000 tons to 350,000 tons annually and exports of sugar in all forms accounted, on average, for about one-quarter of the total value of all Peruvian exports in postwar years.

About one-half of the raw sugar exported goes to Chile for refining, while the refined sugar exported goes to Bolivia and other South American countries.

Under the United States Sugar Act of 1948, the marketing of Peruvian sugar in the United States was reduced to 7,700 metric tons. However, failure of some Far Eastern countries to meet their United States quotas has resulted, during recent years, in the reallocation of part of these shortfalls to Peru; with the recovery of Far Eastern production Peru's exports to the United States may be reduced to the present quota level. In 1952, when the United States Sugar Act comes up for revision, Peru in common with other Latin American countries, will probably endeavor to obtain increased quotas but with the prospects of Cuban surpluses they are unlikely to obtain material concessions.

The United Kingdom, before World War II, was a market for about one-third of Peruvian raw sugar exports but in 1949, owing to currency difficulties, no exports went to the United Kingdom. An arrangement has been completed recently whereby United Kingdom purchases of Peruvian sugar can be made in sterling, and consequently, shipments to the United Kingdom can be expected to recover; it is unlikely, however, that Peruvian exports to the United Kingdom will in future reach prewar levels owing to the planned development of Commonwealth exportable surpluses. Continental Europe took an increased quantity of sugar from Peru in 1949 but little more than the small prewar quantity can be expected to find a market there over the longer term.

In view of limitations on production of sugar in Peru and increasing domestic consumption Peruvian sugar exports in all forms are not likely to exceed 330,000 metric tons, the amount of Peru's basic quota fixed in Article 19 of the International Sugar Agreement, 1937. Should a new Agreement come into force in the near future it is unlikely that Peru would seek a larger international quota since she should find it increasingly more difficult to meet the old quota.

ESTIMATED SUGAR EXPORTS FROM PERU  
(thousand metric tons)

	1938-39 average	1948	1949
Chile .....	114	118	131
Uruguay .....	5	60	28
Bolivia .....	18	26	29
Other Latin America .....	5	-	27
United States .....	35	37	30
United Kingdom .....	100	72	-
Europe .....	10	3	40
Japan .....	-	36	-
Others .....	10	-	-
Total .....	297	352	285
Raw .....	268	309	236
Refined .....	29	43	49

Source: U.S. Department of Agriculture

Prospects for foreign exchange earnings from sugar are mixed. During the early summer the world sugar market was depressed by the prospect of a surplus of three-fourths of a million tons of Cuban sugar. The Korean situation, however, caused a sharp rise in prices. There is no threat at present nor prospect of a world sugar shortage, the rise in prices being entirely attributable to a hurried movement of sugar from producing to consuming countries, particularly the United States, in the face of the international situation. If the international situation is not aggravated the accumulation of large stocks of sugar in consuming countries can be expected to depress prices and with the continuing prospects of Cuban sugar surpluses, prices may fall sharply. The current situation may temporarily increase the proportion of Peruvian exports of sugar to dollar markets but in the long run these are not likely to be maintained at the higher levels.

## APPENDIX III

### PERU--TRADE IN METALS AND ORES

#### Conclusions

(a) Peru's mineral output is highly diversified. Over the past two decades, lead and zinc and their co-products have assumed increasing importance, while copper, gold, silver and vanadium have declined relatively.

(b) Known mineral deposits which have been partially explored and tested afford a physical basis for a substantial increase in the volume of mineral exports. Including the increase in the value of exports resulting from further processing of zinc, it is estimated that the increase in export volume may be 50% or more above the 1948-1949 average of \$48 million, equivalent during the 1960's (at constant prices).

(c) The major obstacle to increased mineral exports in recent years has been a lack of confidence in the policies of the Government with reference to taxation and exchange policies, which limited convertibility of earnings into dollars. Two projects have been delayed (one abandoned) as a result of a failure by the investors to secure a satisfactory agreement.

(d) The increased production should be marketable largely to the U.S.A., except in periods of severe depression.

## 1. Background

Peru's mineral production has undergone a major transformation over the past thirty years. In the twenties, the major emphasis in production was on copper, (carrying high gold and silver values as well) and vanadium. There was also a limited production of lead and zinc. The two dominant firms were Cerro de Pasco Co. and the Vanadium Corporation of America. Because the copper ores were so rich in precious metals, mining methods were relatively wasteful and little or no attempt was made to recover such smelter by-products as antimony or arsenic. Lead and zinc production were neglected in favor of copper largely because of the higher precious metal values in the copper ores. Vanadium Corporation enjoyed a virtual world monopoly of an alloying element which was just beginning to find new uses.

During the depression of the thirties, the sharp fall in silver and copper prices caused operators to seek profitable means of exploiting Peru's lead and zinc ores and encouraged Cerro de Pasco to make efforts to recover more by-products in smelting. The leaner vanadium ores were as yet considered unprofitable.

War demands for lead and zinc encouraged lead mines to install flotation units to recover zinc hitherto discarded as waste and encouraged mining of ores more for their base rather than precious metal content. As a result lead and zinc production, particularly zinc, rose relative to silver. A small plant was erected to treat arsenic accumulations and recovery of bismuth and antimony was increased. Under war-time pressure a plant to treat low-grade vanadium ores was also financed by the U.S. Government, which was later sold to Vanadium Corporation, the bulk of whose current output is from low-grade ores, since the old rich mine is virtually exhausted.

These trends have continued in the postwar period as indicated by the fact that lead and zinc output reached new highs in 1949, while output of copper, gold and silver is below war-time peaks. Incidentally, the war-time copper output peak (1940) was below the 1928-29 level in decided contrast to that of lead and zinc.

The attached Table I contains statistics of mineral output for selected recent years, illustrating the trends outlined above.

## 2. Production Prospects

The trend toward increased production of lead and zinc is likely to continue, since Peru's as yet untapped resources are largely in these minerals. Among the promising projects in this field are the vast lead-zinc reserves at Cerro de Pasco, and the new A.S. & R. project at Chilete. It is also probable that the electrolytic zinc plants of Cerro de Pasco, when



completed,<sup>1/</sup> may make increased production of zinc concentrates at Cerro and perhaps other mines more readily marketable at better prices. At present, transport costs and high iron content render zinc concentrate output at some mines relatively unprofitable except in periods of boom prices.

In copper, the Northern Peru Mining Co. (an A.S. & R. subsidiary) is engaged in investigating the Toquepala deposit (in southern Peru) with a view to erecting a plant to treat 10,000 tons of ore per day. If investigations indicate this project feasible, the copper output of Peru could be more than doubled within five years.

From the foregoing, it is evident that from a physical standpoint, Peru's non-ferrous metals output could be increased substantially at competitive prices. The crucial question lies in the investment climate, the terms and conditions which private investors are able to negotiate with the Peruvian Government, for transfer of earnings outside Peru. The experience of some firms has caused at least one large mining company to abandon a project in recent years, while another has delayed making further investments in the hope of securing better terms in the future.

### 3. Mineral Exports of Peru - Past and Present

While Peru's economy is not so heavily dependent on a single commodity as in Bolivia, Chile or Cuba, mineral exports constitute a substantial proportion of Peru's trade (25% in 1948 and 26% in 1949). <sup>2/</sup>

It is estimated that the value of mineral exports (including all gold and silver) were \$46 millions in 1948 and \$150 millions in 1949. For 1950, it is likely that the volume and value of exports will be little changed from 1949. At prices prevailing on September 15, 1950, the unit values of minerals exports were almost 15% above 1949 (in dollar terms), indicating that 1951 may show some increase if volume and prices are maintained at current levels. Another factor which will raise the value of Peruvian metal exports in future years is the increase in value of zinc

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<sup>1/</sup> The capacity of Cerro's existing pilot plant at Oroya is about 100 tons per month. This plant's capacity is being expanded to about 1,000 tons per month, with construction well under way. Cerro de Pasco is negotiating a loan from Export-Import Bank, which if successful would finance a new plant with an additional capacity of about 3,000 tons per month. Annual output of electrolytic zinc in 1954 and thereafter may thus total 45-50,000 tons per year.

<sup>2/</sup> The ratios are somewhat distorted by the fact that as smelting and refining of metals increase within Peru, some of gold and silver formerly classified as metal exports because they were contained in blister copper (e.g. 1948) were classified as monetary or precious metals in 1949 because the gold and silver were separately extracted in the copper refinery. If total exports of gold and silver in all forms were included in mineral exports in both years, the percentages would be about 28% and 32% in 1948 and 1949 respectively.

exports, because of the expansion of zinc smelting capacity from the present pilot plant stage of about 1,000 tons per year to an ultimate output of perhaps 40-50,000 tons per year. If the zinc exports in 1949 had been in refined form rather than concentrates, the same quantity of zinc exported in refined form would have had a value of \$15-16 millions as against an estimated value of \$8 millions. Since the expansion of zinc smelting facilities and probable expansion of lead, zinc and copper mining will involve appreciable investment, it should also be borne in mind that remittances on account of profits and amortization of capital will likely increase concurrently with exports. In fact, it is the lack of firm assurances on this score which may delay expansion.

Over the next decade or two, it is likely that the volume of Peru's mineral exports may increase 50% or more, resulting in metallic exports of \$75 millions or more annually, provided expansion plans now projected are actually carried out. Virtually all the copper and lead concentrates and much of the refined copper and lead are sold in the U.S. market, as are all the vanadium ores. The zinc concentrates are marketed in a variety of countries including Canada, U.S.A., Belgium and other continental countries. Small marketing of refined copper and lead, and eventually zinc, is made in Latin America and in Western Europe. Consumption in Peru is small and accounts for less than 10% of production in most years.

It appears quite unlikely that Peru will find it necessary to market more than a small part of its mineral exports outside the Western Hemisphere. The experience of the thirties with U.S. self-sufficiency at low levels of consumption is unlikely to recur, except for an occasional period of sharp business depression in the U.S.A. Even in such a case, Peru would be less vulnerable than Chile, for example, because its dependence on mineral exports is relatively smaller and more diversified.

Table 1 PERU--MINERAL OUTPUT IN SELECTED YEARS

Commodity	Unit	1936-39 average	War peak		1947	1948	1949
			quantity	(year)			
Copper	'000 MT	35.6	44.0	(1940)	22.4	18.1	28.0
Lead	"	44.2	53.7	(1945)	45.8	48.5	65.4
Zinc	"	17.0a/	61.2	(1945)	58.2	58.8	71.5
Antimony	MT	1,000	2,472	(1943)	1,283	1,636	750
Arsenic	"	--	6,900	(1944)	608	1,011	500
Bismuth	"	250a/	483	(1943)	237	253	216
Vanadium	"	646	1,214	(1940)	437	511	456
Gold	'000 oz	222.6	285.2	(1941)	116.0	111.2	112.3
Silver	"	19,181	19,916	(1940)	10,783	9,288	10,609

a/ Estimated.

## APPENDIX IV

### PERUVIAN PETROLEUM DEVELOPMENT

#### Conclusions

(a) Peru's crude oil output increased steadily until 1936, falling off thereafter. Its role in world petroleum trade has shrunk even more sharply, because rapidly rising internal consumption has greatly reduced exportable surpluses.

(b) Oil production has been limited to the northern coastal area (except for one small operation east of the Andes). The remainder of the country has been designated as a governmental oil reserve on which limited concessions may be granted with legislative approval. Proposed concessions contracts have in the past failed of such ratification, tending to restrict oil output.

(c) Internal price controls which have not been modified to reflect increases in world prices or the steady devaluation of Peruvian currency have greatly reduced profit margins on internal sales. Because proven reserves are limited and new concessions were not obtainable, the combined effect of increased domestic demand and rigid internal price control has been to reduce earnings and stifle development.

(d) Chile is the major market (70% of the total) for Peru's exports of refined products. In view of the discovery of oil in Southern Chile and the known aspirations of Chile for a refinery to process this crude, Peru's largest and most favorable market may be lost within the next decade. While

Peru's exportable surplus can undoubtedly be marketed in other nearby areas, such a shift would involve greater freight absorption and lower net realizations for Peruvian exports, at any given world price level.

(e) In view of the foregoing, it is unlikely that Peru's petroleum exports will expand over the next decade or two, unless very favorable terms or new concessions are offered by the Peruvian Government and such concessions are developed on a large scale and promptly. The recent experience of petroleum enterprises in Peru is not likely to be viewed favorably by new firms seeking sources of foreign oil output.

## 1. Background

### Production

Peru has had a long history of petroleum production. Production began in 1896, eleven years before it commenced in Argentina, the next South American country to begin production on a commercial scale. Not until 1924 did it relinquish its position as the leading South American country to begin production on a commercial scale. Not until 1924 did it relinquish its position as the leading South American producer to Venezuela. In the next few years it was outstripped by Colombia, Argentina and Trinidad, so that Peru's share of South American output fell as follows:

1920 .....	40%
1925 .....	23%
1930 .....	7%
1935 .....	8%
1940 .....	5%
1945 .....	3.4%
1949 .....	2.5%

Table 1 attached traces the changes in petroleum production in recent years. Peak output was attained in 1936 (17.6 million barrels) and fell off thereafter. In 1949 production of 14.8 million barrels was, however, the highest since 1938.

### Trade

Exports have fallen off more sharply because rising internal consumption has limited the quantities available for export. In 1930, domestic consumption amounted to 2.2 million barrels, leaving an export surplus of over 10 million barrels, largely crude oil. By 1946 when production was little different from 1930 levels, exports had fallen to 8.3 million barrels. Despite an increase of 2.3 million barrels in production between 1946 and 1949, exports increased only 0.2 million barrels. Between 1930 and 1949, internal consumption had risen from 2.2 million barrels to over 7 million barrels of petroleum products. It should be noted that Peru customarily imports about 100,000 barrels of special products, including lubricants.

Detailed data on foreign trade in petroleum in recent years are contained in Tables 2 and 3.

### Reserves

Peru is believed to possess substantial reserves, particularly east of the Andes. Proven reserves at the end of 1948 were estimated at 160 million

barrels,<sup>1/</sup> but these include no allowance for potential reserves east of the Andes. One particularly promising area is the Montana region, which an oil official estimated would require \$250 million to develop properly and would require at least ten years.<sup>2/</sup> Another favorable area, the Sechura desert, was the subject of a proposed concession to International Petroleum Company which was never approved by the Peruvian legislature.

### Government Controls

Exploration has been limited to coastal areas in the northern part of the country (except for the operations of the Ganzo Azul Company east of the Andes, which accounted for less than 1% of the output in 1949). The remainder of the country has been designated a government oil reserve on which limited concessions may be granted with legislative approval, which latter has been unobtainable to date. Not only has the area of private oil search been delimited but price controls have apparently made domestic sales extremely unprofitable.<sup>3/</sup> Since an increasing proportion of output has been sold internally<sup>4/</sup>, the impact on gross and net revenues of International Petroleum Company has been very sharp. The Lobitos Oil Company, which until mid-1949 was free to export its total output, has since been required to share the domestic market with International, thus slightly lessening the latter's burden. The small Ganzo Azul Company has reported a substantial loss in 1949 due to the low selling prices fixed by the Peruvian Government.

## 2. Future Prospects

### Concessions

The basic question with reference to the outlook for Peru's trade in petroleum and products is the problem of removing the burdens hampering further exploration and development of Peru's untapped oil resources. It is inconceivable that Peru's foreign trade in petroleum will not deteriorate over the next five to twenty years, unless positive steps are taken by the Government.

It is unlikely that the Peruvian Government could execute a ten-year program calling for an annual expenditure of \$20-\$30 million per year (perhaps half in foreign exchange) which appears necessary for a large-scale

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- <sup>1/</sup> Everett De Golyer, well-known consulting engineer, in Oil & Gas Journal, December 30, 1948.
  - <sup>2/</sup> World Oil, July 1950, p. 142.
  - <sup>3/</sup> Internal prices have not been adjusted upward to reflect increases in world prices (in dollars) or the Peruvian currency devaluations for many years.
  - <sup>4/</sup> I.P.C. estimates that 58% of its output was used for domestic requirements in 1949 as compared with 31% in 1943, when production was at the same level.

exploration and development of favorable areas for petroleum. Furthermore, it is not apparent what sources could be tapped by Peru for such large foreign exchange outlays, which may or may not prove productive. (In this connection, it should be noted that very large sums were expended in Ecuador by private concerns in recent years without success. In these cases, the project was deemed feasible because the participants were able to finance this venture from their earnings in other areas of the world, a source unavailable to most governments.)

It would appear that the Peruvian Government will find it necessary to make concessions available to private investors on relatively favorable terms, if a decline in Peru's net exports of petroleum is to be avoided. It is quite probable that concessions will be limited to areas, the prospects and size of which will about suffice to maintain exports at recent levels. The prevailing sentiment in Peru appears to be strongly opposed to a private oil boom and action probably will be taken only to the extent deemed necessary to prevent a deterioration in Peru's petroleum exports. The aspirations for a nationally controlled petroleum industry are still strong and will not likely be relinquished.

#### Price Problems

The Peruvian price control regulations have had a mixed effect on exploitation. In so far as production could be increased relative to internal consumption, there was a strong incentive for International Petroleum Company to do so, since net price realizations on exports appear to have been 75%-300% higher than on domestic sales and reduced net earnings by approximately 40¢ per barrel. <sup>1/</sup> But because reserves are limited and new concessions have not been available, the combined effect of increased domestic demand and internal price control has been to reduce earnings and stifle development. This factor may have to be overcome by government guarantees if Peru's oil resources are to be developed by private firms.

#### Foreign Markets

It should be recognized too that the rapid strides in Middle East oil development may narrow the European market for Peruvian crude, while developments in Chile also promise to raise new problems. In recent years, Chile has been a major market for Peruvian refined exports, accounting for about 70% of the total. <sup>2/</sup> Chile's dollar shortages, its growing crude oil output and its aspirations for a domestic refinery appear to dim the prospects for Peru's exports of refined products. While the impact on volume is unlikely to be great in the next few years until a new refinery is erected in Chile and crude production is expanded, the long-term future of the Chilean

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<sup>1/</sup> Calculated from data supplied by International Petroleum Company.

<sup>2/</sup> See Table 4.

market for Peruvian refined products exports is very doubtful. Since the volume of Peruvian exports is small, their sale is relatively assured in other parts of Latin America, but sales in other markets will probably require greater freight absorption and lower net realizations at any given world price level. This factor would tend to reduce the incentives for large-scale development of Peruvian oil by major oil companies.



Table 1

PERU--PETROLEUM PRODUCTION  
(In '000 barrels)

Years and yearly averages	Quantity
1896-1899 .....	70
1900-1909 .....	542
1910-1919 .....	2,129
1920-1929 .....	8,146
1930-1939 .....	14,347
1940-1949 .....	13,457
1940 .....	12,126
1941 .....	11,935
1942 .....	13,629
1943 .....	14,654
1944 .....	14,389
1945 .....	13,744
1946 .....	12,468
1947 .....	12,764
1948 .....	14,069
1949 .....	14,790

Table 2

PERU--PETROLEUM TRADE<sup>a/</sup>  
(In '000 barrels)

Year	Exports			Production	Exports as % of production
	crude	refined	total		
1945 .....	273	8,941	9,214	13,744	67.0
1946 .....	1,648	6,596	8,244	12,468	66.1
1947 .....	1,968	5,061	7,029	12,764	55.0
1948 .....	2,232	5,465	7,697	14,069	54.7
1949 .....	2,356	6,098	8,454	14,790	57.2

a/ Imports of petroleum products are negligible; available data for 1945 and 1946 show imports of 75,000 and 147,000 barrels respectively.

Table 3 PERU--VALUE OF PETROLEUM EXPORTS COMPARED  
WITH VALUE OF TOTAL EXPORTS

(In thousands of soles)

Year	Petroleum exports		Total exports '000 soles	Petroleum as % of total
	'000 soles <sup>a/</sup>	'000 US\$ <sup>a/</sup>		
1945 .....	84,307	12,970	674,530	12.5%
1946 .....	90,933	13,990	983,583	9.2%
1947 .....	114,692	17,645	1,002,943	11.4%
1948 .....	188,133	28,944	1,055,833	17.8%
1949 .....	316,532	23,206	2,107,519	15.0%

a/ 1945-1948 inclusive, US\$ 1 = 6.50 soles.

1949, US\$ 1 = 13.64 soles.

Table 4

PERU--EXPORTS OF PETROLEUM BY COUNTRY OF DESTINATION  
(In '000 barrels)

Country	1946			1947			1948			1949		
	Crude	Refined	Total	Crude	Refined	Total	Crude	Refined	Total	Crude	Refined	Total
Canada .....	-	201	201	-	-	-	-	-	-	-	-	-
El Salvador .....	-	167	167	-	148	148	-	103	103	-	51	51
Other Central America .....	-	198	198	-	486	486	-	138	138	-	327	327
Argentina .....	368	-	368	342	-	342	928	-	928	980	-	980
Bolivia .....	-	252	252	-	192	192	-	215	215	-	270	270
Chile .....	-	3,567	3,567	-	3,278	3,278	-	3,700	3,700	-	4,307	4,307
Colombia .....	-	484	484	-	530	530	-	952	952	-	744	744
Uruguay .....	673	-	673	957	-	957	232	-	232	227	-	227
Other South America .....	-	130	130	-	64	64	-	63	63	-	83	83
United Kingdom ...	607	-	607	669	-	669	1,072	-	1,072	1,149	-	1,149
Australia .....	-	289	289	-	-	-	-	-	-	-	-	-
New Zealand .....	-	981	981	-	97	97	-	-	-	-	-	-
Bunkers .....	-	327	327	-	266	266	-	294	294	-	316	316
<u>Total</u> .....	<u>1,648</u>	<u>6,596</u>	<u>8,244</u>	<u>1,968</u>	<u>5,061</u>	<u>7,029</u>	<u>2,232</u>	<u>5,465</u>	<u>7,697</u>	<u>2,356</u>	<u>6,098</u>	<u>8,454</u>

Table 5 BALANCE SHEET AND RECONCILIATION OF PERUVIAN  
PETROLEUM AND NATURAL GASOLINE

Output, Consumption and Exports

(In '000 barrels)

	1949	1948
<u>Crude Oil</u>		
Production .....	14,790.1	14,069.1
Runs to stills .....	<u>12,285.8</u>	<u>11,901.9</u>
Balance for export .....	2,504.3	2,167.2
Exports .....	2,355.7	2,231.9
Difference <sup>a/</sup> .....	/ 148.6	- 64.7
<u>Refined Products</u>		
Crude runs to stills .....	12,285.8	11,901.9
Refined products output <sup>b/</sup> .....	12,247.0	11,852.0
Natural gasoline output .....	<u>1,093.8</u>	<u>1,088.6</u>
	13,340.8	12,940.6
<u>Demand</u>		
Domestic marketings .....	7,393.8	6,979.3
Refined products exports .....	<u>6,098.3</u>	<u>5,465.1</u>
Total disposals .....	13,492.1	12,444.4
Difference <sup>a/</sup> .....	- 151.3	/ 496.2

<sup>a/</sup> No account is taken of changes in stocks.

<sup>b/</sup> Difference between crude runs and output of refined is measure of losses in processing.

Table 6

PERUVIAN PRODUCTION OF CRUDE  
AND REFINED PETROLEUM

(In '000 barrels)

	1949	1948
<u>Crude Oil</u> .....	<u>14,790.1</u>	<u>14,069.1</u>
Talara and Negritos (IPC) .....	11,913.0	11,362.5
Lobitos - El Alto (Lobitos) .....	2,615.7	2,473.0
E.P.F. (State Petroleum Org.) .....	121.2	112.6
Agua Caliente (Ganso Azul) .....	140.2	121.0
<u>Natural Gasoline</u> .....	<u>1,093.8</u>	<u>1,038.6</u>
I.P.C. ....	976.6	971.8
Lobitos .....	117.2	116.7
<u>Refined Products</u> .....	<u>11,852</u>	<u>12,247</u>
Gasoline		
Aviation .....	144	161
Motor .....	3,806	3,762
Kerosene .....	1,084	897
Diesel oil .....	1,380	2,016
Fuel oil .....	5,623	4,769
Lubricating oil .....	68	70
Asphalt .....	84	61
Still gas .....	58	61
Other .....	--	55

## APPENDIX V

### EXTERNAL DEBT HISTORY

During the twenties, Peru issued dollar bonds in the New York market and consistently met interest and amortization payments. In 1931 Peru defaulted on its external obligations. Except for the payments on the Guano Sterling Loan, made because of its "special security and status," practically none were made on the rest of the external debts from that time until February 1947 when Peru put into operation a debt adjustment plan. This plan called for coupons starting at 1% for 1947-1948, 1-1/2% for 1949-1950, 2% for 1950-1952, 2-1/2% in 1953 and thereafter; a sinking fund of 1/2% per annum was to be used to acquire bonds for redemption in the market; unpaid interest to December 31, 1947, amounting to \$95 million, was cancelled without compensation.

The Foreign Bondholders Protective Council Inc. announced that it would not recommend acceptance of the plan because, (1) the final interest rate of 2-1/2% was below standard and therefore the service obligation assumed was proportionately low. The money required to handle this program for the year 1947 was estimated to be only 1% of the current Peruvian national budget and only about 1% of the value of Peruvian world exports, (2) the cancellation of all interest arrears was a departure from the principle of reasonable debt adjustment, (3) the legislation was unsatisfactory because of the loopholes it contained and the contract changes made without the bondholders' consent.

The sterling readjustment plan was substantially the same as the dollar readjustment plan discussed above. The Council of Foreign Bondholders (British) made it clear to the Peruvian Government that they shared the views of the Foreign Bondholders Protective Council Inc. outlined above. British Government authorities refused the application for permission to offer this readjustment plan, presumably on the grounds that acceptance of such an offer, from a foreign exchange point of view, would be contrary to the national interest.

In the 1947 debt adjustment plan sterling obligations could be exchanged for dollar bonds on the basis of £1 sterling equalling \$4.01. On January 3, 1950 this provision was changed to allow the exchange only at the new devalued rate £1 principal amount of old sterling bonds equalling \$2.80.

A considerable time after the dollar debt adjustment plan was offered, less than 20% of the bonds had been assented to the program. There has, however, recently been a substantial increase in the number of bonds assented to the plan and, by September 1, 1950, \$47.4 million or 62% of the total \$76.5 million of the dollar bonds outstanding at the time the plan was offered in 1947 had been assented to this program. Mr. James Lynch (Economic Department) has been informed by Mr. Kenneth M. Spang, Vice-President of the Foreign Bondholders Protective Council, Inc. that the Peruvian Government has

been having bonds purchased on its behalf in the market and assenting them to the program. It is not known how much of the increase (from 20% to 62%) in the amount of bonds assented is due to this action. It was stated by the Central Hanover Bank and Trust Company, trustees of the new bonds, that the Peruvian Government has not presented bonds in lieu of cash for the sinking fund, but has in fact paid cash to the Bank who in turn purchases the new assented bonds from brokers in accordance with the sinking fund provisions. It is estimated that this cash, amounting to \$1.3 million, has reduced par amount of bonds outstanding by \$8.4 million, indicating an average purchase price of around \$150 for the bonds acquired for the sinking fund. Since this accounts for only 20% of the \$41 million par value which has been assented to December 31, 1949 from 1947, there was left about \$33 million unexplained assents to the program. The question was raised with officials of Central Hanover Bank and Trust Company as to whether the Peruvian Government had accounted for any major portion of this and they stated that there is no indication from the records that such is the case and there was assenting to the program by many people, although one of the largest assenters was the Carl Marks & Co. Inc. Marks had explained to us that their assenting to the program was based on purchase orders placed with them by the Peruvian Government for new bonds and in order for him to complete this transaction, had to assent old bonds, receive the new bonds and deliver them to the Peruvian Government.

When the full 2-1/2% interest rate becomes effective in 1953 the required outlay under the present settlement would become \$2.6 million annually (interest \$1.8 million and sinking fund \$0.8 million, with the interest portion diminishing as the bonds are retired and the sinking fund portion increasing correspondingly). It would probably involve only relatively small additional outlays to produce a settlement which would be acceptable to the bondholders' councils, but it is very difficult to calculate exactly what these amounts might be in view of the many different forms which a revised settlement might take. There would be the question of whether the increased payment should be made retroactive to 1945, the date of the original agreement with the bondholders' councils; the question of what the new interest rate and sinking fund schedules should be; the question of the treatment of pre-1945 defaulted interest payments; etc.

One way to illustrate the possible additional cost would be to assume that the present schedules would simply remain in effect through 1953 but that in 1954 and thereafter the interest rate would be raised to 3% and the sinking fund to 1%, with \$10 million of new bonds being issued in lieu of accumulated interest arrears amounting to some \$79 million. Under such a settlement total service in 1954 and subsequent years would call for an expenditure of \$3.4 million a year (interest \$2.3 million and sinking fund \$1.1 million in 1954, with the interest portion diminishing as the bonds are retired and the sinking fund portion increasing correspondingly). This would involve

an outlay of about \$800 thousand per annum more than under the present arrangement. 1/

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1/ In calculating these figures it is assumed that under either plan the service requirements on the sterling debt would be calculated at the exchange rate of \$2.80 per pound sterling. However, it is possible that the sterling bondholders would hold out for a plan under which they would retain the privilege (which they had before January 1950) of converting their sterling bonds into dollar bonds at the rate of \$4.00 per pound sterling instead of the current rate of \$2.80.