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MACROECONOMIC DEVELOPMENTS
IN YEMEN

Prepared for:

Office of Private Sector Development,
U.S. Agency for International Development,
Yemen Arab Republic

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INTERNATIONAL SCIENCE
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EXECUTIVE SUMMARY

Yemen is primarily an agricultural country where the majority of the population uses traditional technologies for raising sorghum and millet on small terraced plots in mountainous rainfed areas. The country has been heavily dependent on the remittances of workers in the oil states to meet its foreign exchange needs. Over the last two years the country's foreign exchange receipts have been augmented by the sale of newly developed oil resources which are expected to provide roughly \$1 billion annually for little short of a decade.

The Imam was overthrown in the revolution of 1962 and there followed a turbulent decade and a half of recurring war during which two presidents were assassinated. Yemen has since enjoyed ten years of relative political stability under the government of President Saleh who has used careful consensus techniques to overcome centrifugal political forces and contain independent actions of strong local sheiks. Lack of well-established central control presents difficulties for policy implementation, but unlike many other developing countries, the emerging system is developing along more democratic lines despite the absence of multi-party elections. Discussion and criticism of government actions is becoming increasingly open and even encouraged.

Yemen has entered a period of change in which the traditional order is being subjected to strong new economic forces. The opening of the migrant labor market in the Gulf states has absorbed as much as 15 percent of the total Yemeni population, much of it from traditional rural communities. A slackening of demand in this market in the early 1980s caused a drop in workers remittances and a surge in foreign borrowing. The consequent build-up of foreign debt coincided with increasing fiscal deficits which were mostly financed by borrowing from the Central Bank. The drop in remittance also led the government to institute a series of restrictions on foreign exchange transactions in an effort to secure government control over hard currency inflows. This effort has been largely unsuccessful. Large-scale smuggling of consumer goods and manufactures has developed. The major effect of the restrictions is a strangulation of imports of inputs for industry and agriculture, and the emergence of excess capacity in manufacturing. Pressure on the black market rate has not been reduced significantly, since smugglers and flight capitalists are very active in buying up remittance workers' hard currency.

The volume of foreign exchange flowing through official channels has dropped sharply. The government's foreign exchange reserves are critically low. Foreign suppliers are complaining about protracted delays in receiving payments, and there is a widening gap between the official rate and the black market rate. The government has been buying foreign exchange from money traders in Saudi Arabia to meet some of its needs, but now it appears hesitant to do so despite pressing demands of creditors and suppliers, perhaps because it fears causing the rate to depreciate. The government may on occasion have paid more than necessary by waiting until its need for dollars was critical.

Because of interest ceilings and convertability restrictions the government has stifled the growth of foreign currency deposits in domestic banks. In some developing countries these serve as an important source of hard currency for the public sector.

Oil revenues will help resolve some of these problems but projections of the net financing requirements suggests that some reform of the exchange regime will be needed. In the end, it is the government that is short of foreign exchange--not the country--and the current restrictions only serve to drive the system further underground.

The fiscal deficit has been subject to wide swings during the 1980s reaching as high as 26 percent of GDP in 1982, and rising and falling in virtually alternate years since then. The major trends in revenue collections include a marked deterioration of customs receipts reflecting the increase in smuggling and, to a lesser extent, revisions to the structure of rates and exemptions. Offsetting this is an increase in receipts from oil production. Other revenues have not managed to keep pace with the overall growth in GDP. When the oil revenues are exhausted there will be difficulties in meeting the government's revenue needs unless reforms are undertaken soon. Oil production will be constant from 1990/91 onward, and will meet a decreasing proportion of the government's needs. The revenue pinch will be felt well before the oil is actually gone.

The banking system in Yemen is weak and it is highly liquid. Some 75 percent of all deposits are lent to the Central Bank. Of the small share that is lent to the private sector, most is for trade and real estate. Very little of it is for productive investment. Local businesses do not provide financial statements and most lending is character lending with a significant volume of loans going to bank directors. In addition, there are minimum deposit rates which cause banks to turn depositors away. There are clearly difficulties here that prevent the banking system from functioning effectively as a vehicle for mobilizing savings. The banks themselves are not aggressive in searching out new investment opportunities preferring to passively absorb government debt in the form of Central Bank deposits.

The traditional sector is showing signs of decline. Important factors here include higher numbers returning to wage labor in the Gulf States, the subsidization of imported wheat that competes with local sorghum and millet, the overvaluation of the exchange rate which works against all agriculture, and the restrictions on fertilizer resulting from the exchange regulations. In addition, the traditional system is a highly interdependent one, so that if some farms are abandoned, adjacent and downstream farmers are also negatively affected because of erosion and soil moisture loss. This suggests that beyond a certain point, contraction of the traditional sector might accelerate sharply. Widespread deforestation and related erosion reinforce this tendency.

The subsistence nature of the agricultural sector, its relatively low level of monetization, and the persistence of traditional culture will slow the pace of change. But the possibility of a fairly rapid depopulation of the traditional sector should not be overlooked. Shantytown slums and high urban unemployment are serious problems in most other developing countries and have so far been avoided here. However, this situation may not persist. Employment in alternative agricultural activities using technologies that are competitive with imported products can provide some of the new employment that will be needed. More rapid growth of the manufacturing sector will also be necessary.

The USAID program design reflects these needs. It has a strong focus on agriculture. The Agriculture Prices and Incentives study has helped identify which crops Yemen can and should produce on a competitive basis, and what will provide permanent employment without costly protection and subsidization. USAID supports research and field experiments to seek new potential crops and cultivation techniques. At the same time it is conscious of the need to ensure that new techniques are not over dependent on depletion of limited ground water resources and that modern agricultural initiatives should not have the side-effect of accelerating the decline of the traditional sector. USAID research has pointed out the need to reform the exchange system to prevent the stunting of export and import substitute production and to assure fair access to needed inputs such as fertilizer.

In anticipation of challenges that may emerge from a decline of the traditional sector, projects relating to labor markets, employment and mobility are under consideration. Further, work is being done on the potential for housing sector initiatives. This work is related to concerns about future rural-urban migration. It will also be supportive of reform efforts in banking and finance, and will help stimulate employment in the labor-intensive construction sector. This sector has good backward linkages and is currently lagging in Yemen relative to countries at a similar stage of development.

In terms of industry, USAID supports policy analysis that has pinpointed key areas of reform needed to encourage development and accelerate the mobilization of savings. The support offered by USAID in drafting the new Investment Code, currently under consideration by the cabinet reflects its conviction that reforms to the trade and exchange regime as well as banking sector reforms will be critical in assuring growth and new employment opportunities. The support for policy reforms of this sort has been offered in a way that reflects awareness of local political sensitivities and the independent nature of the Yemeni people.

INTRODUCTION

This paper was written as background to the Country Development Strategy Study (CDSS) that will be completed in early 1990. The focus is on macroeconomic developments in Yemen which have taken on an increased importance since the last CDSS. Major new economic forces have come into play and important economic policy decisions are currently being formulated.

The paper begins with a review of conditions in the agricultural and industrial sectors. It then provides a retrospective look at macroeconomic developments during the late 1970s and 1980s with particular attention to the balance of payments, the exchange regime and the government finances. The role of the banking system in mobilizing domestic resources is also considered.

These follow two sets of projections extended until 1993: one for the balance of payments; and one for government revenue and expenditure. These are strongly conditioned by the emergence of oil production as a major source of hard currency. Within the context of these projections there is analysis of the need for immediate reform of the exchange and trade regimes, medium term improvement of tax collection measures and changes to the system of domestic banking.

I. RECENT DEVELOPMENTS BY ECONOMIC SECTOR

A. Agriculture

Agriculture is the mainstay of the Yemeni economy. It employs about 60 percent of the labor force and (excluding qat) it contributes roughly 30 percent of non-oil GDP. The main food crops are sorghum and millet which account for about 68 percent of the cultivated area. Wheat, barley and maize account for another 15 percent.

Yemen has a wide variety of climates distinguished by altitude and rainfall. There are three main agricultural regions. The highland region receives the most rainfall with the greatest concentrations in the south around Taiz. Rainfed cultivation there is based on extensive terracing. Land holdings are highly fragmented because of the mountainous terrain and because of inheritance traditions and high birth rates. In the arid eastern plateau construction of the Marib dam has made possible the cultivation of citrus on a large scale although citrus canker is becoming a serious problem. Soil fertility in the dry coastal region is variable. Sorghum is the main crop there and all production is irrigated.

Over the last few years there have been significant changes in the relative shares of various crops (See Annex C, Table 3). The general trend is one of increased planting of wheat and maize and decreased planting of sorghum and millet. The total cultivated area has declined partly as a result of scarce water supplies. The yields of sorghum have increased slightly while yields for wheat have risen sharply. There have been marked improvements in the cultivation of fruits and vegetables with yields and planted areas both increasing.

Cotton was at one time Yemen's largest export and at the same time provided input for the textile industry. Production peaked in 1974/75 at 27,000 tons and has since fallen to around 5,000 tons. The decline of cotton results from several factors. The rise in income levels caused by the employment opportunities in the gulf oil states raised the costs of production of cotton which is a relatively labor intensive crop. However, as labor markets loosen and there is a large scale return of migrants, this could change. More recently, the sharply higher profitability of vegetable production induced by an import ban has caused farmers to abandon raising cotton.

Coffee output has also been steadily declining. At the turn of the century production was 20,000 metric tons and is now only 3-4 metric tons. The decline is largely because of the increasing profitability of raising qat on coffee lands. Qat is a mild stimulant consumed by chewing the leaves of the qat tree and is widely used in Yemen. Its economic importance, especially in the rural sector cannot be overlooked. The World Bank estimated that in 1982 qat provided 32 percent of rural incomes and accounted for as much as 20 percent of GDP. A dedicated qat chewer will spend roughly 50 rials a day on the habit, making it a significant family expenditure that generates a major urban-rural transfer of resources.

Despite the fact that qat occupied only 43,000 hectares (4 percent of the total) its value added at domestic prices exceeded that of all other agriculture. Qat production is very profitable and wide spread. The 1982 production costs on the estimated 175,000 rural qat plots were roughly 30 percent of market prices. Since then, rising income levels have pushed demand higher, further raising prices and profitability and inducing increased production. Given its current importance, it is likely that restrictions on production or use would have serious impact on rural farm incomes. However, qat competes for irrigated and rainfed land suitable for coffee. There is virtually no external market for qat and the opportunity cost of domestic consumption is high because qat occupies good land and absorbs undervalued water resources.

The main limitation to expansion of agriculture in Yemen is the availability of water. Currently only a quarter of the cultivated land is irrigated although this land accounts for over half of agricultural value added. When the volume or timing of the rains is wrong, as was the case in 1987, rainfed agricultural regions are badly affected and total production stagnates. Rainfed crops are the most vulnerable. Irrigated fruit and vegetable production is more steady. In some of the irrigated areas especially in the Tihama coastal region there are problems of increasing salinity. Efficiency of water use everywhere is still very low. Most irrigation schemes are privately established and no mechanisms are in place to ensure that extraction rates are appropriate. Charges for water

from private sources reflect only the extraction costs and do not take into account depletion of the resource. Publicly supplied water has been distributed free of charge although some charges have been implemented recently. Water tables are dropping in many areas, the most serious being Sana'a where the drop is 1-2 meters per year. Better hydrological survey data are urgently needed and a water management scheme using licensing or other regulatory measures should be implemented.

The changes in the pattern of agricultural production result from natural factors, from direct government efforts to influence the pattern of production, and from competitive pressures stemming from differences in the productive efficiency of Yemeni farmers vis-a-vis foreign farmers. The effects of natural forces include a sharp drop in production for example, the earthquake of 1982 and the ensuing drought. After these disasters production recovered. Wheat output doubled between 1984 and 1986. Good rains and an increase in farm labor availability because of returning workers helped boost wheat output and also contributed to the increases in the output of sorghum and millet (83 percent), barley (46 percent) and maize (26 percent).

Government agricultural policy focuses on food security. The main thrust is the promotion of wheat, fruit and vegetable crops. The system is somewhat complicated relying on tariffs, quotas, import bans, import license auctions, exchange allocations, consumption subsidies and a variety of producer support instruments. Coherence is weak within the overall system and policies can sometimes work against each other.

The market for wheat is one of the most complicated. There are two channels through which wheat and wheat flour enter the country. The first is an auction or tender system. Agents representing foreign suppliers submit tenders for a fixed amount of wheat or wheat flour. The lowest bid wins and the total is divided among several groups for distribution. Sixty percent goes to the state grain corporation which sells it to the public through state retail outlets at prices that are below cost. The subsidy is on the order of 30-40 rials per 50 kg sack. At a retail price of approximately 115 the subsidy is therefore in the range of 20 to 25 percent.

The remaining 40 percent of the tendered supply is allocated to the winner of the auction and the various losers in fixed shares according to the ranking of the prices in the bids. Often the winner of the auction will reconsolidate his 40 percent by buying back the shares allocated to the other bidders. The marketing channels for the 40 percent are determined by the state. The winner of the auction, and others who may be responsible for distributing the 40 percent, are given lists covering each of the 11 regions. On each list is a series of names of local traders and a number of sacks to be delivered. The price to be charged is the state price. The distributing groups are paid a subsidy by the state equal to the difference between the CIF cost of the wheat in rials at the official exchange rate, plus a margin for transport, plus 3 percent for profit. The winner is paid in rials by the state grain corporation for its 60 percent share and by the other participating traders if any.

The auction winner becomes responsible for paying the foreign supplier the whole amount. It must therefore get the necessary exchange from the Central Bank. Currently some major traders have been waiting up to six months for the Central Bank to release the exchange. They are incurring interest costs and will lose money on the transactions. They are not sure if they will bid at all on future tenders.

The other channel for wheat is through Red Sea Mills which imports wheat using its own sources of foreign exchange. It is the only group in the country allowed to use own-source foreign exchange. It is also paid a subsidy by the state in order to bring its output price in line with the state price. The company must submit detailed accounts of its costs and the subsidy is negotiated. Red Sea claims that its costs are underestimated and that it is losing money but there is no way of assessing this claim.

Wheat, flour, bread and related products derived from imports generally sell in the domestic market at less-than-world prices. The state stores usually have the subsidized items in stock and, although there are queues and occasional shortages, the state seems prepared to meet all the demand there is at the subsidized price. The 40 percent that flows through the tenderer-distributors is sold to small traders at the regulated price but thereafter price control is weak. Depending on the season, region and state of speculation in the market, the smaller traders can sometimes sell at prices up to 40 percent higher than the official price. Yemenis will often buy as much as 4 or 5 months supply of flour in a single purchase. Fears of a shortage or price hike can put strains on the ability of the state stores to deliver demanded volumes and the small traders can charge higher prices despite the state's intention to meet demand at the regulated price.

Wheat is in a pool of four controlled commodities. The other three, cement, sugar and rice are said to provide the revenue to support the wheat subsidies so there is no net drain on the treasury, but this is difficult to verify. There are price controls on rice and sugar; sugar in particular is frequently scarce. Clearly the government cannot cross subsidize using sugar as a revenue source and control sugar prices at the same time. There are probably significant levels of sugar hoarding and sales above the price ceiling.

Beginning in 1984 the government tried to stimulate production of fruits and vegetables by imposing a total ban on imports of these commodities. They had been imported in amounts reaching YR 400 million in 1982. Between 1984 and 1986 there were sharp increases in production of vegetables (25 percent), grapes (26 percent), and other fruits (18 percent). Small quantities of the fruit crops are now exported to Saudi Arabia and other neighboring countries especially in the off-season, but when the main domestic prices are higher than world prices producers concentrate on the domestic market. Although there is a gain to producers, consumers suffer and in the long run there is a net welfare loss. This does not necessarily mean that fruit and vegetable production is too high. If fertilizer, credit and exchange markets were operated in a freer manner possibly production of these commodities would naturally expand to meet local needs. The fact that some are currently exported suggests that this is the case. In the context of an overall program of staged liberalization a temporary ban on imports of these goods might be defended as necessary to nudge the pattern of production towards the longer run optimum. Recent work in fact indicates that Yemen has a comparative advantage in fruit and vegetable production.

The exchange rate has been adjusted periodically from 4.5 in 1982 to the current rate of 9.75 to the US dollar. The shortages of foreign exchange indicate that the rial is overvalued. The current black market rate is approaching 14 to the dollar so the rial is probably overvalued by as much as 40 percent. This discourages local food production and creates an incentive to import. Of course exchange rate effects interact with the import restrictions and tariff rates which range between 5 and 10 percent for most agricultural commodities.

The exchange and import controls have also had an important effect on fertilizer use. Productivity in agriculture could be increased with more effective use of fertilizer and agricultural chemicals. Recent studies indicate that the appropriate level of fertilizer use may be as much as 20 times the levels actually used in 1987. But the achievement of these levels requires the research of appropriate seed varieties and improved irrigation practices. In order to be successful, they will have to include better education and extension services. There are further difficulties with the fertilizer distribution system. From the mid-1970s until the early 1980s the Cooperative and Agricultural Credit Bank's (CACB) use of subsidized foreign donations drove many of the private distributors out of business. When it stopped distribution in 1983 the private distributors returned, but import licencing and exchange controls sharply restricted fertilizer imports. Annual rates of fertilizer use dropped from 27,400 tons in 1981-83 to 8,800 in 1984-87. These limited amounts were sold at prices well above those in international markets as the private distributors took large profits. In addition, the CACB dealt exclusively with urea fertilizers. Supplies of non-urea fertilizers were limited despite the important role they play in balanced fertilizer programs. Negative farmer attitudes towards fertilizers may have developed as a result of crop losses due to improper fertilizer use. The dominance of the CACB and the import limits discouraged private distributors from market development efforts and stunted the growth of extension services and supplier support.

While a complete unravelling of the effects of various controls and incentives for domestic producers is difficult, there are three measures which give a good indication of the overall effect of the policies. The first of these, the Nominal Protection Coefficient (NPC), is the ratio of the domestic price to the import or border price. An NPC greater than 1 indicates that through tariffs, quotas or other measures, domestic production enjoys protection against imports. A tariff of 20 percent would allow domestic producers to sell at 20 percent over the world price in the domestic market and from the producers perspective is similar to a 20 percent subsidy. The NPC in this case would be 1.2. A NPC of less than one is similar to a tax on producers. It could arise through a system of forced sales to a monopoly distributor who offers less than the world price for the output.

NPCs for a variety of crops as calculated in a recent USAID study are reproduced in Table 4a (see Annex C). The SER and OER versions refer to the use of shadow (black market) or official exchange rates in converting foreign and domestic prices to a common base.

The highest rates are for apples, millet, sorghum and maize all of which exceed 4 at the OER (or 3.4 at the

SER). The lowest are for potatoes, wheat, dates, poultry, and grapes, all of which are less than 2 at the OER (or 1.76 at the SER). While the high numbers do not in themselves indicate anything about Yemen's comparative advantage, they show that farmers are subject to strong incentives to produce certain commodities.

The Effective Protection Coefficient (EPC) is a refined indicator of roughly the same thing as the NPC. The EPC is the ratio of value added at domestic prices to value added at international prices. It is refined in the sense that it takes into account the protection embodied in differences between domestic and international input prices as well as that relating to differences between domestic and international output prices. Thus raising the tariff on an imported input would lower the EPC for a producer using that input, but would not affect his NPC. In addition, the EPC measures protection relative to value added, so that a relatively low NPC would correspond to a high EPC if domestic value added is thin. For instance, someone who imports television chassis and enclosures separately and then puts the chassis into the enclosures and sells them as finished products has very low value added - perhaps only YR 300 per television. If duties on an imported finished TV are say YR 1000, the assembler can charge this extra amount for his assembled product. The YR 1000 profit he makes because of the protective tariff is very large relative to his 300 YR value added. The EPC captures this relationship between protection and value added and the NPC does not.

EPCs for the agricultural products are shown in Table 4b (see Annex C). The ranking is virtually the same as for the NPCs. Since inputs as well as outputs are evaluated, different EPCs are calculated for a given product depending on the technology employed. The highest EPCs are for maize, millet and sorghum, while the lowest are for potatoes, wheat, grapes, mellons, poultry and bananas. Again, a high EPC does not mean the production is necessarily inefficient relative to international standards. It may be that efficient producers are being given high levels of protection and are therefore making large profits.

The Domestic Resource Coefficient (DRC) is the ratio of domestic social benefits of producing an item, to the social costs of the inputs: (including labor) required to make it. The ratio will tend to fall below one if:

1. There are inputs (such as water) which tend to be undervalued from the social perspective; or
2. There are outputs that are socially costly (pollution, resource degradation) but do not impose a cost on the producer;

The ratio will tend to be greater than one if:

1. There are social benefits (terracing effects on preservation of downstream lands) that do not enter the individual producer's decision.

DRCs are shown in Table 4c (see Annex C). They suggest that from the social point of view Yemen ought to produce fruit and vegetables, wheat and poultry and that social costs exceed the social benefits for millet, sorghum and maize. The results also indicate a strong case for well irrigation over rainfed and spate, and for the use of chemical pesticides.

These results should be interpreted with caution. The DRC calculations in particular might be improved in certain ways. In particular:

1. The assessment of benefits excludes the value of fodder taken from traditional cereal crops which may exceed the value of the cereal itself.
2. There are costs to terminating terrace cultivation which exceed the direct cost of lost crop production. They include loss of positive spillover effects on wadi cultivation, and tourist attraction. Taking full account of the social benefits of terrace cultivation means calculating the stream future of benefits lost by letting terraces deteriorate.
3. The water input for irrigated agriculture is valued at its cost of extraction. Its social value is undoubtedly higher. Because no one has exclusive rights to the water, no one can charge for

its depletion. As a result competition will ensure that the price stays roughly equal to the pumping cost until the water is gone, at which point the price of water increases sharply. This is clearly short-sighted. The socially optimal way to price water is to sell the rights to all water extraction to a single agent. The agent will then sell the water slowly over time, rationing by price, and maximizing the return on the resource rights he has purchased. In this case the profit-maximizing behavior of the monopolist coincides with what is socially optimal and it is competition that is inappropriate.

Over the medium term Yemen will see the progressive dissolution of its traditional agricultural sector. This process will release significant numbers of people who will have to find their livelihood elsewhere. The factors precipitating this change include the following:

1. The wage rates earned by migrant workers in the oil states exceed what can be earned in traditional agriculture. Yemeni urban wages have followed suit. This will draw people off the farm.
2. Food prices are subsidized. Although a good deal of traditional agriculture is for own-consumption there is a marketed surplus in some areas. Cash incomes are increasing too, partly because of remittance income. This tends to monetize the rural economy increasing its exposure to the effects of subsidies.
3. The exchange rate is over-valued which works against all agriculture--traditional and modern.
4. The oil revenues will keep the equilibrium exchange rate higher than it would otherwise be, compromising all non-oil sectors. (This is the Dutch disease, so-called because the discovery of North Sea oil in which Holland had a share caused the guilder to appreciate and pushed Dutch non-oil export industries into a slump.)
5. The rise of modern agriculture works against the traditional sector. There is some impact through increased competition from modern producers, and to the extent that an increasing share of domestic production comes from less labor-intensive modern technologies there will tend to be a net release of people from employment. There may also be damage to traditional land because of modern irrigation practices.
6. There is currently and continues to be a degradation of traditional lands due to deforestation, terrace abandonment (partly because of wage effects), erosion and downstream wadi silting and graveling.

It is difficult to gauge the pace at which this process will take place. Yemeni people are relatively mobile. It has been suggested that up to 65 percent of the people live in places other than where they were born. Many of the migrant workers return to their traditional homes, but some do not, and the ongoing cycle of workers to the Gulf states cannot help but increase overall mobility. It will also broaden perspectives and create appetites for change that might not otherwise have arisen.

Currently there is a gap between rural and urban wage rates and a greater gap in wage earning job opportunities. This is typically the case in developing countries, although not perhaps so pronounced as in Yemen. Data in this area is not comprehensive or timely. Data on the numbers of foreign workers, internal migration statistics and unemployment is also inadequate.

The pressures for traditional sector depopulation are relatively recent. Virtually all of the points 1 to 6 above, concern things that started in the last 10 years. The traditional sector was close to self-sufficient. Large scale movement of these people to the cities would inevitably result in unemployment and would involve heavy demands on social services and increased congestion.

Admittedly rural groups are not well covered by existing programs and it would be costly to cover them given the sparse distribution of traditional communities along the main escarpments. Their movements should be tracked closely and related to the various causes noted above. The full social costs associated with their movement must be considered in evaluating policy options for the traditional sector. In particular, the social cost of labor (shadow wage rate) in traditional agriculture used in the DRC calculations above should be zero if the realistic alternative for traditional sector workers is unemployment. It is important to note that the DRC for rainfed sorghum production (the main agricultural activity) is less than 1 if the shadow wage is zero.

B. Marketing, Distribution and Extension

While the variety of climates in Yemen offers opportunities for crop diversification it complicates the establishment of effective distribution and extension service systems. The wide variety of seeds required, particularly for cereals production, precludes local seed production on an efficient scale. The crop variety and the fragmented landholdings make large scale production difficult especially in the highland region, and make mechanized ploughing and harvesting impractical.

Problems in marketing and distributing local farm produce derive from large numbers of small traditional producers dealing with large numbers of small buyers. Products are not collected centrally. Consolidation, grading and packaging are not done, and post harvest losses are high. There are shortages of cold storage facilities and these are unlikely to develop until harvesting and prestorage standards concerning bacteria, fungi and physical damage are improved. Distribution of goods from processing plants is better. This is partly because the processors are larger and more systematic. Their products are less perishable, are standardized and were developed along the lines established by displaced imported products.

Transportation has improved greatly in the last two decades through the extension of the road network. However, many farm regions are not well served and poor road surfaces contribute to crop damage. Truck rental prices are controlled by the Transport Union and are relatively high. Transportation could be made more efficient by better producer consolidation of produce.

Yemen imports just over half of its red meat requirements. Local production is mostly from individual farmers selling small numbers of animals culled from their herds of cows, calves, sheep and goats. There are virtually no commercial scale breeding or fattening operations. Veterinary services are limited and the Ministry of Agriculture is importing and distributing drugs at allegedly subsidized prices which may have discouraged the development of private veterinary drug dealers.

There have been impressive developments in broiler chicken production. Much of the investment has been by small producers who supply up to 56 percent of the market. All the feed is imported. Roughly half the requirement of day-old chicks is met from existing domestic hatcheries. These are all for broiler production. Layers are still imported from the Netherlands. Problems facing the industry include bottlenecks in feed and day-old-chick imports because of the government tender system; weak management; and shortages of veterinary services resulting in high mortality and poor feed conversion.

C. Industry

Growth of the industrial sector has been dominated by the rise of oil which expanded from nothing in 1985 to 12 percent of GDP in 1988 (see Annex C, Table 1). With production rates levelling off, however, oil's share of GDP will likely decline over time.

After oil, manufacturing has contributed the most to growth increasing at an average real rate of 10.5 percent between 1984 and 1988. Manufacturing is still a relatively small sector accounting for only 11 percent of GDP in 1988. It is heavily dependent on imported intermediate and capital goods. There are virtually no exports and customs duties and input exemptions provide significant levels of protection for domestic market sales.

The largest group of manufacturing industries consists of food processing, beverages and tobacco which together account for about 40 percent of manufacturing sector GDP. Major products include bread, biscuits, ghee and edible oil, canned beans, soft drinks, bottled water, fruit drinks and syrups, milk and yoghurt, and ice cream. There has been rapid increase in productive capacity in these food processing industries. Many of the entrepreneurs are from trading families and some of them returned from South Yemen in the early 1970s when their businesses declined with the rest of the economy of South Yemen.

The food processing industries are highly dependent on imported inputs. These industries import over 90 percent of their raw material needs. Value added typically ranges between 30 and 40 percent with the smaller firms having lower rates. There have been a few efforts to deepen value added by in-house production of canning and packaging requirements but there is little prospect for the local production of raw materials in this sector.

Manufacturing sector growth in 1988 was a mere 2 percent. This reflects the impact of government efforts to conserve foreign exchange. Industries producing goods considered luxuries were allocated smaller amounts of exchange. Fruit juice, soft drink and similar industries were forced to operate at rates of capacity utilization as low as 30 percent. Industries accorded priority by the government such as edible oils and dairy industries (excluding ice cream) were able to operate at 70-75 percent of capacity.

Several changes have recently been introduced to overcome these impediments to industrial sector growth. Allocations for imports of raw materials were raised in late 1987 and again in 1988. Foreign exchange retention ceilings for exporters were raised from 50 to 100 percent to help pay for imported inputs.

The Third Five Year Plan (TFYP) seeks to deepen value added and diversify production. It is intended to promote production of intermediate goods and light industries that can provide jobs for returning migrants. It is hoped that there will be an expansion of textile industries and crafts. To support this expansion, migrants, who have tended to pursue trading activities upon returning, are now allowed to bring back machinery and spare parts for their businesses without the usual import licensing requirement.

The TFYP also includes the expansion of cement production capacity and conversion of existing plants to natural gas that will be available from the Marib site. Electric power generation is also to be converted to gas.

Fulfillment of the TFYP will require major investment, much of which is expected to come from the private sector. Experience under the SFYP is instructive. Total investment between 1981 and 1986 was 15 percent short of the target. Manufacturing sector investment was only half of the planned amount. Agricultural investment was almost 30 percent short of the target. On the other hand, investment in real estate was 21 percent over the planned amount. Government spending plans for public services, electricity and water were also higher. In general, the government spent more than was planned, the private sector invested much less than planned and put the bulk of its money in relatively unproductive real estate.

Despite recent reforms, industrial growth continues to suffer from a number of regulatory and institutional problems. Importing for industrial purposes is still cumbersome and requires the approval of several separate government agencies. The banking system is weak and is hampered by restrictions on deposit and lending rates. The government deficit and its reliance on bank borrowing present further problems. The tax system has several features that discourage investment and the system of laws and regulations governing investment and trade tend to be discretionary and vague in a way that creates uncertainty. The government is considering making changes to the investment code, which may relieve some of these problems. These will be discussed further in the section on savings and investment. It is clear that bolder measures will be necessary if the current five year plan is to come close to achieving its targets in the industrial sector.

II. MACROECONOMIC CONDITIONS

A. Trade and Foreign Exchange

The Yemeni balance of payments has been dominated by remittances of workers in Saudi Arabia and the Gulf states since the oil boom of the 1970s. These remittances reached a peak of \$1.2 billion in 1983. Remittances are virtually the only means of paying for imports since exports have been negligible. However, in the early 1980s the end of the oil boom led to a reduction in remittances which combined with lower aid inflows produced a sharp deterioration in the balance of payments. The large deficits in 1981-83 resulted in the buildup of foreign debt and pressures mounted against the rial which had remained fixed at 4.5 to the dollar since 1973.

The government reacted to these developments with a series of policy changes relating to foreign exchange and imports. The market for foreign exchange is made in Jeddah. Yemeni workers in Saudi Arabia supply hard currency for rials which are repatriated to support family and relatives. The Central Bank, commercial banks and individuals were all allowed to buy foreign exchange in this market although in practice the market was dominated by a group of money changers some of whom were relatively large. The main demand for foreign exchange comes from traders in Yemen wanting to import. They were free to buy on their own from the money changers or through the commercial banks. With the reduced supply of worker remittances the rial began to fall in the Jeddah market. The subsequent actions of the Central Bank were all directed at restricting demand in order to hold the rate.

The first step came in February 1984 when the Commercial Bank Purchasing Committee was established. This consolidated the buying of foreign exchange and was intended to counter the market power of the larger money changers supplying the foreign exchange. Next the margin deposits on import letters of credit were raised and were to be held in rials rather than foreign exchange. Third, merchants were precluded from buying foreign exchange in the informal market. Customs procedures were amended to ensure that imports were in fact financed with exchange purchased from the commercial banks. Fourth, an annual foreign exchange budget was instituted. Imports in this budget were determined residually after estimated foreign exchange receipts and government needs. Importer allocations were made by the Ministry of Industry and the Ministry of Economy, Commerce and Supply. Poor coordination between these two ministries resulted in the issue of licenses which exceeded the foreign exchange allocated for imports. As a result, Central Bank clearances were not always given and there were long delays in opening LCs. Eventually the two ministries were merged and the foreign exchange for license holders was guaranteed by the Central Bank. From this point on, import licensing has been the main mechanism for restricting the pressure on the rial rate in the informal market although there are still significant difficulties clearing letters of credit. The Central Bank attempted to exert further control over the foreign exchange market by closing the money changers. The Central Bank, acting through its agents the commercial banks, is now the sole legal domestic purchaser of foreign exchange.

There is, however, an important illegal market. Since the ultimate check on the system is customs, importers of industrial goods and bulkier low value consumer goods are effectively bound by the rules. The higher value industrial goods and most consumer goods other than basic food stuffs are smuggled using foreign exchange that is beyond the control of domestic authorities. This clearly works to the detriment of domestic industry and agriculture because these are the only groups whose access to foreign exchange can be cut off. Consumer goods are generally subject to higher duty rates than industrial goods. It is therefore possible that they were smuggled even before the tightening of exchange controls. An inspection of customs data would reveal any shifts in the composition of declared imports. If there was a large shift that would indicate two undesirable things:

1. Imports of high duty items have gone under ground resulting in revenue losses.
2. Less foreign exchange will be available for the Central Bank because a greater share of remittances will be financing smuggling, i.e., the efforts of the government to defend the value of the rial are futile.

On the other hand if there was no significant shift in the composition of imports it would mean:

1. The policies are having a positive effect on the value of the rial and the full cost of this is falling on domestic industry.
2. Customs losses from smuggling are already significant.

More careful examination of the trade data is required to determine which of these is the case. Most likely there is a combination of the two involving a small (and temporary) effect on the value of the rial, injury to domestic industry and significant revenue losses.

During the 1980s, foreign exchange reserves of the Central Bank fell from \$1.3 billion to \$290 million at the end of 1988--the equivalent of roughly 3.3 months imports. As the situation became critical the government came under pressure from the IMF to amend the exchange regime. The IMF wanted devaluation and liberalization measures that would give broader access to foreign exchange. The government adopted a few of the IMF measures such as unifying the commercial and bank rates of exchange. But the IMF advice was ignored. In fact the main government action was to close down the money changers. Confidence in the government had fallen to a low level and at the time there was heavy speculation against the rial. Rates as high as 17 rials to the dollar were recorded. When the money changers were closed, the channel through which remittances had flowed was cut off. The immediate effect was a surge in foreign exchange receipts at the Central Bank as workers in Saudi Arabia sought rials there for remittance purposes. The Central Bank built up its reserves and was able to keep the rate around 10 rials to the dollar. Expectations about foreign exchange earnings from oil may also have played a role in stalling speculation against the rial.

As a short term measure these actions may have appeared successful. But it did not take long before remittance money began flowing in large amounts to dealers in Jeddah who supply the needs of smugglers and flight capitalists. The surge of foreign exchange at the Central Bank proved short-lived and there emerged a widening gap between the official rate and the parallel rate. Currently the government is experiencing serious shortages of foreign exchange. The Central Bank has failed to honor letters of credit within the prescribed time. Some suppliers have refused to continue business (gasoline imports were suspended for this reason) and the country's credit rating has deteriorated.

The government has lost effective control of the foreign exchange market. The volume of remittances flowing through official channels has dropped from a peak of \$1.2 billion in 1983 to \$353 million in 1988. The total earnings of Yemeni working in the Gulf states may have fallen but most certainly the reduction in remittances is largely the result of reductions in the portion of income remitted and because more remittances are flowing outside of formal channels. The remittance agents can buy expatriate workers' hard currency and deliver Yemeni rials to relatives' homes within days. Transfers through the official system are much less convenient involving presentation of documentation, delays and perhaps several trips to one of the relatively few retail bank branches.

There are heavy demands on the dwindling official inflows of foreign exchange. Not only has the Central Bank undertaken to supply foreign exchange for all import licence holders (the only legal importers), it also has a large debt service burden. Between 1983 and the end of 1988 external public debt grew from \$1.5 billion, or 30 percent of GDP, to \$3.2 billion, or 55 percent of GDP. Debt service payments have swollen sharply because of this debt. Moreover the older soft loan grace periods are lapsing so principal is coming due. A smaller portion of the new credits are on concessional terms and there has been a marked increase in the use of short term supplier credit. These factors have accelerated the demand for foreign exchange needed for debt service. The debt service payments rose from 2 percent of current receipts in 1983 to 20 percent in 1988. The debt service ratio would have been 28 percent if the oil contractor's share of oil exports were excluded from current receipts.

B. Government Finance

As with developments elsewhere in the economy, 1985 represents a watershed year for government finances. The deficit had swollen in previous years as a consequence of large expenditure programs on infrastructure, defence and social services peaking in 1982 at 26 percent of GDP. Most of the subsequent adjustment was made by

reducing expenditures which fell from 67 to 34 percent of GDP between 1982 and 1986 allowing the deficit to fall to 10 percent of GDP. The biggest cuts were in defence, infrastructure development and public sector wages.

The government had been relying heavily on bank borrowing to finance the deficit. The expenditure restraint allowed a reduction in dependence on this source of finance from 45 percent of domestic liquidity in 1983 to 13 percent in 1986.

In 1987 the government sharply altered fiscal policy. Expenditures shot up from 34 to 40 percent of GDP. Much of this was due to capital expenditures associated with the Marib dam, but public sector wage increases were also a significant factor and may have been allowed because of the anticipated revenues from oil production. Tax revenues grew by only 6 percent and grants shrank by 21 percent. As a result, the deficit doubled from 10 to 20 percent of GDP. Increases in project loans filled some of the gap but the government was forced once again to resort to domestic finance. Borrowing from the banking system doubled.

In 1988 the effects of new oil revenues began to be felt. They covered 17 percent of expenditure in 1988 and 21 percent in 1989. The rate of expenditure growth slowed but spending was still 18 percent higher than 1987. Grant revenue fell a further 40 percent. Overall the deficit fell from 20 percent of GDP in 1987 to 13 percent in 1988.

The government's non-oil sources of income have proven relatively inelastic, or insensitive, to growth. Trade taxes grew more slowly than either GDP or the value of imports between 1983 and 1986. In 1987, trade taxes actually fell by 28 percent although import values were up 45 percent. This resulted partly from the increased use of exemptions and from a shift in the composition of imports resulting from the new import licensing measures. In 1988 trade taxes rose by 22 percent as imports increased and new revenue generating measures were implemented. Only the taxes on incomes and profits have managed to keep roughly in line with the pace of economic growth. In 1987 and 1988 there were sharp increases in non-oil taxes by 33 and 44 percent respectively. However, this was accomplished largely by requiring parastatals to reduce liquid balances to 20 percent of profits and transfer the balance to the government. This one-time effect on revenues tends to obscure the fact that the government has a structural problem with revenue collections. Taxes are once again failing to keep up with GDP growth. Unless other measures are taken, once the oil revenues are gone the tax base will be inadequate to support expenditure requirements.

C. Investment, Savings and the Banking System

Three main facts stand out in the analysis of money and banking in Yemen. First, a very high proportion of bank credit is absorbed by the government deficit. Second, what credit is available to the private sector is almost exclusively for trade and real estate-backed loans. Third, the banking system is highly liquid. These are typical features of underdeveloped countries although the situation in Yemen is fairly extreme.

The large fiscal deficit since 1982 has been financed largely by domestic borrowing. The government has tried to limit the impact of this borrowing on domestic liquidity through three mechanisms. First, it has increased the required reserves the banks must hold at the Central Bank. Second it has increased interest rates, and third, it has imposed direct controls on the amount of credit the banks can lend to the private sector.

In effect what happens is as follows: The government has a large deficit. It borrows money from the Central Bank and spends it. Without further action there would be an increase in the money supply and pressure on prices. To prevent this the banking system is required to place ever larger portions of its deposits at the Central Bank rather than lending them out to the public. This prevents the stock of money from swelling but is clearly an unsustainable process. As a result, the banking system holds over 75 percent of its deposits in the form of reserves at the Central Bank or in cash. The process has reached its limit. The efforts to draw in more cash by requiring the public enterprises to transfer "excess" liquidity to the treasury are evidence that government is seeking all possible options to finance its deficit without simply printing the money.

There are other factors contributing to the large share that Central Bank deposits represent in bank asset portfolios. There have been difficulties with non-performing loans advanced to the private sector especially by the public sector banks. Local private business people do not prepare income and balance sheet statements in

support of loan applications. Many businesses are very small and loan monitoring and evaluation costs are prohibitive for these potential clients. In the agricultural sector and in the housing sector there are difficulties in reclaiming assets from those in default because of legal provisions protecting the rights of those occupying the land or house in the event that they have no alternative place to go. These factors make bankers unwilling to make private sector loans. Such private lending tends to have the following characteristics.

1. Lending is mostly character lending, that is, loans are made on the basis of the trustworthiness of the borrower not on an evaluation of his finances or business intentions.
2. Loans are made to larger borrowers.
3. Loans are made for trading purposes where the goods involved offer reasonable security to the bank.
4. Loans are made on the security of real estate.
5. There is a relatively large volume of lending to bank directors and their companies which tends to limit the extension of credit to new or potential investors and entrepreneurs.

In addition to these factors it is probably fair to say that the banking industry has not been overly aggressive in searching out new business opportunities. The fact that the government deficit is financed by bank borrowing causes the banks no concern. In fact they have on occasion pleaded with the Central Bank to take more deposits and improve the Central Bank deposit rates so that they can place their funds at a reasonable return without the difficulty of going to the private sector to find good business risks.

The share of bank credit that goes to the private sector is small and the portion of that which goes to agriculture and industry is still smaller. In 1988 commercial bank credit to agriculture was less than 1 percent of the total; industrial enterprises was about 5 percent; and trading purposes was 67 percent. There are three specialized public sector financial institutions of which the Agricultural bank is the largest. In 1987 its loans were YR 451 million, or less than 10 percent of commercial bank credit. The Yemen industrial bank had outstanding loans of YR 184 million in 1988 and the Housing Credit Bank had loans of YR 100 million. These institutions maintain high proportions of their assets as cash and deposits, have difficulties with non-performing assets and have expanded credit very slowly if at all in recent years.

Not only is the banking system liquid but the public itself holds a large portion of its assets in the form of cash. In 1988, 55 percent of total domestic liquidity was in the form of cash. A further 18 percent was in demand deposits and the remaining 27 percent was in time and savings deposits. The public has a strong preference for cash perhaps because it does not trust the banking system or because the branch network does not reach everyone. The Islamic rules about interest may be a factor as well. The fact that such a large portion of deposits are in non-interest bearing demand accounts supports this view.

The government sets controls on interest rates. There are minimum rates on deposits at banks ranging from zero for demand deposits, through 8.5 percent for savings deposits, to 10-13 percent for time deposits. The maximum lending rate is 15 percent with certain exceptions. Deposits at the Central Bank earn from 4.5 to 7.5 percent. Given the choice between lending at 15 percent to the private sector and keeping deposits worth 7.5 percent at the Central Bank, it would seem that bankers would lend as much as possible to private borrowers especially as their deposit money costs them anything up to 13 percent. There are reserve requirements however and there have been a variety of restrictions at various times relating to the maximum size of an individual loan and to overall credit expansion. These restrictions and the difficulty in finding credit worthy borrowers of any size limits the volume of lending that can be placed at 15 percent. While the banks are always willing to take (zero interest) demand deposits they are at times unwilling to take further interest-bearing savings and term deposits. Some bankers say that they will sometimes pay less than the legal minimum rates rather than turn well-known customer/depositors away. But with some customers begging reluctant bankers to take deposits and others keeping large balances in cash there is evidence of serious trouble in the financial system. The interest rate constraints, the weak performance of the state financial institutions and the demands of government deficit finance, all suggest the banking system is not able to mobilize savings in an effective way in Yemen.

III. THE ENERGY SECTOR

Oil production began in Yemen in late 1987. In 1988 production was 161,000 barrels a day, rising to about 190,000 bb/d in 1989. It is expected that production will eventually rise to around 225,000 bb/d. At this rate of extraction the currently estimated 800 million of reserves would last until approximately 1997. Reserves have been established for three main fields and there are two others whose potential is not yet known.

The reserves were found and are being exploited by Hunt Yemen Oil Company established during the exploration stage. The formula specifies that Hunt will recover its initial investment costs for exploration, extraction and pipeline equipment up to \$636 million at a rate equal to 30 percent of production each year. Hunt then pays a royalty of 10 percent of the value of production above 100,000 a day. The value of production after the cost recovery and royalty payments are made is split between Hunt and the government according to a sliding scale formula under which the government's share increases as the extraction rate increases. Hunt's share is subject to a 50 percent profit tax. The combined effect of the revenue sharing and tax arrangements is a 70:30 (government:Hunt) split for the value of production under 100,000 bb/d moving to 75:25, 80:20, 85:15 and 90:10 for 100,000 bb/d increments up to 400,000 and higher.

Hunt has control over the extraction rate. The incentives under the formula are for Hunt to press for high rates of extraction initially so as to recover its expenses and then to level off the extraction so that it gets out reserves reasonably fast but not so fast that its share of the revenue is reduced. The revenue flows for the government were positive as soon as the oil began to flow but they do not reach their maximum until the cost recovery payments are completed and production peaks--probably in 1990 or 1991.

There are several uncertainties about the value of oil revenues to the government. First there is the rate of extraction. The faster the oil is extracted the more costly the remaining oil is to extract. Slower rates of extraction allow more underground seepage that reduces the necessary pumping pressures. The faster Hunt pumps, the sooner it gets its money but its profit per barrel is less because of the higher costs and because of the reduced revenue sharing rate. The tradeoff seems to suggest roughly 225 bb/d as the long run extraction rate.

The second consideration is price. Yemen oil is currently fetching about \$15 per barrel. The oil market, like any commodity market, is subject to uncertainties. The original formula was set up so that Hunt's recovery of its investment was relatively secure and variations in the price of oil or the quantity of reserves would come almost entirely from Yemen's share. The cost recovery phase is almost over now but it is significant that as in 1987 when oil first started to flow the world price was around \$24 and quickly fell to the neighborhood of \$14. Yemen's anticipated share would have shrunk more than proportionately to this price collapse due to Hunt's fixed recovery cost share. This may have partly accounted for the rapid expansion of government spending in 1987 and the subsequent retrenchment in 1988 in line with reduced expectations.

The third uncertainty involves the extent of reserves and the possibility that additional reserves may be found in the Joint Exploration Area that straddles the border with South Yemen. At best, exploitation of yet undiscovered reserves in this area is years off although initial agreement on exploration has been made.

Yemen has very large reserves of natural gas both separate from the oil and associated with the oil currently being extracted. Until now the associated gas has been reinjected into the oil fields to maintain pumping pressures. There is no prospect of exporting it. Saudi Arabia burns off massive amounts of its associated gas. A recent dispute between Hunt and Yemen over rights to the gas has been settled and it should now be possible for Yemen to serve some of its domestic energy needs from this source. The gas could replace imported kerosene and gas used for cooking and also stem some of the damage done by deforestation. The gains in terms of foreign exchange savings are welcome but are fairly small compared with the oil itself. Total imports of kerosene and liquid petroleum gas in 1985 were \$42 million while the government's share of oil earnings will rise close to \$1.0 billion annually. Moreover the agreement allows Hunt some profits out of the gas production. The TFYP calls for the establishment of a LPG bottling plant with a capacity of 185,000 tons. The plant has not yet been built but soft financing for the project may be made available by the Germans.

There may be greater potential for foreign exchange savings by substituting local gas for imported fuel oil for cement plants and power generation plants. Imports of fuel oil were \$US 90 million in 1985. The power generation plants and one of the cement plants are on the coast while the existing known reserves of gas are near Marib so a pipeline would be required. There is some potential for gas finds on the coast which would reduce pipeline costs. In any event these developments are also some time off.

There is currently a 10,000 bb/d oil refinery. A second refinery is called for in the TFYP but a decision on constructing has not yet been taken.

IV. FUTURE DEVELOPMENTS

A. Trade and Foreign Exchange

Table 5 (see Annex C) provides projections of the balance of payments until 1993. The projections were based on certain assumptions some of which were drawn from a similar exercise done by the IMF. The assumptions employed are given in more detail in an appendix, but the key ones are outlined here. Oil production is assumed to increase from 161,000 bb/d in 1988 to 225,000 in 1992 remaining constant thereafter. Oil prices are also assumed to rise from current levels to \$16.5 per barrel by 1993. These translate into foreign exchange streams covering government royalties, oil taxes, shares of oil revenue and repayments investment according to the Hunt/YARG formula. No provision has been made for future gas production.

Preliminary estimates for 1989 imports are \$1.047 billion and these are assumed to rise to \$1.438 billion by 1993.

Grants which have declined steadily in recent years are assumed to remain at the relatively low level of \$90 million a year and remittances (through official channels) are also assumed to remain flat at \$300 million annually.

Service payments are assumed to rise in line with non-oil GDP at 15 percent per year, except for debt service which is determined by the structure of existing debt and new debt required to meet the financing gap.

According to these assumptions the current account deficit will fall sharply to a low of \$48 million in 1989 from a high of \$524 million in 1987, and will climb to \$375 million in 1993. The major contribution to the decline is the contraction of imports in 1989 and the inflow of new oil revenue. As imports climb again and oil revenues flatten the deficit will grow. Interest payments on the public debt will also mount quickly after 1989.

Preliminary figures show a sharp turn around in the capital account, from an inflow of \$245 million in 1988 to an outflow of \$193 million in 1989. The causes of this are an increase in loan repayments, a drop in supplier credit and large repayments of investment to Hunt. In 1990 and beyond are small capital inflows as the Hunt investment repayments end and small amounts of new money are made available from short term credit and loans.

The overall balance (current account plus capital account balances) represents the amount by which the country must run down its foreign exchange reserves to meet its current and capital obligations (or the extent to which reserves are built up if the balance is positive). At the end of 1988 foreign exchange reserves were less than \$300 million. The net balance of -\$257 million for 1989 would largely wipe out reserves and the negative balances indicated for future years could not then be financed from reserves. The financing gap must either be filled by additional loans, reschedulings or reductions in imports and other current expenditures. Assuming the gap is financed by additional loans there would be steady large increases in the debt service ratio (interest and principal repayments relative to exports and other current receipts). The ratio would rise from 19 percent in 1988 to 34 percent in 1993. Excluding oil receipts the ratio would rise to 41 percent.

These figures would be cause for alarm in most countries, but they must be put into context for Yemen. The government is seriously short of foreign exchange--but the country is not. The government will receive close to \$1.0 billion in foreign exchange earnings a year while the oil lasts. It also receives some \$300 million of remittances that still go through the formal system. Against this there are \$250 - 300 million in government imports, \$100 - 200 million in interest payments and \$250 in loan repayments each year. Also, the government must meet the foreign exchange needs of licensed importers in industry and agriculture. In addition, there are large volumes of foreign exchange earnings over which the government exercises little control.

Under current arrangements meeting these demands will be difficult. Larger grants and loans from the donor community could relieve the pressures. Some international assistance may be needed but this is probably best offered in the context of certain reforms. There are three basic options open to the government. First it could impose progressively stricter rationing of exchange for industry and agriculture, but this has already had a negative impact.

The most obvious course is to tap the stream of foreign exchange earnings of the workers in the Gulf States. The magnitude of this stream is not known but there are probably about 1.2 million Yemeni working abroad. After living expenses they might have an average of \$1000 - 2000 in savings annually that could be remitted. This would mean somewhere between \$1.2 and 2.4 billion in remittances plus accumulated pools of savings and flight capital of unknown magnitude. The government is already buying some foreign exchange in parallel markets. (This money costs more than government charges to licensed importers so the government is hesitant to use this money for anything but the most pressing of debt service obligations). The government also does not like buying in this market for fear of causing the rial to soften and triggering inflation in the price of smuggled goods.

The government could solve several problems at once by clearing goods through customs without restrictions regarding the source of foreign exchange. There are several possibilities here. The government could continue to allow licensed importers access to exchange at the official rate and permit unlicensed importers to import using (the more expensive) parallel market exchange. Two groups would be affected. First, some of the industrial and agricultural demand that is not met at the Central Bank would turn to the parallel market. Second, a portion of the goods currently smuggled would likely begin to flow through official channels at the port and would yield customs revenues currently foregone. Clearly the bulkier goods, more easily handled through the port and those subject to lower duty rates would be the first to return to the formal system. Smugglers face costs in the form of more costly shipping routes and informal checkpoint levies. They often have to buy in smaller lots at retail prices rather than wholesale prices and may not be able to avoid local retail taxes paid to foreign governments on purchases as is customary on legal international trade transactions. Avoidance of these costs may induce significant switching from smuggling to legal importation if exchange restrictions are lifted. The reduction in costs would tend to reduce consumer prices and would offset to some degree the inflationary effects of the higher cost of foreign exchange in the remittance market brought about by allowing more importers to buy there legally.

The government could implement these changes at once or by degrees. It could allow some imports or some importers to use own-source foreign exchange. It could close the Central Bank window for foreign exchange to some imports or importers and could close the gap between the official rate and the parallel rate. It might wish to follow a gradualist course in order to judge the effect on prices, on the parallel rate, on customs receipts and the volume of legal imports. On the other hand, many small changes will involve many small struggles with importers and industries jockeying for favor and could compromise the pace or extent of reforms.

Another possibility is for the government to encourage foreign currency deposits at the commercial banks. Such deposits are not banned now but there are no guarantees that withdrawals can be made in dollars (depositors may have to take out rials at the official rate) and there are restrictions on interest rates. These regulations effectively rule out any meaningful volume of foreign currency deposits. It is possible that the government fears that allowing growth of such deposits would contribute to a potential currency substitution problem such as Egypt experienced with the "dollarization" of its economy. However, the real causes of switching out of domestic currency arise from inflation and poor monetary and exchange policies, not from the availability of special accounts.

The government has been buying currency from the money traders in Jeddah from time to time. It does not always do this in a systematic and orderly way. The result is that it may have paid more for the exchange than necessary. If the government waits until a loan payment is overdue and is forced to come up with a large sum on short notice, the market in Jeddah is deep enough to supply the sum, but it is not broad and competitive enough to keep the dealers from exploiting the immediacy of the government's need and demanding a high rate. A more orderly approach to meeting the government's foreign exchange needs is required. Allowing foreign currency deposits in domestic banks could form part of the system.

If the government chose to pursue some combination of the policies outlined above the following consequences are likely:

1. Strains on the government's foreign exchange resources will be reduced.
2. The rial will depreciate in the parallel market.

3. The foreign exchange needs of industry and agriculture will be better served with beneficial effects for output employment and prices.
4. Domestic prices of smuggled goods will rise.
5. Prices of non-smuggled goods may rise but not as much as smuggled goods.
6. Government revenues will rise.

B. Government Finance

Table 6 (see Annex C) gives projections of government revenues and expenditures to 1993. The table is consistent with the balance of payments projections in that both employ the same assumptions regarding oil production, oil prices, imports and external borrowing. Greater detail on the assumptions is given in an appendix but the main ones are stated here. Taxes in international trade are assumed to grow at the same rate as the rial value of imports and the average tariff rate is 25 percent. This rate is high by historical standards and the estimates of revenue are therefore generous. However, it was also assumed that the exchange rate remains fixed at 9.76. If the rial were devalued then the rial value of imports and of tariff revenues would be greater. Moreover, as discussed in the previous section, reform of the trade and exchange regimes could have a significant positive impact on the volume of legal imports.

Non-oil revenues are assumed to grow at the same rate as non-oil GDP (15 percent per year) and oil revenues are the same as those in the balance of payments table converted at an exchange rate of 9.76.

All expenditures are assumed to grow at the same rate as non-oil GDP except for externally financed capital expenditures which are taken to be equal to drawings on project loans times the exchange rate.

These assumptions imply that the government deficit will grow very slightly from 1988 to 1990. Thereafter it will accelerate from 9 percent of GDP to 11 percent between 1991 and 1993.

The main determinant of this pattern, as with the balance of payments projections, is the oil sector. Oil revenues and expenditure restraint kept the deficit low in 1988 and 1989. In 1990 repayments to Hunt for its investment in the oil sector end. Oil revenues jump up and with further increases in production in 1991 the deficit reaches its minimum as a share of GDP. Thereafter, oil revenues are constant. Since expenditure continues to grow, the deficit widens. Expressed as a percentage of GDP the deficit falls from a high of 20.2 percent in 1987 to a low of 9.0 percent in 1991, growing to 10.9 percent in 1993.

The financing of the deficit is met partly from external sources. These are projected the same way as was done in the balance of payments table. The remainder is assumed to be financed by borrowing from the Central Bank. Currently all domestic public debt is held by the Central Bank. New advances to the government bear 7 percent interest although much of the outstanding stock of debt bears interest rates as low as 3 percent. As the debt is rolled over there will be a ballooning of interest payments to the Central Bank. This is not all that significant since it simply increases Central Bank profits which are remitted to the government at the end of the year anyway.

The more important issue is that the financing requirement is climbing while the government's main revenue source--oil--is likely to disappear within the decade. Barring discoveries of new oil, the current rates of production will meet a decreasing portion of government revenue needs as the country grows, so budgetary pressures will be felt even before reserves are exhausted.

The key to fiscal balance is to be found in ensuring that the tax system works effectively. Greater reliance may have to be placed on income and excise taxes, but historically customs revenues have accounted for over half of government revenue and they will have to play a major role once the oil is gone.

In developed countries commodity taxes are mainly charged at the retail level either through a retail sales tax or a value added tax, and customs receipts are small. In Yemen, as in most developing countries, domestic industry value added is small. A significant portion of what is consumed is imported. It therefore makes sense to tax commodities as they pass through a relatively small number of customs ports rather than taxing many small retail or even wholesale outlets. Retailers and wholesalers do not keep good business records whereas imports are accompanied by letters of credit, bills of lading, ship manifests and other documentation which make valuation easier.

Taxing imports rather than retail sales misses certain things. The value added by wholesalers and retailers escapes taxation. But import duties can be adjusted upwards to reflect estimated resale margins. Domestically manufactured goods escape import duty. The larger manufacturers, however, are usually heavily dependent on imported inputs and can be made to bear some tax if required. The smaller manufacturers and those with a high level of domestic value added are typically in agriculture or traditional craft industries. They will escape taxation, but this may not be undesirable and there are other ways--abattoir taxes, market stall taxes--of including them in the tax net if needed.

It was suggested above, that reform of the exchange and trade system would have a significant impact on the government's fiscal position. A projection of the effect of a devaluation of the exchange rate is given in Table 9 (see Annex C). If the rial is set at 12.5 to the dollar and subsequently depreciates by 8 percent a year the projections indicate a reduction in the deficit equal to approximately 5.4 percent of GDP by 1993 (as opposed to 10.9 with no devaluation). However, the projection is a very narrow interpretation of the effects of a devaluation based solely on the increase in the rial value of oil revenues, debt service payments and certain other items that enter the government's accounts and must be converted from dollars to rials. The dollar value of these things is taken as fixed and, since they are in net surplus in the government accounts, the effect of the devaluation is to make the deficit smaller. No account is taken of the impact of devaluation on inflation, the volume of imports and exports, and the level of domestic economic activity. It is probable that, collectively, these other factors would serve to reduce the deficit further.

The largest potential effect of liberalization of the trade and exchange system on the deficit concerns customs revenues. There are several independent effects:

1. Imports of industrial and agricultural goods currently restricted by exchange licensing arrangements will increase, possibly with a ballooning effect due to pent-up demand. The customs rates on these items will probably be low and there may be many exemptions.
2. Goods which are currently smuggled may now be imported and bear duty.
3. Higher exchange rates will increase the rial value of goods declared and therefore duties payable.

The government may wish to review the system of customs levies if the exchange regime is liberalized so that it will have a clearer idea of how much revenues will increase and can make appropriate adjustments. The first step would be to analyze the pattern of imports prior to the foreign exchange restrictions. The second step would be to make rough estimates of the costs faced by smugglers and to revise tariffs to minimize the attractiveness of smuggling. The third step would be to tighten the administration of customs to ensure that there are no irregularities in duty assessments. Customs departments in many developing countries have difficulties of this sort. One way of overcoming them is to hire an independent agent for import verification. SGS of Switzerland, for instance, does import verification in several African countries. Some countries whose customs officers are not well paid and have encountered valuation problems have instituted a system under which customs officers get bonuses related to the value of duties collected.

Inflation is a potential problem. A high proportion of consumer goods are imported. This is of less importance to the poorer subsistence sector, but urban groups may be affected more noticeably and the government may come under strong pressure to maintain fixed nominal prices for basic foods. This will result in large budgetary pressures. If the government tries to keep the official rate window open for a time, or is slow to reduce the number of goods that are eligible for cheaper foreign exchange, this also will increase pressure on the deficit.

At the very least, the government can expect a period of turbulence in the markets after a devaluation and exchange liberalization. There will be pent up demand for certain goods previously ineligible for foreign exchange. The government may face problems of confidence and speculation against the rial. It will need a certain level of reserves in order to convince the public it has the resources to stick to its course. In the long run, the government may be better off with a managed float exchange rate system. This way it will be able to avoid the political difficulties associated with making larger periodic adjustments to the rate. Instead there will be frequent small changes. If the government keeps a prudent level of reserves it will be able to lean against any speculative pressures and prevent the progressive overvaluation that has occurred in the past.

ANNEX A
STATEMENT OF WORK

ATTACHMENT A:
STATEMENT OF WORK

BACKGROUND

USAID/Yemen's next Country Development Strategy Statement (CDSS) is due in Washington in early 1990. Preparations for completing this key planning document which will guide Mission programming over the next three to five years include the commissioning of a broad macroeconomic analysis reviewing structural changes in the Yemen economy and commenting on the major policy issues which the country is likely to face in the 1990s.

Relevant analysis provided by this study will be incorporated into the final CDSS. In addition, the analytical document produced will be available as background documentation, informing the Mission as well as AID/W and the YARG about important trends, structural changes, and likely future concerns relating to economic development in Yemen over the next several years.

Four areas of particular concern are highlighted in the SOW for this macroeconomic review. First, the study should begin with an overview of Yemen's economy with special emphasis on developments and trends over the last five years. Among other issues, this section should look at growth rates by sector and comment on the factors inhibiting or promoting growth in key areas of Yemen's economy. Changes in agriculture--and changes in the macroeconomic climate that affect the agricultural sector--need to be highlighted. The assessment in this overview should track with the draft outline of the CDSS which will be provided to the contractor on arrival in Yemen.

Second, the study should include a detailed analysis of Yemen's foreign exchange situation. Major recent developments include a sharp decline in remittances and foreign aid receipts and a sharp rise in exports (primarily oil). At the same time, debt repayment is increasing and import levels remain high. A thriving "underground economy"--a substantial share of Yemen's imports are smuggled across the border from Saudi Arabia, and a large part of the remittances are returned through private moneychangers--complicates the situation still further. Despite the promise of oil, the foreign exchange constraint is limiting Yemen's ability to import needed capital goods and, at the same time, meet growing demand for consumer goods and more diversified food imports.

Third, the study should provide a comprehensive analysis of the Government of Yemen's (YARG) budgetary situation. A cursory analysis suggests that some important structural changes are taking place. Sources of revenue are far more diversified than in the past, in part due to the emergence of oil as an

additional source of revenue. Nonetheless, growing demand for public services and an inability to mobilize domestic resources quickly is imposing constraints on development in Yemen. This element of the study needs to cover both the "supply" side (where revenue is coming from) and "demand" side (what it is being spent on). Some attention will also need to be given to financial markets and the extent to which they can be further developed to support resource mobilization in Yemen.

Fourth, the study should provide an assessment of the impact of oil on Yemen's economy in the 1990s, particularly on its largest single sector (agriculture). This element of the study will need to provide expected foreign exchange earnings under a series of different pricing scenarios. In addition, it should provide information on likely oil-related investments required by Yemen in the coming years. Finally, an assessment is needed on to what extent oil-led growth can contribute to industrial growth and a more diversified export base for Yemen in the 1990s.

In addition to these four areas of major focus, the contractor will be expected to provide an accompanying and complementary set of brief comments (not to exceed ten double spaced pages each) on (1) major policy issues and concerns faced by the Yemeni economy flowing out of the macro study; and (2) the Mission's draft CDSS document and extent to which it can better address key issues facing the Yemen economy.

ARTICLE I: TITLE

USAID/Yemen requests a macroeconomic analysis of Yemen's economy, with particular emphasis on economic performance over the last five years and anticipated key issues over the next five years.

ARTICLE II: OBJECTIVE

The purpose of the study is to provide major inputs into USAID's Yemen's planned Country Development Strategy Statement (CDSS) due in Washington in January 1990. The final document will also serve as a stand-alone background piece providing more detailed background analysis on key issues facing the Yemeni economy for the Mission, AID/Washington, and the YARG.

ARTICLE III: STATEMENT OF WORK

The major analytical document produced by the contractor shall present a detailed discussion and analysis of each of the major issues outlined below, with each major section head constituting a chapter in the final report:

1. Overview: Analyze Yemen's recent economic performance by sector, noting major structural changes that have taken place

since 1970 but placing special emphasis on developments over the last five years. Identify and discuss which sectors are growing fastest and which sectors are growing slowest and why. Comment on how recent developments affect agricultural in particular. Review and assess structural shifts underway in the economy, particularly as they relate to the structure of employment, income, and economic growth. Discuss the recent slowdown in growth in Yemen in a regional context, including the slowdown in economic growth and reduced employment opportunities for Yemeni workers in neighboring states, particularly Saudi Arabia. Finally, comment on likely short-term and medium-term economic trends that can be expected to affect the course of development in Yemen through 1995.

2. Foreign Exchange Constraints: Separately analyze recent trends and the short and medium term outlook for Yemen's major sources of foreign exchange (exports, remittances, and foreign assistance) and major foreign exchange outflows (imports and debt repayment). In light of this analysis, review overall balance of payments trends and future likely status, with probable impacts on growth in the overall economy. Discuss the impact of YARG exchange rate policy on its balance of payments accounts and on sectoral growth, particularly agriculture. Review the role of the underground economy in Yemen, particularly as it relates to foreign exchange shortfalls experienced by the country. Assess possible approaches to strengthening formal financial institutions to "capture" some of this foreign exchange.

3. Budgetary Constraints: Analyze recent trends in the YARG budgetary situation, including structural changes in the sources of income. Assess which sources of revenue are growing fastest and which sources of revenue are growing slowest and why. Analyze government spending patterns (recurring budget as well as capital investments) in the context of the current five year plan and assess the implications of these spending patterns for economic growth in Yemen. Review the budget deficits experienced by the YARG in recent years, present likely future trends, discuss how these deficits are financed, and comment on the impact these deficits have on overall economic performance in Yemen and Yemen's balance of payments accounts. Finally, review the resource mobilization potential of Yemen's private sector and discuss its likely future role in promoting economic growth and employment generation in Yemen in the 1990s.

4. Role of Oil: Review developments in the oil and gas sector in Yemen over the past three years and comment on what impact the emergence of oil has had on Yemen's economy thus far. Develop and present reasonable foreign exchange and revenue generation scenarios for Yemen over the next five years, based on a series of different pricing scenarios. Assess to what extent if any oil-led growth can be expected to contribute to industrial growth and a more diversified export base for Yemen

in the 1990s. Identify potential linkages so that growth in the oil sector is not confined to isolated enclaves but becomes more widespread.

Based on the above analysis, the contractor shall also prepare two brief, detachable papers that cover the following areas:

1. Policy Issues: What critical macro economic policy issues are facing Yemen as it moves into the 1990s? To the extent possible, present an independent view of major policy dialogue issues and the analytical requirements needed to support such a dialogue.

2. CDSS Issues: In light of the macro economic analysis provided and discussions with Mission staff, comment on the strategy proposed by USAID in its draft CDSS. Given the size and nature of the USAID program and the economic problems facing Yemen, to what extent does the strategy represent a reasonable approach for the Mission to take? What are the strengths and weaknesses of this strategy and what areas should the Mission look to for possible special emphasis?

SECTION IV: METHODS AND PROCEDURES

Successful completion of the SOW in the time frame indicated will require the services of a skilled macroeconomist with demonstrated analytical and writing skills. The basic methodology shall consist of qualitative and quantitative economic analysis of existing economic data and other material available within the Mission and YARG institutions, and collected in the United States prior to departure for Yemen. No new data is expected to be generated as a part of this study.

The contractor shall spend an estimated five working days in Washington prior to departure for Yemen collecting relevant data related to the Yemeni economy and wider economic developments within the region based on advance consultations by phone with the USAID Project Officer. The focus of this exercise should be on collecting material not likely to be available in-country such as recent reports published in the United States and oil price projections. Relevant institutions that should be visited in Washington as part of this background preparation include the World Bank, IMF, and USAID (Yemen Desk and ANE Economics Section).

On arrival in Yemen, the consultant will work under the general guidance and supervision of the USAID Program Office in completing the terms of the SOW. In addition to reviewing documents collected within USAID, the consultant will collect relevant information and data through consultations with YARG officials and/or other donors. The consultant shall also provide briefings to Mission staff on the status of the assignment and the findings of the analysis as and when requested by the Program Office.

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SECTION V: REPORTING REQUIREMENTS

The final report submitted by the consultant to the Mission prior to departure from Yemen shall include the following sections:

1. Table of Contents
2. Executive Summary of not more than six double-spaced pages highlighting the main findings of the study
3. Main Body of Report, not to exceed eighty double-spaced pages of text. The main body of the report shall follow the general outline proposed in the SOW, discussing in detail each of the issues raised therein.
4. Annexes, to include at a minimum a copy of the SOW for the assignment and a list of documents and individuals consulted, along with their institutional affiliations. Additional supporting statistical tables and graphs shall also be included as appropriate in support of the major findings presented in the main body of the report.

This final report shall be supplemented by two additional stand-alone documents, each not to exceed ten double-spaced pages of text that (a) provide an overview of the major policy issues facing the YARG, given the macroeconomic situation described in the main body of the report; and (b) comment on the proposed USAID strategy envisaged in the draft CDSS.

If requested, oral briefings on the final report shall be provided to interested Mission and/or YARG officials prior to departure.

ARTICLE VI: RELATIONSHIPS AND RESPONSIBILITIES

The economist hired for this assignment will work out of the Office of Program, USAID/Yemen, reporting directly to Jonathan Addleton (Deputy Program Officer) and Benjamin Hawley (Program Officer).

ARTICLE VII: PERFORMANCE PERIOD

The assignment proposed in this SOW shall begin in Yemen on or about November 11 and end on or about December 16, for a total of five working weeks. Provisions should also be made for the estimated five days of consultations at USAID, World Bank, etc. in Washington D.C. prior to arrival in Yemen.

The assignment is predicated on an estimated total thirtythree work days, including twentyeight work days in Yemen including international travel, and five workdays in Washington.

ARTICLE X: SPECIAL PROVISIONS

Duty post is Sana'a, North Yemen. Access to classified U.S. Government documentation is not required. Language of assignment is English. USAID's Office of Program will provide basic logistic support, including transportation within Sana'a and hotel reservations if requested. Limited secretarial support will also be provided during regular working hours.

ANNEX B
COMMENTS ON THE USAID PROGRAM

ANNEX B

COMMENTS ON THE USAID PROGRAM

The paper entitled Macroeconomic Issues in Yemen outlined key macroeconomic challenges facing Yemen over the next five years. The CDSS should indicate that the USAID program has been designed with a sensitivity to these matters and is responsive to the needs of the people and government of Yemen in meeting these challenges.

In terms of industry, USAID supports policy analysis that has pinpointed key areas of reform needed to encourage development and accelerate the mobilization of savings. The support offered by USAID in drafting the new Investment Code currently under consideration by the cabinet reflects its conviction that reforms to the trade and exchange regime as well as banking sector reforms will be critical in assuring growth and new employment opportunities. The support for policy reforms of this sort has been offered in a way that reflects awareness of local political sensitivities and the independent nature of the Yemeni people.

Agriculture is the biggest sector, and employer and forms the main part of USAID's program. The central problem in agriculture is that most production crops using traditional technologies cannot compete with imported wheat and sorghum. These products are slowly losing out to imported wheat. The government is exacerbating the problem by subsidizing wheat imports, maintaining an overvalued exchange rate and giving inadequate access to foreign exchange for import agricultural inputs.

USAID initiatives have been useful in focusing attention on these problems. It has financed studies such as the Agricultural Pricing and Incentives, and Yemen Arab Republic Agribusiness Development Problems and Potential. Even when these efforts are portrayed as simply being supportive of Yemeni initiatives, USAID will inevitably be associated with the policy recommendations that emerge from the process. For this reason the results of the studies need to be handled carefully.

The following points reflect some concerns about the support for policy work and are also as areas that should be considered carefully:

1. Local sorghum production is high cost and when the local chicken feed producers cannot get the foreign exchange for imported sorghum they prefer to go without it than pay the high local prices. Nonetheless PL480 imports of local sorghum may prove problematic because of a perception of displacing local production.
2. The fruit and vegetable ban undoubtedly caused increases in local prices and consequent increases in production. Import bans are perhaps a clumsy instrument for development but if they are ever justified, it would be in the context of an infant industry such as this. Full assessment of the welfare costs associated with such a ban should also take into consideration the fact that there are major market distortions associated with fertilizer, credit, alternative land uses and water charges. If these things were put right the welfare costs of the ban might look very different and the ban might even be redundant. USAID may not want to suggest that fruit and vegetable production should be reduced.
3. The need for hydrological surveys and the water charge issue are very important and have been repeatedly raised by USAID and other donors as major concerns. No government response can be forced. However, USAID should be certain that its own projects, especially those relying on irrigation and limited ground water reserves are constructed with these problems in mind. Depending on the level of concern USAID could even condition implementation of portions of its program on resolution of outstanding water problems.
4. The possibility of difficulties resulting from a decline of the traditional sector needs to be woven into project and program rationale. In agriculture this means putting emphasis on providing employment to labor released from the traditional sector and ensuring that new agricultural initiatives do not contribute to the decline.

5. The government's problems with foreign exchange will result in pressure from the World Bank and perhaps the IMF to amend the exchange regime. The current problems are largely of the government's own making. The past mistakes are relatively recent and have not become entrenched. Political considerations, the size of the gaps that need to be filled, the threat of inflation and the general capacity of the population to absorb the changes - these are the issues the government will raise when resisting reforms. The magnitude of these problems is considerably less than in many other developing countries facing adjustment problems. The government should be encouraged to pursue the reforms at the earliest possible moment with the commitment of additional donor resources if necessary.
6. Reforms in the banking sector may be more difficult to achieve. Some consideration has been given to program initiatives in housing finance to demonstrate more effective lending practices and to stimulate growth in the employment sector and alleviate pressures that may result from increased internal migration. This may be a good strategy. The following points may be useful in framing the program.
 - The existing private banks do make loans available to larger developers but tend to ignore the smaller builders and owner occupiers.
 - Housing and especially land prices in urban areas are extremely high given the income levels and the low degree of urbanization. This suggests that supply constraints rather than demand constraints are limiting the growth of the sector.
 - Additional credit for housing will be most effective if it is given on terms that ensure advance funding to builders. The supply of housing will not increase if finance is only advanced for existing or completed structures or for land. If home buyers are simply offered credit on terms that require the builder to go out and find further credit to finance the construction phase, little may be accomplished as existing financial institutions have not functioned well in this area.
 - The state housing bank has had problems with non-performing assets and growth of its lending has been limited because of restrictions on its ability to raise deposits.
 - There may be institutional factors regarding zoning, building permits, site servicing, roads and the like which will constrain new building regardless of improvements to financing methods.
7. The government has apparently done some work on the tax system. There may be further opportunities for useful policy research in this area especially on customs reform done in conjunction with a liberalization of the trade and exchange systems. The World Bank/IMF will have an interest in this area and may look for donor support. The rapport and confidence that USAID has built with the government in supporting policy development projects could be useful in promoting constructive reform either directly with the Bank or in a complementary fashion within the government.
8. The mission may support work on labor markets and employment. This work could prove quite valuable especially if returning migrant and displaced traditional worker problems become more acute. The results of such work could provide useful perspectives on the future needs in the areas of housing, social services and training.

ANNEX C
TABLES

TABLE 1: GROSS DOMESTIC PRODUCT BY SECTOR

	1976/77	1984	1985	1986	1987	1988
	(millions of 1986 rials)					
AGRICULTURE FOREST AND FISH.	3610	9214	9997	11136	11093	11686
MINING AND QUARRYING	101	270	249	237	274	282
CRUDE PETROLEUM	0	0	0	260	390	5970
MANUFACTURING	521	3613	4034	4467	5291	5396
ELECTRICITY AND WATER	40	289	320	383	440	492
CONSTRUCTION	916	1819	1651	1285	1310	1349
HOUSING AND BUSINESS SERVICE	0	2861	3081	3270	3351	3418
TRADE	1903	3573	3697	3958	4486	4845
TRANSPORTATION AND COMM.	396	3535	3991	4228	4695	4930
FINANCIAL SERVICES	960	823	828	930	1015	1116
OTHER PRIVATE SERVICES	0	578	603	659	691	738
GOVERNMENT SERVICES	1122	4009	4047	4088	4304	4626
IMPUTED BANKING SERVICES	-148	-545	-760	-524	-495	-545
GDP AT FACTOR COST	9421	30039	31738	34377	36845	44303
INDIRECT TAXES AND IMPORT DU	1834	3333	3363	3881	3100	3531
GDP AT MARKET PRICES	11254	33372	35101	38258	39945	47834

SOURCE: WORLD BANK

TABLE 1: GROSS DOMESTIC PRODUCT BY SECTOR

	1976/77	1984	1985	1986	1987	1988
	(percentage shares)					
AGRICULTURE FOREST AND FISH.	32.1	27.6	28.5	29.1	27.8	24.4
MINING AND QUARRYING	0.9	0.8	0.7	0.6	0.7	0.6
CRUDE PETROLEUM	0.0	0.0	0.0	0.7	1.0	12.5
MANUFACTURING	4.6	10.8	11.5	11.7	13.2	11.3
ELECTRICITY AND WATER	0.4	0.9	0.9	1.0	1.1	1.0
CONSTRUCTION	8.1	5.5	4.7	3.4	3.3	2.8
HOUSING AND BUSINESS SERVICE	0.0	8.6	8.8	8.5	8.4	7.1
TRADE	16.9	10.7	10.5	10.3	11.2	10.1
TRANSPORTATION AND COMM.	3.5	10.6	11.4	11.1	11.8	10.3
FINANCIAL SERVICES	8.5	2.5	2.4	2.4	2.5	2.3
OTHER PRIVATE SERVICES	0.0	1.7	1.7	1.7	1.7	1.5
GOVERNMENT SERVICES	10.0	12.0	11.5	10.7	10.8	9.7
IMPUTED BANKING SERVICES	-1.3	-1.6	-2.2	-1.4	-1.2	-1.1
GDP AT FACTOR COST	83.7	90.0	90.4	89.9	92.2	92.6
INDIRECT TAXES AND IMPORT DU	16.3	10.0	9.6	10.1	7.8	7.4
GDP AT MARKET PRICES	100.0	100.0	100.0	100.0	100.0	100.0

SOURCE: WORLD BANK

TABLE 2: GROSS DOMESTIC PRODUCT BY SECTOR

	1976/77	1984	1985	1986	1987	1988
	(rates of growth)					
AGRICULTURE FOREST AND FISH.	-0.1	8.5	11.4	-0.4	5.3	
MINING AND QUARRYING	5.1	-7.8	-4.8	15.6	2.9	
CRUDE PETROLEUM	0.0	0.0	0.0	50.0	1430.8	
MANUFACTURING	7.4	11.7	10.7	18.4	2.0	
ELECTRICITY AND WATER	24.9	10.7	19.7	14.9	11.8	
CONSTRUCTION	4.7	-9.2	-22.2	1.9	3.0	
HOUSING AND BUSINESS SERVICES	5.6	7.7	6.1	2.5	2.0	
TRADE	2.6	3.5	7.1	13.3	8.0	
TRANSPORTATION AND COMM.	4.6	12.9	5.9	11.0	5.0	
FINANCIAL SERVICES	28.2	0.6	12.3	9.1	10.0	
OTHER PRIVATE SERVICES	3.4	4.3	9.3	4.9	6.8	
GOVERNMENT SERVICES	0.3	0.9	1.0	5.3	7.5	
IMPUTED BANKING SERVICES	48.0	39.4	-31.1	-5.5	10.1	
GDP AT FACTOR COST	2.8	5.7	8.3	7.2	20.2	
INDIRECT TAXES AND IMPORT DUTIES	3.9	0.9	15.4	-20.1	13.9	
GDP AT MARKET PRICES	2.9	5.2	9.0	4.4	19.7	

SOURCE: WORLD BANK

TABLE 3: AGRICULTURAL PRODUCTION

	1977	1987	1977	1987	1977	1987
	hectares '000		percent		yield	
CEREALS	924	809	83.6	81.6		
SORGHUM	782	678	70.8	68.3	0.78	0.85
WHEAT	65	75	5.9	7.6	0.94	1.75
BARLEY	47	44	4.3	4.4	0.89	1.10
MAIZE	30	42	2.7	4.2	1.43	1.25
LEGUMES	72	30	6.5	3.0	1.14	1.55
POTATOES	9	9	0.8	0.9	11.11	13.00
VEGETABLE	22	25	2.0	2.5	9.55	18.60
GRAPES	10	15	0.9	1.5	4.70	8.93
OTHER FRU	15	19	1.4	1.9	5.20	6.58
COFFEE	7	18	0.6	1.8	0.49	0.25
COTTON	6	7	0.5	0.7	0.88	0.85
TOBACCO	5	4	0.5	0.4	1.28	1.56
SESAME	10	12	0.9	1.2	0.60	0.38
ALFALFA	3	14	0.3	1.4	13.67	4.36
QAT	22	na	2.0	na	na	na
TOTAL	1105	992	100.0	100.0		

SOURCE: WORLD BANK, YEMEN AGRICULTURAL STRATEGY PAPER
IMF, RECENT ECONOMIC DEVELOPMENTS, 1989

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TABLE 4a: NOMINAL PROTECTION COEFFICIENTS, 1988.

	SER	OER
CEREALS	3.87	4.59
Wheat	1.24	1.48
Barley	3.36	4.00
Sorghum	5.15	6.09
Millet	6.16	7.29
Maize	3.43	4.08
VEGETABLES	2.06	2.45
Tomatoes	2.85	3.40
Onions	2.17	2.58
Potatoes	1.16	1.38
FRUITS	2.68	3.17
Apples	6.61	7.91
Grapes	1.76	1.92
Dates	1.52	1.82
Melons	1.73	2.07
Bananas	1.78	2.13
OTHER		
Coffee	2.12	2.54
Poultry	1.56	1.83

SOURCE: FARM PRICES AND INCENTIVES

SOURCE: FARM PRICES AND INCENTIVES

SER=Shadow Exchange Rate

OER=Official Exchange Rate

TABLE 4b: EFFECTIVE PROTECTION COEFFICIENTS, 1988.

	SER	OER
CEREALS	4.21	5.27
Wheat	1.03	1.29
Sorghum	4.18	5.23
Millet	6.36	7.95
Maize	5.27	6.59
VEGETABLES	1.44	1.8
Tomatoes	1.83	2.29
Onions	1.48	1.85
Potatoes	1.01	1.26
FRUITS	1.46	1.82
Grapes	1.3	1.63
Deciduous fruit	2.69	3.37
Melons	1.1	1.37
Bananas	1.36	1.7
OTHER		
Coffee	1.87	2.33
Poultry	1.37	1.72

SOURCE: FARM PRICES AND INCENTIVES

SER=Shadow Exchange Rate

OER=Official Exchange Rate

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TABLE 4c: DOMESTIC RESOURCE COSTS, 1988.

	SER (a)	SER (b)	OER (a)	OER (b)
CEREALS				
Wheat	1.21	0.66	1.52	0.82
Rainfed	1.68	0.95	2.1	1.18
Well irrig	0.75	0.36	0.93	0.45
Sorghum	2.82	1.56	3.51	1.91
Rainfed	2.32	1.17	2.9	1.46
Well irrig	2.54	1.44	3.18	1.79
Millet	4.35	2.88	5.42	3.6
Maize	4.2	2.34	5.25	2.93
VEGETABLES				
Tomatoes	0.85	0.58	1.07	0.72
Onions	0.75	0.59	0.94	0.74
Potatoes	0.71	0.61	0.89	0.77
FRUITS				
Grapes	0.81	0.65	1.02	0.82
Deciduous fruit	0.66	0.45	0.82	0.56
Melons	0.73	0.57	0.91	0.72
OTHER				
Coffee	1.79	2.25	1.07	1.33
Poultry	0.89	1.11

SOURCE: FARM PRICES AND INCENTIVES

SOURCE: FARM PRICES AND INCENTIVES

SER=Shadow Exchange Rate

OER=Official Exchange Rate

a=shadow wage at full cost

b=shadow wage at 25 percent labor cost

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TABLE 5: BALANCE OF PAYMENTS PROJECTIONS

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
	act.	act.	act.	act.	act.	prim. proj.	proj.	proj.	proj.	proj.	proj.
	\$US millions										
EXPORTS	10	9	8	16	57	853	1038	1136	1298	1368	1419
OIL	0	0	0	0	26	803	988	1082	1239	1305	1351
OF WHICH GOVERNMENT OIL	0	0	0	0	18	425	545	789	972	1028	1065
OTHER	10	9	8	16	31	50	50	54	59	43	68
IMPORTS	-1796	-1414	-1106	-868	-1260	-1311	-1047	-1139	-1232	-1331	-1438
GOVERNMENT	-436	-299	-251	-227	-454	-389	-251	-273	-296	-319	-345
PRIVATE	-1360	-1115	-855	-641	-806	-922	-796	-866	-936	-1012	-1093
percent government	24	21	23	26	36	30	24	24	24	24	24
SERVICE PAYMENTS (NET)	-52	-46	-72	-85	-199	-331	-401	-536	-598	-645	-709
SERVICE RECEIPTS	299	243	190	172	181	213	245	282	324	373	429
OFFICIAL	60	40	39	59	73	na	na	na	na	na	na
PRIVATE	239	203	151	113	108	na	na	na	na	na	na
SERVICE PAYMENTS	-351	-289	-260	-257	-380	-544	-581	-750	-839	-918	-1020
GOVERNMENT	-70	-60	-51	-103	-191	-249	-277	-360	-414	-484	-576
INTEREST ON PUBLIC DEBT	-12	-16	-19	-42	-48	-54	-53	-102	-118	-143	-184
OTHER	-58	-44	-32	-61	-143	-195	-224	-258	-297	-341	-392
PRIVATE SERVICE PAYMENTS	-281	-229	-209	-145	-162	-181	-181	-181	-181	-181	-181
HUNT OIL PROFITS	0	0	0	-8	-27	-114	-123	-209	-244	-254	-263
UNREQUITED TRANSFERS (NET)	1293	1137	850	836	878	405	362	358	357	355	353
RECEIPTS	1434	1210	912	910	922	434	392	390	390	390	390
OFFICIAL	189	143	103	241	160	91	92	90	90	90	90
PRIVATE	1245	1067	809	669	762	343	300	300	300	300	300
PAYMENTS (PRIVATE)	-141	-73	-62	-74	-44	-29	-30	-32	-33	-35	-37
CURRENT ACCOUNT	-545	-314	-320	-101	-524	-384	-48	-181	-175	-253	-375
NON-MONETARY CAPITAL	283	115	132	213	366	245	-193	20	29	24	57
DRAWINGS ON LOANS	234	227	167	142	360	356	286	300	300	300	300
REPAYMENTS OF LOANS	-24	-64	-48	-62	-99	-100	-242	-243	-231	-289	-259
SUPPLIER'S CREDIT	0	0	11	130	265	367	238	285	308	333	360
REPAYMENT OF SUPPLIER'S CRE	0	0	0	0	-123	-136	-180	-238	-325	-297	-321
HUNT OIL REPAYMENTS	0	0	0	-12	-39	-241	-296	-84	-23	-23	-23
OTHER	73	-48	2	15	2	-1	1	0	0	0	0
NET ERRORS AND OMISSIONS	46	77	26	81	105	-67	-15	0	0	0	0
OVERALL BALANCE/FINANCE GAP	-216	-122	-162	193	-53	-206	-257	-161	-146	-229	-318
MEMORANDUM ITEMS:											
EXTERNAL PUBLIC DEBT	1474	1547	1852	2202	2807	3174	3534	3797	3995	4168	4426
OF WHICH SHORT TERM	12	33	68	198	340	570	628	675	658	695	734
DEBT SERVICE RATIO	2	5	6	9	23	19	28	32	33	34	34
DEBT SERV. RAT. EX HUNT	2	6	6	10	24	27	40	40	40	41	41
EXTERNAL DEBT TO GDP	30.9	33.4	44.0	55.5	65.5	54.8	53.1	47.4	43.6	40.7	38.7

SOURCE: MISSION ESTIMATES

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TABLE 6: GOVERNMENT FINANCE PROJECTIONS

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
	act.	act.	act.	act.	act.	prla.	proj.	proj.	proj.	proj.	proj.

	millions of rials										
REVENUES AND GRANTS	5260	5439	6002	9027	9091	13759	16593	19763	23023	25251	27526
REVENUE	4408	4677	5341	7189	7631	12876	15695	18884	22145	24373	26648
TAXES ON INT'L TRADE	2213	2121	2540	3102	2227	2706	2700	2918	3156	3410	3684
OTHER TAXES (EX OIL)	1447	1641	1813	2549	3155	3650	4320	4968	5713	6570	7556
OIL TAX	0	0	0	0	0	1410	1660	2568	3040	3184	3296
NON-TAX REVENUE (EX OIL)	748	915	988	1147	1523	2198	2865	3295	3789	4357	5011
OIL - GOVERNMENT SHARE	0	0	0	391	726	2745	3663	5136	6447	6852	7101
GRANTS	852	762	661	1838	1460	883	898	878	878	878	878
EXPENDITURE	10067	10047	11032	12886	18036	21243	24284	27644	31351	35615	40518
CURRENT	6393	6188	6894	7801	9413	13479	15609	17950	20643	23739	27300
WAGES AND SALARIES	2147	2273	2717	3113	3854	5187	6284	7227	8311	9557	10991
DEFENSE	3253	2784	2856	3057	3374	5538	6215	7147	8219	9452	10870
CURRENT TRANSFERS	552	557	659	793	1152	1180	1245	1432	1647	1893	2178
OTHER	441	574	662	838	1033	1574	1865	2145	2466	2836	3262
CAPITAL	2751	2881	2464	2922	5682	5747	6475	7163	7799	8529	9370
BUDGETED DEVELOPMENT	1324	1216	1135	1259	1375	1911	2400	2760	3174	3650	4198
CAPITAL TRANSFERS	548	602	438	655	1157	714	1283	1475	1697	1951	2244
EXTERNALLY FINANCED	879	1063	951	1008	3150	3122	2792	2928	2928	2928	2928
EXTRABUDGETARY	923	978	1674	2163	2941	2017	2200	2530	2910	3346	3848
OVERALL DEFICIT	-4807	-4608	-5030	-3859	-8945	-7484	-7691	-7881	-8328	-10363	-12991
FINANCING	4807	4608	5030	3959	8945	7484	7691	7881	8328	10363	12991
EXTERNAL (net)	900	802	767	648	2346	2199	429	556	673	107	400
PROJECT LOANS	879	1063	890	1008	3149	3121	2791	2928	2928	2928	2928
CASH LOANS	128	75	185	99	90	352	0	0	0	0	0
LESS REPAYMENTS	-107	-336	-308	-459	-893	-1274	-2362	-2372	-2255	-2821	-2528
DOMESTIC (net)	3907	3806	4263	3211	6599	5285	7262	7325	7655	10256	12591
DOMESTIC PUBLIC DEBT	12394	16376	20496	23798	30455	35742	43004	50328	57983	68239	80830
growth rate		32	25	16	28	17	20	17	15	18	18
CENT BK CLAIMS ON GOV	13692	17927	22381	26626	33978	40200					
GOVT DEP. AT CENT BK	1298	1551	1885	2828	3523	4458					
MEMORANDUM ITEMS											
TRADE TAX	2213	2121	2540	3102	2227	2706	2700	2918	3156	3410	3684
TRADE TAX / IMPORTS	0.27	0.28	0.31	0.37	0.17	0.21	0.26	0.26	0.26	0.26	0.26
TRADE TAX / PRIVATE IMPORTS	0.36	0.36	0.40	0.50	0.27	0.30	0.35	0.35	0.35	0.35	0.35
GDP	21870	24756	30969	38258	44337	57772	67147	79605	92454	105057	119158
GDP NON-OIL		24756	30969	37998	43947	51752	59515	68442	78708	90515	104092
GDP OIL		0	0	260	390	6020	7713	11163	13746	14542	15066
GROWTH RATES:											
GDP		13	25	24	15	30	16	19	16	14	13
GDP NON-OIL			25	23	16	18	15	15	15	15	15
GDP OIL	0	0	0	0	50	1444	28	45	23	6	4

SOURCE: MISSION ESTIMATES

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TABLE 7: GOVERNMENT FINANCE PROJECTIONS

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
	act.	act.	act.	act.	act.	prim.	proj.	proj.	proj.	proj.	proj.
	percent of GDP										
REVENUES AND GRANTS	24.1	22.0	19.4	23.6	20.5	23.8	24.7	24.8	24.9	24.0	23.1
REVENUE	20.2	18.9	17.2	18.8	17.2	22.3	23.4	23.7	24.0	23.2	22.4
TAXES ON INT'L TRADE	10.1	8.6	8.2	8.1	5.0	4.7	4.0	3.7	3.4	3.2	3.1
OTHER TAXES (EX OIL)	6.6	6.6	5.9	6.7	7.1	6.3	6.4	6.2	6.2	6.3	6.3
OIL TAX	0.0	0.0	0.0	0.0	0.0	2.4	2.5	3.2	3.3	3.0	2.8
NON-TAX REVENUE (EX OIL)	3.4	3.7	3.2	3.0	3.4	3.8	4.3	4.1	4.1	4.1	4.2
OIL - GOVERNMENT SHARE	0.0	0.0	0.0	1.0	1.6	4.8	5.5	6.5	7.0	6.5	6.0
GRANTS	3.9	3.1	2.1	4.8	3.3	1.5	1.3	1.1	1.0	0.8	0.7
EXPENDITURE	46.0	40.6	35.6	33.7	40.7	36.8	36.2	34.7	33.9	33.9	34.0
CURRENT	29.2	25.0	22.3	20.4	21.2	23.3	23.2	22.5	22.3	22.6	22.9
WAGES AND SALARIES	9.8	9.2	8.8	8.1	8.7	9.0	9.4	9.1	9.0	9.1	9.2
DEFENSE	14.9	11.2	9.2	8.0	7.6	9.6	9.3	9.0	8.9	9.0	9.1
CURRENT TRANSFERS	2.5	2.2	2.1	2.1	2.6	2.0	1.9	1.8	1.8	1.8	1.8
OTHER	2.0	2.3	2.1	2.2	2.3	2.7	2.8	2.7	2.7	2.7	2.7
CAPITAL	12.6	11.6	8.0	7.6	12.8	9.9	9.6	9.0	8.4	8.1	7.9
BUDGETED DEVELOPMENT	6.1	4.9	3.7	3.3	3.1	3.3	3.6	3.5	3.4	3.5	3.5
CAPITAL TRANSFERS	2.5	2.4	1.4	1.7	2.6	1.2	1.9	1.9	1.8	1.9	1.9
EXTERNALLY FINANCED	4.0	4.3	2.9	2.6	7.1	5.4	4.2	3.7	3.2	2.8	2.5
EXTRABUDGETARY	4.2	4.0	5.4	5.7	6.6	3.5	3.3	3.2	3.1	3.2	3.2
OVERALL DEFICIT	-22.0	-18.6	-16.2	-10.1	-20.2	-13.0	-11.5	-9.9	-9.0	-9.9	-10.9
FINANCING	22.0	18.6	16.2	10.1	20.2	13.0	11.5	9.9	9.0	9.9	10.9
EXTERNAL (net)	4.1	3.2	2.5	1.7	5.3	3.8	0.6	0.7	0.7	0.1	0.3
PROJECT LOANS	4.0	4.3	2.9	2.6	7.1	5.4	4.2	3.7	3.2	2.8	2.5
CASH LOANS	0.6	0.3	0.6	0.3	0.2	0.6	0.0	0.0	0.0	0.0	0.0
LESS REPAYMENTS	-0.5	-1.4	-1.0	-1.2	-2.0	-2.2	-3.5	-3.0	-2.4	-2.7	-2.1
DOMESTIC (net)	17.9	15.4	13.8	8.4	14.9	9.1	10.8	9.2	8.3	9.8	10.6
EXCHANGE RATE	4.58	5.35	7.36	9.64	10.34	9.77	9.76	9.76	9.76	9.76	9.76

SOURCE: MISSION ESTIMATES

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TABLE 8: COMPOSITION OF REVENUE

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
	act.	act.	act.	act.	act.	prlm.	proj.	proj.	proj.	proj.	proj.
	percent of total										
REVENUES AND GRANTS	100	100	100	100	100	100	100	100	100	100	100
REVENUE	84	86	89	80	84	94	95	96	96	97	97
TAXES ON INT'L TRADE	42	39	42	34	24	20	16	15	14	14	13
OTHER TAXES (EX OIL)	28	30	30	28	35	27	26	25	25	26	27
OIL TAX	0	0	0	0	0	10	10	13	13	13	12
NON-TAX REVENUE (EX OIL)	14	17	16	13	17	16	17	17	16	17	18
OIL - GOVERNMENT SHARE	0	0	0	4	8	20	22	26	28	27	26
GRANTS	16	14	11	20	16	6	5	4	4	3	3
REVENUE	100	100	100	100	100	100	100	100	100	100	100
TAXES ON INT'L TRADE	50	45	48	43	29	21	17	15	14	14	14
OTHER TAXES (EX OIL)	33	35	34	35	41	28	28	26	26	27	28
OIL TAX	0	0	0	0	0	11	11	14	14	13	12
NON-TAX REVENUE (EX OIL)	17	20	18	16	20	17	18	17	17	18	19
OIL - GOVERNMENT SHARE	0	0	0	5	10	21	23	27	29	28	27

SOURCE: MISSION ESTIMATES

TABLE 9: GOVERNMENT FINANCE PROJECTIONS

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
	act.	act.	act.	act.	act.	prla.	proj.	proj.	proj.	proj.	proj.
	percent of GDP										
REVENUES AND GRANTS	24.1	22.0	19.4	23.6	20.5	23.8	24.7	26.8	27.9	27.8	27.6
REVENUE	20.2	18.9	17.2	18.8	17.2	22.3	23.4	25.4	26.6	26.6	26.5
TAXES ON INT'L TRADE	10.1	8.6	8.2	8.1	5.0	4.7	4.0	3.5	3.5	3.5	3.6
OTHER TAXES (EX OIL)	6.6	6.6	5.9	6.7	7.1	6.3	6.4	6.0	5.8	5.9	5.9
OIL TAX	0.0	0.0	0.0	0.0	0.0	2.4	2.5	4.0	4.3	4.2	4.1
NON-TAX REVENUE (EX OIL)	3.4	3.7	3.2	3.0	3.4	3.8	4.3	4.0	3.9	3.9	3.9
OIL - GOVERNMENT SHARE	0.0	0.0	0.0	1.0	1.6	4.8	5.5	7.9	9.1	9.1	8.9
GRANTS	3.9	3.1	2.1	4.8	3.3	1.5	1.3	1.4	1.2	1.2	1.1
EXPENDITURE	46.0	40.6	35.6	33.7	40.7	36.8	36.2	34.4	33.2	33.0	33.0
CURRENT	29.2	25.0	22.3	20.4	21.2	23.3	23.2	21.7	21.1	21.2	21.3
WAGES AND SALARIES	9.8	9.2	8.8	8.1	8.7	9.0	9.4	8.7	8.5	8.5	8.6
DEFENSE	14.9	11.2	9.2	8.0	7.6	9.6	9.3	8.6	8.4	8.4	8.5
CURRENT TRANSFERS	2.5	2.2	2.1	2.1	2.6	2.0	1.9	1.7	1.7	1.7	1.7
OTHER	2.0	2.3	2.1	2.2	2.3	2.7	2.8	2.6	2.5	2.5	2.5
CAPITAL	12.6	11.6	8.0	7.6	12.8	9.9	9.6	9.7	9.1	8.9	8.7
BUDGETED DEVELOPMENT	6.1	4.9	3.7	3.3	3.1	3.3	3.6	3.3	3.2	3.3	3.3
CAPITAL TRANSFERS	2.5	2.4	1.4	1.7	2.6	1.2	1.9	1.8	1.7	1.7	1.7
EXTERNALLY FINANCED	4.0	4.3	2.9	2.6	7.1	5.4	4.2	4.5	4.1	3.9	3.7
EXTRABUDGETARY	4.2	4.0	5.4	5.7	6.6	3.5	3.3	3.1	3.0	3.0	3.0
OVERALL DEFICIT	-22.0	-18.6	-16.2	-10.1	-20.2	-13.0	-11.5	-7.6	-5.3	-5.2	-5.4
FINANCING	22.0	18.6	16.2	10.1	20.2	13.0	11.5	7.6	5.3	5.2	5.4
EXTERNAL (net)	4.1	3.2	2.5	1.7	5.3	3.8	0.6	0.9	1.0	0.1	0.5
PROJECT LOANS	4.0	4.3	2.9	2.6	7.1	5.4	4.2	4.5	4.1	3.9	3.7
CASH LOANS	0.6	0.3	0.6	0.3	0.2	0.6	0.0	0.0	0.0	0.0	0.0
LESS REPAYMENTS	-0.5	-1.4	-1.0	-1.2	-2.0	-2.2	-3.5	-3.7	-3.2	-3.8	-3.2
DOMESTIC (net)	17.9	15.4	13.8	8.4	14.9	9.1	10.8	6.7	4.4	5.1	4.9
EXCHANGE RATE	4.58	5.35	7.36	9.64	10.34	9.77	9.76	12.5	13.5	14.58	15.746

SOURCE: MISSION ESTIMATES

APPENDIX: ASSUMPTIONS UNDERLYING PROJECTIONS

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
	act.	act.	act.	act.	act.	prln.	proj.	proj.	proj.	proj.	proj.
HUNT INVEST RECOVERY	0	0	0	12	38	241	296	61	0	0	0
OPERATING COST	0	0	0	0	0	23	23	23	23	23	23
INVEST RECOVERY + OP COST	0	0	0	12	38	264	319	84	23	23	23
HUNTS ROYALTY PAYMENTS	0	0	0	0	0	30	47	54	68	73	75
PRODUCTION RANGES											
	0	0	0	0	0	0	0	0	0	0	0
300-400	0	0	0	0	0	0	0	0	0	0	0
200-300	0	0	0	0	0	0	0	0	21	25	25
100-200	0	0	0	0	0	61	90	100	100	100	100
<100	0	0	0	0	3	100	100	100	100	100	100
TOTAL	0	0	0	0	3	161	190	200	221	225	225
HUNTS SHARE 400+	0	0	0	0	0	0	0	0	0	0	0
HUNTS SHARE 300-400	0	0	0	0	0	0	0	0	0	0	0
HUNTS SHARE 200-300	0	0	0	0	0	0	0	0	24	29	30
HUNTS SHARE 100-200	0	0	0	0	0	76	117	135	140	145	150
HUNTS SHARE 0-100	0	0	0	0	8	68	53	128	148	152	158
HUNT PROFIT	0	0	0	0	8	144	170	263	311	326	338
HUNT PROFIT NET OF ROYALTY	0	0	0	0	8	114	123	209	244	254	263
TOTAL HUNT	0	0	0	12	46	378	443	293	267	277	286
OF WHICH PROFIT	0	0	0	0	8	144	170	263	311	326	338
LESS ROYALTIES =	0	0	0	0	8	114	123	209	244	254	263
OF WHICH INVEST RECOV	0	0	0	12	38	241	296	61	0	0	0
OF WHICH OPERATION COST	0	0	0	0	0	0	0	23	23	23	23
INVEST RECOV + OPER	0	0	0	12	38	241	296	84	23	23	23
TOTAL GOVERNMENT	0	0	0	-12	-20	425	545	789	972	1028	1065
OF WHICH OIL TAX	0	0	0	0	3	144	170	263	311	326	338
OF WHICH OIL SHARE	0	0	0	-12	-23	281	375	526	661	702	728
OIL PRODUCTION	0	0	0	0	3	161	190	200	221	225	225
OIL PRICE	0	0	0	0	23.74	13.66	14.24	14.82	15.35	15.890	16.450
TOTAL VALUE	0	0	0	0	26	803	988	1082	1239	1305	1351
EXCHANGE RATE 1	4.58	5.35	7.36	9.64	10.34	9.77	9.76	9.76	9.76	9.76	9.76
EXCHANGE RATE 2	4.58	5.35	7.36	9.64	10.34	9.77	9.76	12.5	13.5	14.58	15.746
TRADE TAX	2213	2121	2540	3102	2227	2706	2700	2918	3409	3977	4641
TRADE TAX / IMPORTS	0.27	0.28	0.31	0.37	0.17	0.21	0.26	0.20	0.20	0.20	0.20
TRADE TAX / PRIVATE IMPORTS	0.36	0.36	0.40	0.50	0.27	0.30	0.35	0.35	0.35	0.35	0.35
GDP	21870	24756	30969	38258	44337	57772	67147	82739	97722	112238	128399
GDP NON-OIL		24756	30969	37998	43947	51752	59515	68442	78708	90515	104092
GDP OIL	0	0	0	260	390	6020	7713	14297	19013	21724	24307
GROWTH RATES:											
GDP	0.0	13.2	25.1	23.5	15.9	30.3	16.2	23.2	18.1	14.9	14.4
GDP NON-OIL			25.1	22.7	15.7	17.8	15.0	15.0	15.0	15.0	15.0
GDP OIL	0.0	0.0	0.0	0.0	50.0	*****	28.1	95.4	33.0	14.3	11.9