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Primary and Secondary Markets
for Government Securities:
Some Policy Recommendations

USAID/EGYPT

Final Report

May 19, 1992

Price Waterhouse



May 19, 1992

Mr. Lawrence Brown
Office of Finance and Investments
USAID/Egypt
Cairo Center
106 Kasr El Aini Street
Garden City
Cairo, Egypt

Dear Mr. Brown:

Re: AID/PRE Financial Sector Development Project
Contract No. PDC-2206-Z-00-8191-00
USAID/Cairo - Primary and Secondary Markets for Government Securities
PIO/T No. 263-0102-3-30170

Enclosed please find 10 copies of our Final Report on the Government Securities Market in Cairo. The issuance of this report signifies the conclusion of this assignment under FSDP. As required, one copy has been forwarded to Sandra Frydman, PRE/EM.

We have enjoyed the opportunity to assist USAID/Egypt in this important assignment. We look forward to further collaboration with the Mission.

Sincerely,



J. Richard Breen
Project Director, FSDP

Attachments

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I. Executive Summary

A. Background

As part of a larger and more comprehensive program of policy reform, the Central Bank of Egypt, as fiscal agent for the government, is about to introduce an auction market for the issue of short-term government securities, with the first of a series of regular auctions provisionally scheduled for very early in 1991. The importance of this development is clear, for it implies that rates on newly issued government debt will be essentially market-determined. At about the same time, and for much the same purpose, the ceilings on interest rates payable on local currency denominated deposits are to be lifted. Likewise, all of the elaborate apparatus of differentiated ceilings on bank lending rates, designed to allow borrowers in selected sectors access to credit on concessionary terms, will be dismantled.

Taken together, these changes open the way for meaningful inter-institutional competition within the banking system. For as the government securities market becomes more fully developed, banks will have to offer rates on deposits that are clearly related to market realities, and if banks are to remain viable they must charge similarly market-related interest rates on the loans they originate. More generally, both public and private banks will have to operate more efficiently in performing all of their essential functions as financial intermediaries, as vehicles for the mobilization of savings for the ongoing redistribution of credit to non-bank borrowers. And in an environment in which interest rates are no longer constrained by ceilings the scale of the banks' operations in local currency should increase considerably.

Moreover, the development of a more active market for government securities will allow the central bank to rely increasingly on open market operations as an instrument of monetary policy. Of course, this does not mean that reserve and minimum liquidity requirements will suddenly be rendered unnecessary or that either requirement can be phased out completely. However, as the market for government securities increases in size and resiliency, the central bank will be in a position to absorb (or inject) bank reserves through sales (or purchases) of government securities for its own account. In effect, reserve requirements will continue to play an important role in determining the banks' demand for reserves, but it remains for the central bank to manage the availability, or supply, of reserves in line with its overall targets for the growth in domestic credit. The virtue of open market operations is that they provide the central bank with a flexible instrument for the management of reserve availability and one that is fully consistent with market mechanisms.

The main focus of this report, as its title implies, is on the policy and operating issues involved in the initial sale of government securities (or primary market) and on the implementation of monetary policy by varying the amount of bills offered through the auction. Before turning to those issues, however, it is useful to provide a brief profile of the financial markets and the legal and regulatory restraints within which they now operate (Section 2). The remainder of the report is organized as follows. Section 3 provides a summary of the auction procedures that might be followed in any initial offering of government securities. Section 4 describes some of the trading practices that have evolved in countries where secondary markets are fully developed, and which might develop in Egypt as well. Finally, section 5 outlines a market-oriented approach to reserve management by the central bank.

B. Recommendations

The recommendations that emerge from this consultancy are briefly summarized as follows;

1. At this juncture, there appears to be very little consensus among financial institutions on the level of interest rates that might emerge in the aftermath of an initial offering of government securities, or to put the same matter in a slightly different way on the size of an issue that the market might absorb without undue strain. Accordingly, until the market's digestive capacity has been more fully tested, the initial offerings should be confined to securities with original maturities of three- to six- months. In order to further increase their market appeal, the securities should be issued in bearer form. For much the same reason, the tax law should be amended so that any income earned by an investor in Treasury bills is fully exempt from personal income taxes, just as interest on deposits is now treated as tax-free.
2. If the auctions are to provide a meaningful measure of market rates of interest, then they should be transparently free of any official intervention. This implies that the central bank should not, as a rule, participate in the auction or stand ready to purchase any bills if the amount tendered is undersubscribed. However, in the unlikely event that the central bank does find it necessary to act as a residual buyer it should only do so at the average auction rates. In order to facilitate the development of a non-bank market, all financial institutions -- including public and private banks, insurance companies, investment companies, and any dealer firms that may be organized to make markets in government securities -- should be eligible to participate in the auction, and to bid both for their own account and on behalf of customers.

3. The inclusion of public sector banks as eligible participants carries with it the possibility that the auction process may not be fully free of "official" influence. The presumption implicit in this argument is familiar. The four public banks are after all captive institutions, their lending operations are oriented largely to government-owned companies, and their directors are all government appointed. Moreover, the sheer size of the financial resources at their disposal implies that the public banks are in a position to dominate the auctions, and in the process enable the government to borrow on relatively easy terms. Yet despite all these considerations, public banks are subject to the same market imperatives as private banks and senior management of the public banks is well aware of that fact. At this juncture, there is simply no reason to presume that the auction will be dominated by inflated bids by the public banks, and it would certainly be premature to exclude those banks from participation in the auction. However, if evidence unfolds that their bids are biased, then the central bank should either reserve the right to limit the amount of securities sold to any one institution, or allocate sales to public sector banks at the average auction rates submitted by other parties.
4. By its very nature, the development of a market for short-term securities will expose banks of any kind, public or private, to more intensive market discipline, and some institutions are clearly concerned that they may be unable to adjust to the effects of rising interest rates. Yet these risks are easily exaggerated. In fact, the government's domestic financing requirements over the near term may well turn out to be relatively small, as much of the prospective budgetary deficit will be financed by the local currency counterpart of increasing foreign official assistance. Under these circumstances, the risk of disintermediation -- the possibility of deposit losses as depositors withdraw funds for direct investment in marketable securities -- would appear to be easily manageable. Moreover, for many individuals, direct investment in marketable securities is a somewhat alien and unfamiliar experience, and many depositors may be reluctant to take advantage of higher rates of return on Treasury bills. Nevertheless, as a precautionary measure, the minimum denomination in which the bills are issued should be set initially at a high level, perhaps LE 25,000, so that purchases are beyond reach of most individuals or households. Of course, this also limits the potential for purchases of bills by non-financial investors -- individuals, households, and smaller businesses. Thus, over time the authorities may want to consider a reduction in the minimum denomination. However, at this point, while the market is still in its formative stage, it would be premature to issue bills in small denominations.
5. Every effort should be made to facilitate the development of a secondary market, so that participants in the primary market (or indeed any other investors) are in a position to increase or reduce their holdings without undue fluctuations in market values. The bills should be issued in bearer form so that they are easily

negotiable. But the liquidity of the instrument depends on the readiness of banks and other financial institutions to make a market by quoting -- to each other, to non-bank investors, and to the central bank -- bid and asked prices at which they are prepared to buy or sell. Indeed, as a condition for participation in the primary market, financial institutions should be expected to provide firm quotations. Otherwise, the marketability of the instrument itself will be impaired, and the central bank would find it all the more difficult to use open market operations as an instrument of monetary policy.

6. Apart from this very general requirement, and the need for clearly defined rules for the settlement of transactions in government securities, the secondary market should be allowed to develop its own standards and practices with a minimum of official regulation. Thus, market participants should be allowed full freedom in the prices they quote, or in determining the spread between bid and offer quotations. But to contribute to market liquidity, the quotations must be competitive. In short, a bank must enter into transactions at the prices it quotes, as both buyer and seller. At some later stage, the central bank should establish criteria for the selection of the financial institutions that would be eligible to participate in the primary market. And those criteria should include, among other things, a satisfactory contribution to market liquidity, as demonstrated by a relatively high volume of transactions on a continuing basis with other banks and non-bank investors.
7. These standards can only be developed after the secondary market has come into play, and the central bank has had an opportunity to monitor market participants' performance over a period of time. For the market to function efficiently transactions costs should be kept to a minimum. Accordingly, all transactions among banks, or between banks and their customers, should be fully exempt from stamp tax. Likewise, market participants should be allowed to buy or sell on a direct placement basis, without reliance on a broker, who can only do business through the organized stock exchanges. Of course, from time to time, banks may find it convenient or necessary to use the exchanges. However, they should not be required to do so, since the present structure of commission rates would simply introduce unnecessary transaction costs.

II. Financial Liberalization in Perspective

The introduction of an auction mechanism for the issue of treasury bills is perhaps best viewed as the first of a series of measures needed to facilitate the development of larger and more varied market for short-term debt of all kinds. Stripped of all its technicalities, the auction represents a market arrangement for the generation of interest rates on an instrument that is free of any credit risk. In effect, the market would provide a reference rate for the determination of interest rates on other instruments of comparable maturity, but generally higher credit risk. And as the secondary market increases in size and liquidity, so that the government can issue debt with longer maturities, then investors will be able to more sensibly evaluate the returns on fixed-income obligations offered by other borrowers, or dividend returns on equities. Clearly, the development of a broader, more fully diversified capital market will require extensive changes in company law, in the tax code, and in standards of financial disclosure. This will take time to materialize, but the critically important first step calls for the adoption of a market arrangements for issue of treasury bills. For reasons discussed below, that, in turn, calls for the deregulation of bank deposit and lending rates.

A. The Regulatory Environment

In Egypt, as in most countries, commercial banks form the core of the financial structure. The banks are active, varied, and experienced, but inter-institutional competition is constrained by a pervasive pattern of bank regulation. All foreign-owned banks, or their branch offices, can do business only in foreign currencies. These banks are subject to reserve requirements, currently set at 15 percent of their deposit liabilities, but deposit and lending rates are free of any restriction. Domestically owned banks, as well as banks owned jointly by non-residents and their Egyptian partners, can operate in both local and foreign currencies. Deposits in local currency with original maturities of less than two years are subject to a reserve requirement of 25 percent, which must be held in the form of a non-remunerated account with the central bank.

These differentiated reserve requirements, by themselves, tend to place locally-owned banks, taken as a group, at a competitive disadvantage in terms of their ability to mobilize deposits or to generate additional loans. But inter-institutional competition, even among locally owned banks, is further restricted by ceilings on deposit interest rates. For deposits denominated in local currency, the maximum allowable interest ranges 5 percent (on large denomination deposits with an original maturity of 7-14 days) to 16 percent on deposits with original maturities of seven years or longer. Within this range, there is an array of ceiling rates, differentiated by very detailed classifications of deposit maturities. But despite this progression, the rate schedule provides very little incentive for depositors to move funds into accounts with more distant maturities.

On the lending side, the regulations establish minimum and maximum rates, differentiated both by loan maturities and the sector in which the borrower is classified. Thus, the ceiling rate on loans to "priority borrowers" in the agricultural and industrial sectors ranges from 15 percent on loans of one year or less, to 17 percent on loans with maturities of more than two years. The maximum lending rates on loans to households or to businesses in the services sector are similarly graduated, with ceiling rates of 17-19 percent. The only types of loans (other than inter-bank loans) that are fully exempt from ceilings are loans to the trade sector. Of course, the main thrust of these ceilings is designed to facilitate the use of credit by priority borrowers. However, the perverse effect may well be to curtail the availability of credit, since lending to borrowers in agriculture or industry usually entails somewhat higher credit risks than loans to commercial borrowers.

Still another element of the regulatory environment centers on the use of credit ceilings. For many years commercial banks in Egypt have been subject to ceilings in the form of a limit on the ratio of (1) each bank's loans to both public and private companies to (2) the total of its deposits from these two sources. In recent years, the ratio has been set at 65 percent, but in either case has had little effect on the growth in domestic credit. The ceilings do not cover credit to the government or to the public authorities, so that the government has been free to issue additional securities, usually at relatively low interest rates. When purchased by banks, these securities have generally been rediscounted with the central bank. In the absence of any offsetting increases in reserve requirements, or a secondary market through which the central bank could employ open market operations, both bank reserves and their local currency deposits have been free to move upward. With any increase in deposits, the allowable growth in credit increases correspondingly. Viewed from another angle, an unchanged loan/deposit ratio is consistent with a wide range in rates of growth in the monetary and credit aggregates.

B. Some Implications of Direct Control

Given this pervasive system of interest rate regulation, and the absence of any well organized non-bank markets for short-term debt, there is simply no mechanism for efficient allocation of credit through the banking system. Available credits have to be rationed or distributed on the basis of non-market criteria. The distribution of local currency deposits among different banks, for example, is determined largely by the size and geographic spread of their branch networks, not by differences in rates paid to depositors. The result is that the four public banks are much better situated to attract deposits than other institutions. Likewise, the borrowers they serve, principally state-owned companies, have access to credit in much larger amounts than other business borrowers.

To be sure, the public banks are authorized to lend to private borrowers as well, and can do so up to the limits imposed by credit ceilings. Similarly, public enterprises are free to develop banking relationships with private banks, provided they first clear up any outstanding loans with public banks. But the fact remains that the lending operations of the public banks are largely oriented toward the needs of state enterprises, many of which are thinly capitalized and highly leveraged borrowers. All this means that the market for bank credit is highly segmented, with very little room for competition among banks in terms of the rates they charge, the borrowers they serve, or the rates they offer to depositors.

From time to time, the ceilings on local currency deposits have been subject to upward adjustment, most recently in May 1989. However, rates of interest on these deposits remain negative in real terms, after allowance is made for actual or anticipated rates of inflation. Moreover, interest rates are uncompetitive with rates on deposits denominated in foreign currencies. Those rates are unregulated, and, in nominal terms, somewhat lower than rates on deposits in domestic currency. Nevertheless, the growth in foreign currency deposits has been much more rapid than in local currency deposits, as many residents are apprehensive about the potential for depreciation of the domestic currency in terms of dollars. For much the same reason, residents are generally reluctant to borrow in dollars, since any depreciation of the pound would be reflected in a roughly equivalent increase in borrowing costs. In other words, the differential in interest rates in favor of borrowing in dollars is not large enough to offset the expected exchange rate loss over the term of the loan.

Some of the implications of all this are familiar and need only be briefly summarized. Clearly, the effect of negative real rates on interest on almost the full range of bank lending rates is to generate relatively large demands for bank credit. For those borrowers that do enjoy access to bank credit, there is a very real incentive to use funds in very capital intensive activities. The entire structure of ceilings on bank deposit rates places a severe constraint on the ability of the banks' to mobilize savings in deposited form, particularly in accounts with longer maturities. As a result, the banks appear to have been left with a potentially serious mismatch between the average maturity of their loan portfolios, and the much shorter average of their deposit liabilities. Viewed in another way, the ceilings on local currency deposits almost invite residents to leave any foreign sources of income with banks overseas, or to place funds in foreign currency deposits with domestic banks.

As a consequence, the commercial banks have accumulated very large net liabilities to residents denominated in foreign currencies, amounting to roughly US \$2 billion equivalent or about 7 percent of total assets. In effect, the banks have assumed much of the exchange rate risks that their customers have avoided. This may put pressure on the banks to widen spreads between borrowing and lending to pay the interest on their uncovered foreign currency liabilities. Scope for this is limited, however, since interest rates on domestically generated lending (in foreign currencies) are closely

linked lending rates overseas. It also puts pressure on banks to increase their net claims on non-residents to balance their overall foreign currency position. And in a roundabout way this may simply add to pressures on the country's net international reserves.

Many of these problems would be much more manageable if bank lending and deposit rates were not subject to regulation. Indeed, deregulation is a necessary element in any effort to encourage the net repatriation of foreign assets by residents, along with other capital inflows. But if the effort is to be reasonably effective, then the central bank must be equipped with more flexible policy instruments. For unless the exchange rate were allowed to float without official intervention, the authorities' ability to control the monetary base, or the credit aggregates, depends on their ability to sterilize inflows of foreign exchange.

Any central bank purchases of foreign exchange would increase the net foreign assets of the central bank as well as monetary base -- bank reserves and currency in circulation. Such an increase could generate an equivalent or substantially greater change in money and bank credit which would in turn affect domestic prices. Up to a point, excess reserves can be absorbed through increases in reserve requirements, but the scope for these increases is quite limited. As a practical matter, the only way to absorb excess liquidity is through increased issues of government debt at market rates and/or central bank sales of government securities out of its own portfolio. The introduction of an auction for government bills is intended to serve both objectives.

III. Initial Offerings of Government Securities

When the auction market first gets underway, the offerings of securities should be confined to short-term instruments, since most of the participants will be commercial bank investors and their readiness to purchase medium or longer-term securities is likely to be very limited. At some later stage, after the market has settled down and market participants have developed a sense of how short-term securities are priced, the central bank may want to issue medium-term securities, with original maturities of perhaps of 1-3 years. And if those are well received, the range of maturities can be stretched out even longer.

However, present plans call for the issue of three-month bills, more precisely bills with an original maturity of 91 days (13 weeks). These are best issued in bearer form, rather than registered in the owner's name, since a registration requirement might drive many potential investors away, and hence limit the size of the market. As in other countries, the bills represent a promissory note of the government -- a direct obligation to pay the face value at the maturity. Unlike government notes or bonds, which typically carry a series of coupons, bills are issued without coupons. Rather, they are issued and traded at discount, and the discount is converted into an equivalent interest yield.

A. The Auction Mechanism

The discount on a new issue is determined at auction, and in other countries a variety of auction procedures have been used for that purpose. The standard practice in the United States is to make an advance announcement of the volume of bills to be sold, and then accept all bids, starting with the highest bid price, until the tender is fully sold. From time to time, the Treasury may make a subscription offering of coupon issues, in which it announces the amount to be sold, the interest coupon on the issue, and the issue price. But the Treasury reserves the right to change the amount sold and the allotment procedures after all subscriptions have been submitted. Investors enter subscriptions for the amount of securities they wish to purchase at the Treasury's announced price and yield. If the issue is "overpriced" and the amount offered is undersubscribed, the Treasury simply has to accept that result.

The basic difference between these two approaches is clear. In a subscription offering, the issuer establishes the interest rate on the issue, but market participants determine the amount to be sold. By contrast, in bill auctions, as they are usually conducted in the United States, the issuer decides the amount to be offered, and the market determines the price, or effective interest rate, at which the offering is taken up. Larger investors usually submit one or more competitive bids, which state the discounted

price and the amount(s) they are prepared to buy at each price, carried out to three decimal places. Other investors, usually individuals, are allowed to enter noncompetitive bids, showing the amount they are prepared to purchase but not the price.

After the auction closes, but before the results are announced, all bids must be tabulated. First, the volume of noncompetitive awards is subtracted from the total of each issue. Noncompetitive tenders are accepted in full, at least up to the limit on such tenders, and the remainder is allocated among competitive bidders beginning with those that bid the highest prices and ranging down in price until the total amount is used. The lowest accepted price is called the "stop-out" price. Since a number of bids may have been entered at the stop-out price, the amounts award at that price are allotted on a pro-rated basis.

This approach is illustrated in the upper panel of the Table below, on the assumption that all bids are submitted in competitive form and that the amount to be issued at auction is LE 100 million. In this case, which assumes that investors bid more aggressively at lower prices (or higher effective yields), the accumulated bids amount to LE 90 million at bids of 95.750 or lower, and to LE 125 million at prices of 95.000 and above. Thus, that bid represents the stopout price, and the combined amounts bid at that price (LE 25 million), are more than the amount available after higher bids have been satisfied. In other words, LE 10 million in bills has to be allotted to the two different investors who have submitted bids for different amounts at the same price. Since the allotment is done on a pro-rata basis, investors 6 and 7 would receive 40 and 60 percent, respectively, of the remainder.

The lower panel in the table assumes that the auction is open to non-competitive bids and that two such bids are received from investors 5 and 6, amounting to LE 50 million. Assuming that there were no limit on the size of non-competitive tenders, these would be accepted in full, so that only LE 50 million is available for distribution to investors submitting competitive bids. In this particular case, investor 1 would received the full amount of the bid (LE 30 million) while investor 2 would receive the remaining LE 20 million. The weighted average yield in this case is 11.630 percent, with the weights based on the distribution of bills among competitive bidders. Non-competitive bids are awarded bills at the weighted average yield, that is, at discounted prices that result in a yield of 11.630 percent.

**Illustrative Auction Results for a LE 100 million Issue
(LE Amounts in millions, Annual Yield in percent)**

Bid	Amount	Price	Yield	Accumulated Bids
1	LE 10	97.100	11.472	LE 10
2	LE 15	97.000	11.868	LE 25
3	LE 20	96.500	13.846	LE 45
4	LE 20	96.000	15.824	LE 65
5	LE 25	95.750	16.813	LE 90
6	LE 10	95.000	19.780	LE 100
7	LE 15	95.000	19.780	LE 115

Weighted Average Yield = 15.042

Bid	Amount	Price	Yield	Accumulated Bids
1	LE 30	97.100	11.472	LE 30
2	LE 35	97.000	11.868	LE 65
3	LE 10	96.500	13.846	LE 75
4	LE 15	96.000	15.824	LE 90
5	LE 20	--	--	LE 110
6	LE 30	--	--	LE 140

Weighted Average Yield = 11.630

B. Yield Calculations

The yields shown in the table are calculated in accordance with the practice in the United States, and may require some explanation. For bills with an original maturity of less than six months, or a remaining life to maturity of less than six months, annual interest rates or yields are calculated as if a year had only 360 days. Moreover, the discount or difference between the bid price (P) and the face value of the bill (F) is expressed as a percentage of the face value. In other words, the rate of discount (d) is expressed as: $d = (F-P)/F$. The standard formula for calculation of discount yields is $d = (F-P/F) \times (360/t)$ where t is the number of days to maturity.

In order to facilitate comparison with interest rates on other instruments, Treasury bill yields are also reported on a bond equivalent basis, which are computed on the basis of a 365 day year. For bills maturing in six months or less, the bond equivalent yield (y) is computed as: $y = (F-P/P) \times (365/t)$, where t is the original or remaining number of days to maturity. When computed on a bond equivalent basis, annual yields are always higher than the annual rate of discount. Either one of these formula could be used in reporting average auction yields, and the choice between the two is somewhat arbitrary. But discounted yields, as calculated in the United States, have often been a source of considerable confusion. If a choice must be made, then it makes more sense to report yields on a bond equivalent basis, when the central bank announces the auction results. However, most Eurodollar rates are quoted on a 360 day basis, so it may be appropriate to use that basis as well.

The auctions are to be held on a weekly basis, so that the amounts sold can digested more easily than would occur if the auction were held only once a month. As now planned, the amount of the weekly issue will be made on Tuesday, bids are to be submitted on Wednesday, with settlement and delivery of the bills to take place on Thursday. From time to time, the bill may reach maturity on a bank holiday, in which case the investor will have to wait at least another day to redeem the bill or exchange it for a new offering. And if the bank holiday falls on a Thursday, then the investor will have to wait another two days, or until after the weekend is over, to redeem the bill. Of course, if the holiday falls on a date certain then investors already know, at the time of purchase, that the effective maturity date will be 92 days away, they will act accordingly. In effect, the investor would lower the bid on a bill that had to be held an extra day, so that the realized return on a bill held over a 92 day period would be no less than the yield the investor required for a 91 day bill.

On those occasions, the average effective yield at auction, as announced by the central bank, might be higher than normal. In order to avoid any "holiday-induced" distortions in interest rates, the United States Treasury pays an extra day's interest whenever the maturity date, or repayment of a maturing bill, must be deferred because of certain bank holidays. The extra day's interest is calculated on the basis of the average rate at the offering, three or six months earlier. Much the same practice might be adopted by the Egyptian authorities. With respect to legal holidays, the central bank need only announce that if the maturity date falls on a holiday or weekend, the bill will be redeemed on the first business day thereafter and that an extra day's interest will be paid.

From time to time, some Islamic holidays may fall on Thursday, when settlement would normally be made for redemption of a maturing bill. In this event, the holder of the bill would have to wait until after the weekend to receive payment. The dates on which these holidays may fall are uncertain, and in a paradoxical way that may avoid any distortions in the way bills are bid at the time of auction. Nevertheless, as a matter of financial practice an extra day's interest should be paid, whenever redemption has to be deferred for reasons that nobody could reasonably anticipate.

C. Eligible Auction Participants

In the early stages of the market's development every effort should be made to facilitate widespread participation and redistribution of the bills sold at auction. But the eligible tenderers should be limited to financial institutions, and not open to individuals until the central bank is fully equipped, in terms of computer capacity, to enter bids, separate competitive from non-competitive bids, and then tabulate the results. The bills are to be issued with a minimum denomination of LE 25,000, and that in itself restricts the number of individuals that could qualify as investors. However, even within this restricted group, the number of interested investors might be unmanageably large in terms of the operational burden it places on the central bank. As matters now stand, it appears that all tenders would have to be processed manually, and, if the central bank is inundated with bids, the entire auction could turn into an administrative nightmare. This is not to suggest that it will turn out that way, but simply that it could happen. Accordingly, as precautionary matter, participants at the auction should be confined to financial institutions.

The auction would be open to all domestic banks, jointly owned banks, specialized banks, insurance, and finance companies. Within this group, some institutions might only bid for their own account, fully prepared to hold the bills to maturity. Others might bid for larger amounts in the expectation that at least part of that amount can be resold after auction at higher prices to their customers. Still other organizations may simply enter bids on behalf of their corporate and other clients.

At this point, the central bank need not, and probably should not, establish detailed eligibility standards for participation by the commercial banks. However, it should be clear that participation in the auction has its advantages, since the banks may be able to resell the bills at marked up prices in the aftermarket. And if a secondary market is to develop, then banks should be expected to quote prices on both sides of the market -- not only prices at which they offer bills for sale, but also bids at which they will purchase. In short, banks would be expected to make markets in bills as a condition for participation in the auction.

At some later date, the central bank may want to develop a system of accredited dealers, similar to the network of "recognized dealer firms" through which the Federal Reserve carries out open market operations. The dealers could be bank dealers or non-bank firms, but once accredited or recognized they would be the only institutions eligible to bid at auction. Certainly, one of the criteria for recognition would be the extent to which an institution contributes to market liquidity through entering into transactions on a continuing basis. At this time it is much too early to establish any requirements for participation in the auction. However, the central bank should make it clear that it expects banks to support the development of a secondary market. And for that purpose it should plan to monitor the banks' trading activity on a regular basis.

The auctions should be transparently free of official intervention or government pressure, if the rates are to provide a meaningful indication of market conditions. Yet, the inclusion of all of the public banks as eligible auction participants naturally raises questions about whether, and to what extent, these banks are fully autonomous, or can bid for government debt on an "arms length" basis. The banks are, after all, state-owned organizations, their directors are all government appointed, and most of their loan portfolio consists of claims on public enterprises. This is not intended in a critical spirit, but simply to suggest that the public banks may have a conflict of interest, and cannot bid in a fully independent way.

To put it plainly, there is a risk that the public banks may submit very large bids at very high prices, with the result that average auction yields are relatively low and leave the entire structure of deposit rates well below rates of increase in prices. There are two ways to guard against this possibility, without barring the public banks from the auction. First, the central bank may place a limit on the amount bids that it will accept from a single institution, or group of institutions. Second, it can allow the public banks to bid for bills, but only on a noncompetitive basis and only up to whatever limits may be placed on such tenders.

These kinds of measures should be taken, if at all, only after the auction results have been subject to thorough analysis over a period of several months or longer. The question that immediately arise is whether, and under what circumstances, the Central Bank of Egypt should buy at auction, and if so how. As a rule, the Federal Reserve Bank of New York does not make outright purchases for its own account while an auction is

underway, although it may submit tenders for foreign central banks for whom it acts as a correspondent bank. However, given the size and liquidity of the secondary market in the United States, the Federal Reserve can always buy (or sell) securities after the auction is out of the way.

That option is not open to the Central Bank of Egypt, and if an offering of bills is not fully taken up by the market, then the central bank may have no choice but to absorb the remainder. At times, these purchases may be fully consistent with the central bank's own targets for the growth in the monetary and credit aggregates. Moreover, there may be periods when the central bank wants to avoid a sudden or "traumatic" rise in interest rates, and as a matter of policy decides to buy bills at auction. The problem arises when restraint on reserve growth is required, the central bank is unable absorb reserves through open market sales of government securities, and the amount of competitive bids falls short of the amount offered. The risk of a breakdown in the auction mechanism seems very remote, but if the central bank does have to intervene in the market it should do so in a very unobtrusive way, only on a noncompetitive basis. This means it should only buy at market rates of interest, at the average discounted price of competitive bids tendered.

D. Minimum Bill Denomination

The choice of minimum denominations for bills raises two separate, but clearly related, issues, since the potential demand for bills by individuals depends on the denominations in which they are offered. If the bills are issued with relatively high denominations, this will limit the extent to which individuals and other non-bank investors can buy bills through the secondary market. And in an indirect way, that may inhibit the demand for bills when offered in the primary market as well.

However, to issue bills in relatively small denominations can quickly create problems of a different kind. As short-term instruments, bills are very close substitutes for time and other interest-bearing accounts offered by banks, particularly deposits at the shorter end of the maturity spectrum. Thus, unless banks offer roughly comparable rates on deposits, they will be exposed to deposit withdrawals for investment in bills. And if the banks do offer fully competitive rates on deposits, then their net interest income will be squeezed (and some may incur losses) unless they pass on any increase in interest costs to borrowers through higher lending rates. Clearly, the banks' vulnerability to disintermediation and/or an erosion in rate spread is much greater as the minimum bill denomination is lowered.

Present plans call for the issue of bills with a minimum denomination of LE 25,000, which seems an appropriate size -- large enough to minimize the risks of disintermediation yet not so large as to preclude participation by individuals in the secondary market. It hardly needs to be emphasized that the minimum denomination can be reduced, at some later date, to facilitate the development of a larger non-bank market for bills. And when the central bank is fully equipped to open the auction to individuals that may be the appropriate time to do so. For the moment, however, and in view of all the uncertainties about the financial condition of some of the domestic banks, the better part of caution suggests that the auction should begin with bills no smaller than the amount planned.

IV. Toward the Development of a Secondary Market

In countries where government securities markets are well developed, trading takes place not on an organized exchange but on an "over-the-counter" basis through a network of dealer firms who make markets in securities by quoting -- to each other, and to investors -- bid and asked prices at which they are prepared to buy and sell. The dealer firms may be bank or non-bank institutions, but in either case the dealer acts as a principal. That is, the dealers sell or buy for their own account. In effect, they assume positions -- long or short -- as an essential part of their business activity.

Naturally, they do so in the expectation of profit, and profitability can potentially arise from several sources. A firm can realize a financing or "carry profit" when it earns a return on securities owned that exceeds its costs of financing the securities. More importantly, they may make position profits, by having gone long (held inventories of securities) in periods of rising market prices and falling interest rates, or by having gone short (sold securities they did not own and borrowed securities to make delivery) in periods of falling markets or rising interest rates. Finally, dealers may make trading profits from the spread between bid and offer prices in trading with customers and other dealers, although bid-ask spreads in most competitive markets are much too small to serve as a significant source of profit.

The efficiency and liquidity of the secondary market has a direct impact on the rate of interest that must be paid on newly issued government debt. For when investors are in a position to sell the debt before it comes due they are less fully exposed to credit risk, and that in itself is enough to reduce the rate of interest needed to issue the debt at the very outset. From the point of the central bank, moreover, the use of open market operations as an instrument of monetary policy obviously depends on the readiness of at least some market participants to quote prices at which they will buy or sell government securities.

At this stage, the secondary market in Egypt remains to be developed, and perhaps the most constructive policy approach to that process is to allow the market itself to develop spontaneously with a minimum of official guidance or regulation. This implies that banks should be allowed to negotiate directly with one another, without any legislative requirement that they deal only through brokers. Of course, at times banks may find it convenient to go through brokers simply to conceal their presence in market, but brokerage commissions should be freely negotiated because at their present mandated levels they may be prohibitively high. For much the same reason, the stamp tax on transactions in government securities should be removed as quickly as possible, since it represents a transactions cost that can only impair the liquidity of the market.

A. Market Price Fluctuations

The presumption that a secondary market will develop on its own follows almost inevitably from the fact that changes in bill prices will create trading opportunities. Banks can surely be expected to offer securities, to one another, or to their customers at varying rates, depending on their own needs for liquidity, on the cost and availability of inter-bank loans, and on the cost of deposits. And in an environment in which bank lending rates are also unregulated, the cost of funds will be driven largely by changes in demands for bank credit.

Thus, yields on outstanding bills will fluctuate over time for reasons related to the general level of short-term interest rates, and so will yields at auction. The reason is straightforward. Investors who want to buy bills can either buy new bills at auction or buy existing bills from banks. But they are unlikely to bid for new bills at a rate of discount lower than that on existing bills. If they did, they would be offering to buy at a price higher than that at which they could buy existing bills. Conversely, investors will not bid substantially higher rates of discount (lower prices) than those prevailing on existing bills. If they did, they might not obtain bills at auction since they would surely be outbid by others trying to get only a slightly better return than that available on existing securities. Thus, the prevailing level of short-term rates will determine, within a range, the discount established on new bills at issue.

If the prevailing level of short-term rates (which establishes the rate at which a bill is initially sold) falls after a bill is issued, then this bill -- as long as its price does not change -- would yield more than new bills. But buyers will compete for the bill, and, in so doing drive, up its price until the bill is sold at a rate of discount equal to the new, lower going interest rate. Conversely, if short term rates rise after a bill is issued, the unwillingness of buyers to purchase any bill at a discount less than available on new issues will drive down its price and thereby force up its yield.

All this suggests that actual, and anticipated, changes in bill prices will create trading opportunities for both bank and non-bank institutions. Furthermore, as the government issues securities with a more varied range of maturities -- bills with six- or nine-month maturities, or medium- or long-term bonds -- the trading opportunities could proliferate very rapidly. The longer the life to maturity of any government security, the more vulnerable it is to price fluctuations for any given change in interest rates. Consequently, investors will normally require higher yields on instruments with longer lives to maturity, and the "risk premium" required may be quite variable over time. Thus, in the normal course of events, investors are likely to adjust the maturity profile of the securities they own, by substituting shorter for longer term instruments in anticipation of rising interest rates or by replacing short-term securities with longer term debt in anticipation of a rising market (declining interest rates).

B. Brokerage Commissions and Stamp Taxes

In its early stages, the secondary market is likely to develop as an "over-the telephone" market in which quotations are communicated among financial institutions, and between them and other large investors, via telephone. As investors "shop the market", looking for the best quotations, bid and offer prices will tend to converge to a prevailing market price. However, the process of convergence happens much more rapidly when as many market participants as possible have easy access to accurate, timely information about market conditions. Thus, in most markets brokers perform a necessary and useful function by providing an information service that tells a trader just where the market is -- where quotations stand, and how much, in terms of securities volume, are bid or offered at those prices. By definition, brokers never position securities. Their role is simply to link market participants, and for that they charge a commission.

In short, there is a legitimate role for brokers in the government securities market, as it may take shape in Egypt. But as matters now stand, brokers must do business only through the registered exchanges (Cairo or Alexandria) and that presents very real problems. In the first place, the exchanges are open for only two hours. Bids and offers are subject to change, so that even if a broker receives and communicates quotations early in the day, those quotations may no longer be effective by the time the exchange is open for business. The second problem is much more serious. Brokerage commissions, as established by ministerial decree, amount to .002 of the transaction value.

Although seemingly small in amount, commissions at these rates could paralyze secondary market activity. This is easily illustrated. Many investors in short-term bills may want to hold them for periods much shorter than the original maturity of the bill. Suppose, for example, that a three-month bill was purchased at auction at 95.000 to yield almost 20.8 percent on a bond equivalent basis. Then, two days later the investor has an opportunity to sell the bill at 95.019, and wants to do so, either because other investment or lending opportunities have materialized or perhaps because the investor wants to realize the gain while its there. Of course, the sales price is only marginally higher than the investor's purchase price, but the potential gain, over a two-day holding period, would amount to about 36 percent. However, after payment of brokerage commissions, the seller would realize no gain at all, and if all secondary market transactions had to be executed through a broker this particular trade might never have been done.

All this suggests that investors in government securities must be free to trade without recourse to the exchanges, if a meaningful secondary market is to take shape. For that purpose transactions in government securities should also be exempt from stamp taxes. If applied at present rates, the stamp tax would have a crippling effect on market activity, even more so than brokerage commissions. Under present law, the tax would be imposed at a .007 rate on security transactions in excess of LE 100. The damaging

implications of this tax rate are easily illustrated. Suppose an investor purchased a newly issued three-month bill 97.500 to yield 10.7 percent on a bond equivalent basis. If the investor immediately sold the bill, at an asking price high enough to recover the stamp tax, the bill would have to be offered at about 97.565, which would yield only 9.8 percent to the new owner. Thus, the effect of the stamp tax is to impose a loss on the original investor, if the tax cannot be passed on, or to reduce the yield to the new owner, when the tax is shifted forward. Either way, the liquidity of the secondary market would be badly impaired, and as result participants in the primary market will act accordingly. They will require higher yields at auction to compensate for the illiquidity of the secondary market. This implies that the government's financing costs are likely to be much higher as long as the stamp tax remains in place.

C. Security Trades and Inter-Bank Lending

From the point of any commercial bank investor, the development of a secondary market would clearly allow the banks much more flexibility in the way they manage their liquidity positions. Apart from borrowing at the central bank, virtually the only way for a bank to supplement its own internally generated cash flow, or dispose of any excess liquidity, is through borrowing or lending in the interbank market. In Egypt, as elsewhere, interbank loans are typically very short-term in character, with longest maturity normally no more than two months. At present, with most of the larger banks awash with excess liquidity, rates in the interbank market reportedly range between 8 1/4 - 10 percent, depending on the term of the loan and the credit status of the borrower. More often than not, the interbank market is a "one-way market" since any liquidity shortage, or excess, is usually generalized throughout the commercial banking system. By its very nature, the market simply provides an arrangement for redistribution of liquidity between commercial banks. Put differently, it does not allow the banks to draw on non-bank sources of liquidity or respond to non-bank demands for securities.

A secondary market for government securities, when it emerges, would dispose of many of these limitations, and more. It would provide a base from which transactions in short-term bills can evolve into trades in medium- or longer-term government debt. Access to non-bank sources of liquidity will enable banks to respond more flexibly to the needs of non-bank borrowers, and in so doing contribute to more competitive lending practices. Finally, the market will generate interest rate information, so that the rate and non-rate terms on which other, private debt is issued and traded can be priced with reference to market conditions.

Moreover, if the secondary market is allowed to develop on its own, banks (and possibly non-bank dealer firms) will almost surely find ways to better accommodate their customers' needs by making markets in government securities. As mentioned earlier, this carries with it an obligation to quote prices at which they stand ready to buy and sell

bills of different maturities. Of course, these quotations need not, and cannot, be "firm" unless there is a clear understanding or agreement on the amount or size of the transaction. In any event, when a bank makes a market it acts as a principal, not as an agent or broker. This means that it must be willing to take a position in the market, by adding to its inventories, or going long, when other market participants are selling. And when others are net buyers, a bank must be prepared to sell out of its own security portfolio, and may have to borrow securities (or take a short position) if its inventories are exhausted.

In countries where securities markets are fully developed, bank and non-bank dealers continuously buy and sell from one another in managing their own positions through a variety of arrangements, and just how the secondary market in Egypt may evolve remains to be seen. Presumably, banks will continue to rely on interbank borrowing, when necessary, to finance any long positions, or to finance security purchases for resale to customers. But if interbank lending rates are relatively high, or loans are unavailable on any terms, then other types of financing arrangements will have to be developed, perhaps along lines that are used in other countries.

Rather, than rely on the interbank market as an outlet or source of funds, banks may begin to sell securities under agreements to repurchase the securities a day, a week, or several months later at the same price plus an agreed rate of interest for the period. From the point of view of the seller, such repurchase agreements provide a way to lend securities. The "counterparty" to this transaction, or borrower of securities, has an obligation to return the securities when the transaction is reversed. But in the meanwhile, the securities can be sold, in which case they would have to be replaced through market purchases before the expiration of the repurchase agreement. In effect, the counterparty will have taken a "short" position, and if market prices move lower that position would turn out to be well rewarded.

V. From Direct to Indirect Instruments of Monetary Policy

It would be illusory to suppose that the secondary market activity will develop in large volume over the very near term. Transactions in government securities would have to be exempted from stamp tax, and that may not happen until after the auction mechanism has been introduced. Moreover, it may take time for market participants to reach any consensus on trading practices or rules, on such matters as arrangements for the delivery of securities, settlement dates, and how to handle failures to make timely delivery of the securities purchased. Above all, it will take time for market participants to develop a feel for the market -- an informed view of market conditions, or how prices (interest rates) are likely to change over time. Under these circumstances, many institutions may be reluctant, understandably so, to take positions in anticipation of interest rate movements. Or, if they do take positions, and quote firm buy and sell prices, the spread between bid and offer may be very wide.

All this is to be expected in a period in which the market is still in its formative stages. But it is no reason to defer the introduction of an auction mechanism for the issue of government securities. Indeed, in the present economic and financial environment, this may be the best of all times to begin. With the surge in foreign official assistance, much, if not all, of the prospective budget deficit in 1991 can be financed through use of the local currency counterpart of those inflows. The government's domestic financing requirements, if any, will be relatively small. Any newly issued bills -- over and above the government's financing needs -- can, and should, be used to retire outstanding debt, which carries non-market rates of interest. Moreover, the demand for bank credit by business borrowers (both public and private enterprises) appears to be relatively weak, and the commercial banks are unusually liquid, whether liquidity is defined inclusive or exclusive of their reserve accounts with the central bank.

This does not mean that liquidity is evenly distributed within the system or that all banks are in a position to bid very aggressively at auction. But, taken as a group, the banks' "excess" liquidity, over and above the amounts required to satisfy the minimum liquidity requirement, came to roughly LE 2 billion at the end of last September, and this should be interpreted as a minimal estimate of the potential for investment in Treasury bills. For when allowance is made for liquidity outside the banking system, or for possible conversion of foreign into local currency the market's "absorptive capacity" is clearly much larger. All this suggests, that a bill auction at this time need not result in an explosive increase in interest rates, especially if the initial offerings are relatively small in amount.

A. Reserve Management

Once the auction is underway, the central bank will be in a much better position to manage the growth in the reserve and credit aggregates, without reliance on credit ceilings or other direct instruments of control. Those ceilings can be rendered ineffective, as long as the government is free to borrow directly from the central bank or as long as commercial banks are allowed to redeem government debt at par through the central bank. Under these circumstances, which effectively provide the government with open-ended access to central bank credit, the central bank is deprived of effective control of its own liabilities -- reserve money in the form of currency and reserves of commercial banks.

In a sense, the issue of bills through an auction mechanism would enable the central bank to reassert control over its own net domestic assets. Viewed in a different way, the central bank is in a position to manage its own domestic liabilities in the form of reserve money, and since the growth in reserve money determines -- within fairly predictable limits -- the growth in monetary aggregates, the authorities can influence the overall rate of growth in the net domestic assets of the banking system as a whole. This is done by changing the amount of new issues government debt (net of any redemptions of outstanding debt) at the weekly auctions. The issue of debt, whether sold to a commercial bank or to a non-bank investor, has its counterpart in a corresponding reduction in the combined reserve balances of the commercial banks. Conversely, any redemption of debt would be reflected in an increase in currency outstanding and/or a rise in commercial bank reserve balances.

Even without a broad-based, active secondary market for government securities, which is a necessary condition for the conduct of open market operations, the monetary authorities can at least approximate the effects of open market sales (or purchases) by varying the amount of new issues in the primary market. Open market operations provide much more policy flexibility, in the timing of any sales or purchases, and in techniques used to absorb or supply reserves. But either way, the main focus of policy is on the relationship between the demand for reserves (as determined by reserve requirements) and the projected supply of reserves (which is subject to a variety of factors beyond the central bank's direct control).

Within this framework, a neutral or unchanged policy would be designed to absorb any excess supply of reserves by offering bills at auction in amounts roughly equivalent to the estimated excess. Alternatively, if the forecast suggests that a reserve shortage might develop, and create upward pressures on interest rates, then a neutral policy would call for the redemption of maturing bills rather than refinancing them through new issues. When policy restraint is called for, the authorities might simply allow a reserve shortage to develop and/or issue bills to create an even larger shortage. In the process, interest rates would rise as demands on the interbank market intensified and

banks reduced their holdings of bills. If the process goes far enough, and banks develop reserve deficiencies, they would be compelled to turn to the central bank for accommodation. A policy of monetary ease would call for bill sales in amounts smaller than the projected reserve surplus, or for the redemption of maturing bills, perhaps even for the advance redemption of any longer-term debt.

The implementation of this approach does not require detailed or precise estimates of all of the many factors that supply or absorb commercial bank reserves. But the central bank should be in a position to project changes in the most important of these factors -- the government's cash balances, the National Investment Bank's account, demand for currency, and the central bank's foreign exchange holdings. In many respects, each of these balance sheet items are beyond the central bank's control. Some may be subject to considerable period-to-period or even day-to-day variation. For some factors, the variability may be reasonably predictable. Others may have a predictable component, but they may also change in ways that are hard to forecast. Under the best of circumstances, the projections will inevitably be subject to error. Still, an effort should be made to form at least rough estimates of the change in the supply of reserves, if not on a weekly basis, then over monthly periods. Otherwise, the central bank may discover that it is acting to supply (or absorb) reserves, when non-policy factors have much the same effect, and this may only intensify swings in reserve availability.

B. The Discount Mechanism

In an environment in which interest rates will be largely market determined, the question naturally arises whether the discount mechanism should be modified, and if so how. Certainly, in periods when policy is oriented toward restraint banks will have every incentive to turn to the central bank for accommodation if the discount rate is slow to adjust to changes in market rates of interest. And if the central bank is unselective in accommodating any demands for credit there is real danger that the facility will be abused, and simply compound the need for offsetting increases in sales of bills.

The easy and obvious way to minimize these pressures is to adjust the rate automatically in line with changes in the average auction rate on bills, and to add a premium above the auction rate so that the discount rate becomes a penalty rate. The presumption implicit in this approach is that banks should liquidate their holdings of bills, even if that entails substantial losses, before turning to the central bank for assistance. In countries where secondary markets are well developed this approach has its appeal. However, that is not the case in Egypt, and to subject all bank borrowing to a penalty rate, irrespective of the circumstances that prompt the need for assistance, seems both inappropriate and out of context.

Of course, the discount rate must be adjusted from time to time in line with changes in money market conditions. However, it need not be set at a penalty level if the authorities make it clear that use of the discount facility is viewed as a measure of last resort. As a rule, access to central bank credit should be limited in amount, frequency, and duration. To be sure, if a bank is in difficulty, and experiences unusually large deposit withdrawals, then assistance must be made available, perhaps for extended periods, until its basic problems are resolved either through an acquisition, an infusion of additional capital, or other action. But apart from emergency situations, borrowing from the central bank should be conditional on prompt repayment. Thus, if a bank comes up short in its efforts to meet its reserve requirement, after having made a good faith effort to obtain funds from other sources, then credit might be made available, but only for a few business days. This would subject the bank to additional pressure to find other sources of reserves to repay the loans. In short, the terms on which commercial banks are allowed to borrow is perhaps more important than the mechanism by which the rate is set.

VI. Concluding Suggestions

Despite all the uncertainties about where interest rates may settle in a less regulated environment, the introduction of an auction mechanism for bills is long overdue. At this point, the central bank has a detailed plan for the conduct of the auction, and the procedures should be communicated to eligible participants as quickly as possible, so that there no misunderstanding or confusion about pricing of successful tenders, allotment procedures, and arrangements for settlement of successful bids. The auction results -- volume of bills sold, weighted average yield on competitive bids, range of accepted bid prices, and the volume of unsuccessful tender -- should be regularly reported to the press. For that purpose, the central bank should designate one or more officers to meet with the press to answer any questions that may arise, but in ways that minimize the possibility of any speculative inference about the "orientation" or thrust of monetary policy.

At the very outset, the central bank should make clear that it expects eligible auction participants, especially banks, to make markets in bills. And it should monitor the market to get some indication of just how fully banks are complying with that request. It would be useful to schedule frequent, if not daily, meetings with perhaps five or six representatives from financial institutions, simply to exchange views on market developments. As a matter of routine practice, moreover, the central bank should make regular calls to the banks to solicit bid and offer quotations. And sooner or later, the central bank should begin to formalize the process of market surveillance by requiring banks and other eligible participants to report their gross sales and purchases, along with changes in their positions during the reporting period.

As soon as it becomes operationally feasible to process tenders in potentially very large amounts, the auction should be opened up to allow individuals to submit bids, on a competitive or non-competitive basis. This will expose commercial banks to more intensive competition, but over time, if evidence unfolds that the risks of disintermediation are manageable, consideration should be given to a reducing the minimum bill denomination. At the same time, the authorities should begin to probe the market's ability to absorb debt with longer maturities, perhaps through an offering of notes in the 1-5 year maturity range. And if that offering is well received, it may be feasible to issue debt with even longer maturities.

All this may take some time, but the critically important first step is only a few weeks away. For the central bank, the introduction of an auction mechanism for varying amounts of bill issues entails a profound change in the way monetary policy will be conducted in Egypt. From time to time, the central bank may require technical assistance in one or another area of operations and policy. There is every reason to believe that this assistance would be both well received and well used.

Appendix 1 Repurchase Agreements and Matched Sale-Purchase Transactions

As the secondary market for government securities increases in size and liquidity, the central bank will be in a position to manage commercial bank reserves through open market operations, and it may decide to adopt some of the techniques employed by the Federal Reserve. Although the main thrust of those techniques appears to be well understood, questions have been raised about the use of transactions under repurchase agreements, and how they differ from outright purchases or sales of government securities.

Both the timing and amount of outright transactions depends principally, but not exclusively, on the projected behavior of bank reserves. Thus, when reserve forecasts suggest a large reserve need stretching several weeks ahead, the Federal Reserve may buy a substantial volume of government securities. Since the operations are geared to addressing extended needs, they are normally undertaken to coincide with the projected rise in the need for reserves. Alternatively, if the forecasts show a prospectively large and extended period of reserve excess, the Federal Reserve may engage in outright sales of government securities.

However, more often than not, Federal Reserve operations in the government securities market involve purchases (or sales) under agreements to reverse the transaction within a relatively short period of time. In effect, this enables the Federal Reserve to inject (or absorb) reserves in large volume for a few days at a time. Suppose, for example, a forecast suggests that a reserve shortage will develop for the remainder of a current statement week, but are at an appropriate level for the following week. Under these circumstances, the Federal Reserve might buy treasury bills outright now, and then sell bills from the portfolio a few days later when the additional reserves were no longer needed. But such a course would involve substantial transactions costs and would expose market participants to unnecessary market risks. Thus, instead of relying on outright transactions, the Federal Reserve would buy the securities under repurchase agreements (RPs), which obligate the seller to buy them back on the desired date. This involves a pair of securities trades, but the economic essence of the transaction is a collateralized loan. Stripped of all its complexities, this approach enables the Federal Reserve to inject reserves on a temporary basis without exposing market participants to additional interest rate risks.

When the Federal Reserve wants to absorb reserves temporarily, it does so through matched sale-purchase transactions (MSPs). Under these arrangements, the Federal Reserve sells treasury bills for immediate delivery, and simultaneously buys them back for delivery at some future date. In making MSPs, the Federal Reserve notifies dealers of the rate at which it will sell a particular bill. Dealers then submit the amount they are willing to buy and the rate at which they will offer. The Federal Reserve, in turn, may then raise or lower the amount of the sale if the bidding seems to indicate a bigger, or smaller, volume of reserves in the banking system than expected. The rate of

discount set by the Federal Reserve determines the price realized by the System on its sale while the competitively set reoffering rate determines the prices at which it reacquires the same issue of bills when the transaction is unwound. In terms of its effects on commercial bank reserves, an MSP is just the reverse of an RP.

Appendix 2 Persons Contacted/Interviewed

Washington, D.C.

Embassy of the Arab republic of Egypt

Sayed Elbous, Minister Plenipotentiary

Alaa Khalil, Counselor, Economic and Commercial Affairs

The Institute of International Finance

Sharif Ghalib, Director, Africa/Middle East Department

Agency for International Development

Gary L. Vaughan, Private Enterprise Officer, ANE/PSD

The World Bank

Marcelo M. Giugale, Country Operations Division, Europe, Middle East and North Africa

International Monetary Fund

Mr. Chabrier

Mr. Yendl

Mr. Ghesquiere

Cairo, Egypt

Central Bank of Egypt

Dr. Salah Hamed, Governor

Mr. Barbary, Sub-Governor

Farouk Fouad Mishriky, Sub-Governor

Fouad Osman, Sub-Governor

Fouad M. Shaker, Director General, Bank Control Dept.

Mostafa Ismail Eweiss, General Manager

Misr International Bank

Amal El-Togby, General Manager

Mohamed Ozalp, General Manager

National Bank of Egypt

Gamal El Tohami, Deputy General Manager, Foreign Division

Bank Misr

Mohamed A. Hafez, Chairman

Investments & Securities Group SAE
Dr. Ahmed S. Foda, Managing Director

USAID/Cairo
David Dod, Economic Advisor

Misr America International Bank
Ismail Hassan Mohamed, Chairman

Egyptian Finance Company
Dr. Farid W. Saad, Chairman
Cherif E. Abdel-Meguid, Manager

Al Chark Insurance Company
Ezzat M. Abdel Bary, Chairman

The Egyptian American bank
Ellie J. Baroudi, Managing Director

Capital Investment Authority
Dr. Mohamed Hassan Fag El Nour, Chairman

Maher Fahmy, Stockbroker

Mohamed Fahmy, Legal Advisor

Appendix 3 Team Members

Bond Market Specialist: Martin R. Barrett

Since 1988, Mr. Barrett has served as a consultant to foreign central banks and other official institutions in less developed countries on a wide range of policy issues. He has worked independently or as chief of party for consulting teams on a variety of assignments in Africa, Asia, the Caribbean, and Latin America. Some of these assignments have focused on broader problems in the implementation of financial policy, such as the implications of deregulation on interest rates and credit flows. On other assignments, he has evaluated the performance of indexed mortgage instruments, proposed several "market-approximating" arrangements for providing forward cover against exchange rate risks, outlined initial steps for the rehabilitation of a group of failed financial institutions, and provided an overview of the mortgage markets. From 1961 to 1981, Mr. Barrett held various positions at the New York Federal Reserve Bank.

Local Financial Markets Specialists:

Wafik Arif

Mr. Arif is a banking, credit and marketing specialist with close to 20 years experience in finance. He has extensive experience in financial planning and control, trade financing, and corporate lending, including investment and project financing. He has been involved, at a senior management level, in the packaging and marketing of financial products and services, and the management of credit and marketing groups in a banking environment. As Head of the Financial Management Department at Environmental Quality International (EQI), Mr. Arif is responsible for supervising private sector development projects, and financial management services. His duties include preparing financial assessments of diverse industrial and tourism development projects. Mr. Arif is also responsible for developing financial structures for a variety of projects. Previous positions include Senior Credit and Marketing Officer with Citibank, N.A. in the Middle East and North Africa; Country Credit and Marketing Manager with Bank of America's affiliate in Cairo; and Commercial Account Manager with Bank of Montreal, Canada.

Ahmed Hamdy

Mr. Hamdy is a Credit Specialist with extensive experience in banking management. He has been working in the banking world for over 14 years, and has been involved in all aspects of credit, marketing and operations, including financial administration, credit analysis, money management, corporate finance and taxes. In his capacity as Credit Specialist with Environmental Quality International (EQI), Mr. Hamdy conducts assessments on the financial and economic merits of an array of industrial and tourism development projects, prepares offering memoranda for investors, and develops financial

structures for a variety of projects. Prior to joining EQI, Mr. Hamdy was Country Manager of Operations and Administration with American Express Bank, Cairo, Egypt. His duties included the management of branch operations, financial administration, treasury, personnel and general services.

Financial Analyst/Technical Support: Richard Dangay

Mr. Dangay has been involved in various assignments of the Financial Sector Development Project. His experience ranges from computer programs design to financial analysis. He has evaluated financial feasibility of projects, prepared budgets, developed cost models and revised management procedures for a multinational corporation.

Appendix 4 Scope of Work

Background

The problems which exist in the financial markets of Egypt are well known. They include inactive capital markets, an over-regulated banking sector, a non-existent mortgage market, and no primary or secondary market in government or private sector debt instruments. It is in this latter area that the Central Bank of Egypt (CBE) has requested USAID assistance.

Recognizing that a primary market in debt instruments can not exist without a secondary market to trade these instruments, the CBE has requested the assistance of two debt instruments specialists who will provide an action plan for the possible development of an active debt instrument market. The CBE feels that initially a study should be undertaken to assist in preparing a possible debt issue for the Government of Egypt (GOE).

This request is of particular interest to us as we begin to assist the GOE in the liberalization of its financial markets.

Objective:

The purpose of the assignment is to provide advice to the Central Bank on how an active primary and secondary market for bonds and other debt instruments, including treasury bills, might be established, and on how the Central Bank might enter into that market.

Tasks:

1. The consultants will review available material on Egyptian financial markets prior to arriving in Cairo, including publications of the World Bank, the International Finance Corporation, and the Institute for International Finance.
2. The consultants will meet in Cairo with key officials in policy and management positions in the CBE, financial institutions, the private sector, and other knowledgeable about Egyptian financial markets.
3. The consultants will conduct a thorough analysis of the Egyptian capital market structure as it relates of debt instruments. They will investigate current legal, financial, and administrative impediments relating to current and possible future debt instruments within the capital market, including the following:

- Interest rate controls
 - Credit allocation policies/interest rate subsidies
 - Ability of the CBE to effect monetary policy
 - Tax treatment of debt instruments
 - Laws on the issuance, ownership, or trading of debt instruments
 - Mechanisms required to facilitate the development and trading of debt instruments
 - Underwriting of primary debt issues
 - Discount pricing mechanisms
 - Absorbative capacity of the bond issue in the market
 - Related impact on the deficit
4. The consultants will prepare a draft report summarizing their findings and presenting recommendations for the introduction of new debt instruments. These will include recommendations on the modifications of existing legislation to support the introduction of new debt instruments and technical advice on the initial operation of a market in debt instruments.
 5. Before departing, consultants will submit a draft copy of their report to USAID/Cairo and the Central Bank of Egypt.
 6. USAID will provide written comments on the draft copy of the report within two weeks of submission. The contractor will prepare the final report within two weeks of its receipt of comments from the mission. 10 copies of the final report will be submitted to USAID/Cairo and the Central Bank of Egypt.

Level of Effort:

The work outlined above will be completed by a three-person team of specialists in a four week assignment to Cairo with a few additional days in the U.S. in preparation prior to travel and after departure in report completion.

Qualifications:

1. The team should comprise a Bond Market Specialist, a local Financial Markets Specialist, and a Financial Analyst/Technical Support. The Bond Market Specialist should have an advanced degree in economics and finance in addition to extensive bond market related experience. He/She will be the team leader.
2. The Local Financial Markets Specialist should have in depth knowledge and understanding of Egyptian financial markets, including the history of previous bond issues, their constraints and current status.

3. **The Financial Analyst/Technical Support staff should have an advanced degree in economics or finance and overseas experience related to the development of debt instruments in developing countries.**