Coalition Provisional Authority

Technical Assistance Report

to

The Central Bank of Iraq

Formulating and Implementing Monetary Policy

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Preface

At the request of the United States Department of the Treasury, Dr. Coats visited Baghdad as a member of the Economic Policy Office of the Coalition Provisional Authority (CPA) from May 6 to July 1. The last week of the assignment was spent in Amman, Jordan. Dr. Coats was the CPA's Senior Monetary Policy Advisor to the Central Bank of Iraq and was financed by the USAID/BearingPoint. Dr. Coats is retired from the International Monetary Fund and is currently a Director of the Cayman Islands Monetary Authority.

At the Central Bank of Iraq (CBI) Dr. Coats worked with Governor Shabibi, Deputy Governors Salman and Al-Juboori, Senior Advisor Ibraihi, Director General of the Statistics and Research Department Mudher, Director General of the Agreements and Loans Department Hassan, other department heads and CBI staff.

The report was prepared with the assistance of Hashim Al-Ali (BearingPoint), Ahmad Al-Samarrie (CPA and US Office of Management of Budget, retired), George Gianaris (CPA), Simon Grey (former CPA and Bank of England), Craig Lund (CPA), Tom Simpson (US Treasury and Board of Governors of the Federal Reserve System), Robert Walker (Bearing Point), Betsy White (former CPA and Federal Reserve Bank of New York retired), and Raleigh Tozer (CPA and Federal Reserve Bank of New York). The final version of this report has been reviewed and cleared by the Iraqi team at the U.S. Treasury.

Dr Coats would like to thank all of the above colleagues and counterparts for their encouragement and assistance under difficult circumstances.

Executive Summary

The Central Bank of Iraq has been quite successful so far in stabilizing the Iraqi dinar and in bringing inflation under control. Continued success will be more likely if the CBI clarifies its monetary policy framework, develops internal guidelines for its operations within that framework and communicates clearly to the public how its operations should contribute to price stability.

The report outlines a **policy framework** in which the CBI, in pursuing its goal of price stability, targets (but does not fix) the exchange rate. The framework allows the exchange rate to move modestly in response to market demand and to allow larger changes if indicated by balance of payments fundamentals. The framework allows the market to determine the behavior of the money supply resulting from the exchange rate target, but adjusts for the impact on domestic liquidity of the government's sales of foreign exchange to the CBI. This adjustment takes the form of a target for the Central Bank's net domestic assets (NDA). With exchange rate and NDA targets, liquidity and money supply behavior, including short-term interest rates, must be allowed to respond to remaining market forces. Until money markets are better developed, the CBI should set an interest rate bench mark Policy Rate. The Policy Rate is the CBI's guess at the money market rates that should result from its exchange rate and NDA targets. Mistakes in setting the Policy Rate will be indicated if banks borrow too much from or deposit too much with the CBI.

The report also sets out changes in the CBI's reserve requirement and banking facilities needed to improve the environment in which banks manage their liquidity and the CBI implements its monetary policy. The changes are meant to provide banks with greater certainty with regard to the cost of liquidity and the options for managing it and to encourage them to rely more on the market than the CBI for managing their liquidity. The changes are also important for the development of an efficient and liquid government securities market.

The new reserve requirement will allow banks to satisfy the requirement on average over monthly periods, thus turning required reserves into a liquidity management instrument. However, the inclusion of vault cash as reserve assets will create considerable excess liquidity at Rafidain and Rasheed banks. This additional liquidity should be removed by the MOF transferring most of its deposits with these banks to the CBI.

Standing lending and deposit facilities will confine short-term interest rates within a moderate range while providing an incentive for banks to deal directly with each other. The increased certainty should enable banks to operate safely with lower excess reserves, which are now almost as large as the very large requirement reserves.

To formulate and implement monetary policy within this framework, the CBI needs information about economic and financial developments. Work is going forward to **improve the quality and timeliness of relevant data**. The report recommends

increasing the responsibility of key users of data for their improvement and strengthening the technical basis of the Statistics and Research Department's collection, maintenance, and provision of these data. The Governing Board should require regular reports on progress.

In addition, data need to be analyzed and the analysis needs to be presented to the policy makers in a useful and timely manner. The report outlines a process similar to what is used in most central banks by which **staff prepare briefs** for the Board's monetary policy reviews. These briefs, in a structured way, analyze economic developments relevant for monetary policy and formulate policy recommendations and/or analyze policy options for the consideration of the Board.

The first round of staff policy briefs were presented to management June 20. The further development of these briefs can play a very important role in improving the formulation of monetary policy in Iraq. However, for this development to occur, management must provide the necessary leadership.

A main conclusion of these initial staff briefs is that the CBI should moderate the rapid liquidity growth now coming from government sales of foreign exchange to the CBI by steadily reducing its claims on the government (NDA) every month. The government's sales of foreign exchange to the CBI are expected to average around one billion dollars per month for the rest of the year and the CBI's sales to the market are expected to be on the order of $400 million per month. The CBI will need to work with the MOF to increase the government's sales of securities to the market above its refinancing needs or to issue and sell its own bills for this purpose.

Central Bank Boards generally express their monetary policy decisions in a **Policy Directive** that delegates the day to day implementation of policy to management or to a **Monetary Policy Committee**. The report outlines the process for doing so and provides a model Policy Directive.

Monetary policy is more effective when it is well understood by both the central bank and the public. The report outlines approaches to communicating policy to the public and provides a model **Press Communiqué** for announcing its monetary policy decisions.

Key Recommendations

- Adopt new reserve requirement and banking facilities regulations before the first government securities auction. In consultation with banks, develop the instructions and procedures to fully implement the new regulations and to monitor their operation.

- Establish and publish the dates for the monthly monetary policy reviews by the Board. Instruct staff to continue preparing monthly briefs in time for each such Board meeting and clarify the responsibilities for supervising and coordinating the briefing process.

- Establish and implement the CBI's policy for communicating its policy actions and other activities to the public.

- Develop the means for draining ID 300 to 400 billion from the market each month for the rest of the year. This is best done cooperatively with the MOF. On a one time bases in September, the government should reduce the extra liquidity created by the new reserve requirement by transferring about ID 600 billion in its deposits with Rafidain and Rasheed banks to the CBI.

- Reorganize the Bank to more efficiently and effectively fulfill its objectives as set out in the new Central Bank Law.

I. Introduction

The Central Bank of Iraq (CBI) is mandated in the central bank law to maintain price stability. To do so it must adopt a monetary policy regime consistent with price stability and develop the capacity to implement that regime successfully. Successful implementation of the regime will require collecting and analyzing relevant economic data (inflation rate, interest rates, exchange rate, money supply, GDP, BOP, etc.), presenting that data and analysis to the CBI board with policy recommendations, the development of appropriate policy instruments and the development of a government securities market.

This report reviews the current, heavily managed exchange rate regime and proposes a framework in which money supply developments can also be taken into account in formulating policy once open market operations are possible. It sets out the changes in the CBI's policy instruments (standing facilities, reserve requirement, and open market operations) that will be needed for implementing policy under almost any policy regime and that are needed to facilitate the development of liquidity in the government securities market. It makes recommendations for the organization of the analysis of policy options for the Board of the CBI, and for the day to day implementation of policy decisions. The report sets monetary policy implementation in the context of the development of the government securities market and improvements in payment systems. Finally, the report sets out a work plan for further improvements in the areas of the reports primary concern and touches on related areas where additional assistance is also needed.

II. The Monetary Policy Regime

The CBI does not yet have reliable data on the money supply. It is hoped that work now underway will result in appropriate measures in the next few months. However, it will take longer to develop credible time series and seasonal adjustments. The data provided to it by the Central Statistical Organization (CSO) on prices (the Consumer Price Index—CPI) have a number of shortcomings, though work to improve the index is going forward. While year on year inflation figures are thought to be reasonably accurate, month to month data are not. Moreover, GDP data are only available with a long lag and only give a rough indication of the level of economic activity and its rate of growth.

Unemployment data is only available from occasional surveys. There are no financial markets producing market interest rates for financial instruments, though bank loan and deposit rate data are available monthly since liberalization March 1. Balance of payments data is compiled with a six months to one year lag though improvements are being made.

A major part of the data collection problem rests with manual accounting and poor communication between bank branches and their head offices (and similar problems for other economic entities) and the generally low level of the information and telecommunication infrastructure. Progress is being made toward improving the quality and timeliness of bank data and other data, however. Technical assistance is being given in this area by the CPA and USAID (Bearing Point). There are a number of organized training sessions and seminars, as well as some surveys being carried out with the assistance of some international organizations, such as the IMF, World Bank, UNICEF, UNDP, WFP, and others. However, it will take some years before Iraq's economic data approach international standards. Significant improvements in data most immediately relevant for monetary policy may be expected soon.

In the current environment it is not possible for the CBI to achieve a base money (or other monetary aggregate) target and it would be disruptive and undesirable to do so if it could. One price is well known and available with no lag, which is the exchange rate. In addition, good data is available for oil revenues, which constituted about 89 percent of government revenues in 2003. Furthermore, imports are about half of GDP in 2003, and thus the domestic price level is very sensitive to the exchange rate movements. Thus stable exchange rates make a significant contribution to a stable price level.

Current Monetary Regime

In perusing its goal of price stability, the CBI has no alternative at present to basing its monetary policy on the behavior of the exchange rate. The system now in operation can be briefly described as one in which base money and the money supply grow as a result of the inflow of foreign exchange (largely oil revenue) to the government, which the government sells to the CBI for dinars in order to meet its domestic obligations (salaries, etc.). The CBI limits the monetary impact of these net capital inflows by selling to the market (banks and their customers) some of the foreign exchange it acquires from the government.

However, rather than determining the size of its foreign exchange sales with the aim of achieving some rate of monetary growth, the CBI aims to stabilize the I.D./ U.S. dollar exchange rate. The authorities rejected the choice of a hard peg, for example a currency board (which has been so successful in some other transition economies—Bosnia and Herzegovina, Bulgaria, Estonia, Lithuania) because of the relatively low level of the CBI's foreign exchange cover of its monetary liabilities. Some also argued that a hard peg might not be appropriate for a country primarily reliant on oil exports for its foreign exchange, though most of the oil exporters in the Gulf have exchange rates fixed to the US dollar.

The current policy regime in Iraq may be described as one of rather heavily managed floating. Others have characterized it as a soft exchange rate peg. The CBI's sole instrument of policy has been an almost daily auction of U.S. dollars to banks that wish to buy them. The auction is a daily clearing house of market supply and demand, with banks potentially submitting both bids for and offers of dollars. In fact, there are very few offers of dollars other than from the CBI. The auction results set a single rate for all transactions in the session. These FX auctions were started in early October 2003 and are functioning well.

In order to determine its supply of dollars to the market in the auctions, the CBI takes into account several factors. It collects data on market exchange rates from selected FX dealers and bureaus each morning and afternoon of every business day, and it is influenced by the direction exchange rates are tending. It then analyses the bids and asks submitted in the auction and chooses an exchange rate (and supply of dollars) that satisfies most of the market's demand. Whether it satisfies most or almost all of the market's demand depends on the behavior of the market exchange rate data.

In addition to these two factors, the CBI's decisions about the amount of its dollar sales are also influence by developments in its foreign exchange reserves. By now, the CBI has reasonably good estimates of the amount of dollars the Government will sell to it. It has a general goal of building the level of its foreign exchange reserves over time. Reserve data is available daily with little or no lag. An expected persistent decline in reserves would lead the Auction Committee to accept a more depreciated exchange rate for the dinar.

Interim Improvements

The CBI's policy of managed floating is out of favor in most countries in preference for the greater clarity of a hard peg (such as a currency board) or a free float. Soft pegs or managed floating potentially suffer from the risk of destabilizing speculation that often results from the central bank not playing properly by the rules of the regime it has chosen. The logic of a soft peg or managed floating is that while using stability of the exchange rate to anchor inflationary expectations, the authorities must allow the exchange rate to adjust to economic fundamentals (e.g., "permanent" changes in oil prices and thus the balance of payments) while resisting short run volatility in the rate. The peg can also be supported against speculative pressures by appropriate adjustments in domestic liquidity.

The challenge for the CBI is to turn this broad statement of policy into meaningful operational guidelines that can instruct both the day-to-day policy decisions of the CBI and the public's understanding of them. The CBI should never loose sight of its objective of price stability and its need to use the instruments available to it to that end.

It is a generally accepted proposition that a central bank cannot target both the exchange rate and the money supply (or some similar monetary aggregate) because the two targets may imply two different price levels. It is generally assumed that central banks have a number of policy instruments (e.g., foreign exchange market intervention with which to target the exchange rate) and domestic open market operations (e.g., the purchase and sale of MOF securities with which to target base money). For such central banks, the ultimate impossibility of targeting both the exchange rate and the money supply has to do with the ultimate impossibility of fixing (i) a non market equilibrium **real** exchange rate (the nominal exchange rate adjusted for inflation) in the face of capital mobility and limited foreign exchange reserves and (ii) a non market equilibrium **real** money supply (or interest rate).

If the exchange rate is too low (too many dinars per dollar), the net inflow of foreign currency (from trade surpluses, foreign investment, aid, etc.) will increase the money supply as the central bank buys up the foreign currency to preserve the exchange rate. The increase in the money supply will drive up domestic prices and thus increase the real exchange rate to its equilibrium level. If the exchange rate is too high (to few dinars per dollar), the reverse would occur. Foreign currencies will flow out of the country reducing the money supply as the central bank sells its foreign exchange to preserve the nominal exchange rate. The fall in the money supply will lead to lower inflation/prices and thus reduce the real exchange rate to its equilibrium. These market forces and the resulting adjustments in the money supply are equilibrating (this is how a currency board works) unless the central bank also tries to target the money supply and thus undermines these market forces. Persistence by the central bank with both targets would tend to result in the depletion of its foreign exchange reserves (after which the two targets could only be maintained by imposing capital, price, and interest rate controls), or the explosive growth in reserves in a futile effort to neutralize the resulting capital inflows or outflows.[2]

Until now, the CBI has been particularly constrained against any misguided attempt to target both the exchange rate and the money supply because it has only had, effectively, one instrument of policy—the foreign exchange auctions. Thus, for any particular exchange rate target, monetary growth depends on government decisions with regard to its sales of foreign currency to the CBI for dinars that it then spends for domestic goods and services (e.g., government employee wages). If the government's sales of foreign exchange are more than enough to finance the net needs of importers (at the prevailing exchange rate), its sales to the CBI will be greater than the CBI's foreign exchange auctions to the market and the CBI's net foreign assets (and base money) will grow. In time, the market's equilibrating forces described above could adjust to almost any stable fiscal policy. If the size of the government's foreign exchange sales to the CBI vary a lot, market adjustments will be much more difficult unless the CBI can moderate the monetary consequences.

If the currently higher than usual oil prices and resulting higher revenues continue, the government may increase foreign and domestic expenditures and thus its sales of dollars to the CBI. The current budget limits such increases but the temptation to spend available reserves will be great. Unless these higher purchases of dollars by the CBI were offset by increased sales to the public in the CBI's foreign exchange auction, which would tend to offset downward pressure on, or appreciate the dinar, the dinar money supply would grow more rapidly producing upward pressure on prices.[3] In this event, the CBI would need to decide whether to accept a more rapid reserve accumulation, thus permitting an

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[2] Iraq does have capital controls but they are not thought to be very effective. In addition, some key prices continue to be controlled and heavily subsidized (such as gasoline prices).

[3] In Iraq's current condition of considerable unemployment, the effects being describe are likely to be modest. The increase in demand created by increased government spending out of extra oil revenue would, to some extend, increase imports and thus the demand for dollars in the auction at the same exchange rate.

increase in inflation. However, the government may choose to place much of this temporary windfall in a stabilization fund for use when foreign exchange inflows (e.g. from below average oil prices) are below average, which would diminish or remove the dilemma for monetary policy, as well as help stabilize government expenditures over time.

The CBI has rejected a hard peg, which would allow monetary growth to be determined by market forces (and fiscal policy and a stabilization fund), because it believes its existing level of foreign exchange reserves are not adequate to insure the credibility of a hard peg. Thus it has chosen to stabilize the rate but to stand ready to allow it to adjust in the event economic conditions suggest the need for such an adjustment.

In most countries such a policy would call for no sterilization of the monetary consequences of foreign exchange interventions needed to maintain the desired exchange rate target as long as the central bank's reserves remained adequate, unless there was clear evidence of a change in the fundamentals determining the equilibrium exchange rate. This strategy remains largely valid for Iraq, but unlike most countries it must also take into account the impact of fiscal policy's more direct affect on domestic liquidity. It would be pure coincidence if the base money created from government sales of foreign currency to the CBI less CBI sales of foreign currency to the market (to achieve its exchange rate target) produced the monetary growth needed for price stability. Thus, unless the CBI enjoyed exceptional influence over fiscal policy, it would be appropriate for it to adjust the monetary growth that would result from interventions to stabilize the exchange rate by using its second instrument—open market purchases or sales of government securities. While it should not set both exchange rate and money supply targets, it may usefully set an exchange rate and net domestic assets targets (see the next section).

The Role of Monetary Targets

With the development of a government securities market the CBI will have two instruments and could target both an exchange rate and a (base) money growth rate. It is very likely, however, that the real exchange rate (the nominal exchange rate adjusted for changes in the price level in Iraqi dinar) wanted by the market will require a different price level (given the nominal exchange rate target) than does the real monetary base demanded by the economy (given the nominal base money target). Something must give.

As explained above, an economy can produce whatever real exchange rate it needs through adjustments in the domestic price level.[4] One strategy that should be considered by the CBI would be to develop an approach to a monetary target that preserves the automatic stabilizing properties of unsterilized intervention to stabilize the exchange rate. The CBI could give primacy to the exchange rate while monitoring base money as a

[4] This abstracts from the costs that might be born during the price adjustment and thus the possibility that adjusting the exchange rate might be the easer way to adjust the real exchange rate in response to a permanent shock to equilibrium.

source of information on developments or could give primacy to the base money target allowing the market exchange rate to do more of the adjusting. In the near future, when money demand is likely to be changing for many reasons and the data with which to estimate its behavior is not available, emphasizing exchange rate stability to anchor inflation expectations is almost unavoidable. None the less, policy can benefit from monitoring the behavior of the money supply. An approach to formulating monetary policy with this feature is set out below.

The CBI can establish a money or base money target in the traditional way.[5] An inflation target is chosen, real income growth is forecasted (guessed) and any factors that might influence the income elasticity of money demand (or velocity of circulation) are factored in. If inflation and interest rates are moderate and stable, and the economy has adjusted to the new currency, a stable elasticity of one is a reasonable assumption (meaning the velocity, the inverse of k, would be constant).[6] The demand for base money can be stated as follows:

1. $B^d \equiv kPq$,

Where

$B \equiv$ Base money,
$k \equiv$ income elasticity of demand for B (inverse of velocity),
$P \equiv$ Price level, and
$q \equiv$ real income.

Thus to a first approximation:

2. $\Delta B^d/B = \Delta k/k + \Delta P/P + \Delta q/q$

This expression says that the rate of growth of base money demanded by the economy depends on the rates of growth of its demand, inflation and real income. By setting an inflation target (say 5 percent) and forecasting (guessing) its growth rate over the next year (say 10 percent)[7] and forecasting (assuming) a rate of change in demand (say zero), we arrive at a target growth rate for base money (which will be indicated by a superscript *). This "target" is the rate of growth that will produce the desired inflation rate if the assumptions for q and k are correct.

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[5] This is more or less the simplest model possible. As data and CBI experience improve, modestly elaborated models should be developed that include the real sector more explicitly (output gap), financial markets, the external sector and possibly the fiscal sector.

[6] For the sake of simplicity, the following formulation is in terms of base money rather than M1 or M2. This assumes a stable multiplier related B to an M. However, the multiplier is almost certain to increase over the next few years from improvements in the payment system, banks, and liquidity management capabilities.

[7] Given the "post" war starting point, this is probably too low if security conditions are significantly improved and too high if they are not. However, these guestimates have not yet benefited from staff analysis of the sort that should be reflected in their Board Briefs.

The supply of base money can be controlled by the central bank as a result of its ultimate control over the size of its balance sheet. Base money is determined by the behavior of the central bank's net foreign assets (NFA) and its net domestic assets (NDA). Thus if NDA doesn't change (as with a currency board) the behavior of base money is determined by the behavior of NFA.

3. $B^s \equiv NFA + NDA$, and

$$\Delta B^s/B \equiv (\Delta NFA + \Delta NDA)/B$$

Market equilibrium requires:

4. $B^s = B^d$

When money supply does not equal money demand, market forces are set in motion that bring about equilibrium. If the exchange rate is fixed, equilibrium is achieved by adjustments in NFA and the money supply. If the money supply (or its growth rate) is fixed equilibrium is achieved by adjustments in the price level (or inflation rate).

In reality, none of these assumptions or forecasts is likely to be correct, but the simple money demand, money supply framework provides a useful structure in which to discuss the factors that might cause the inflation outcome to be different than desired by policy or that might cause the policy settings needed for the inflation target to be different than initially thought. Thus the framework can be a useful way to focus a discussion among Board members and between Board members and staff on whether the current stance of policy is appropriate or not in light of the inflation objective.

The CBI understandably wishes to target (manage) the exchange rate as its key policy variable. This is possible as long as the rate chosen is consistent with a sustainable balance of payments. Otherwise the CBI would eventually run out of the foreign exchange reserves needed to support the exchange rate.[8] If the exchange rate is not sustainable, perhaps because of changes in conditions, it will have to be changed. If the analysis and forecasting of the staff (along the lines recommended here) strongly indicate the likelihood that the existing exchange rate is not viable, the CBI would be able to allow it to adjust in a more orderly way than would occur under a speculative attack as its foreign exchange reserves run out. At a minimum, staff should prepare projections of the sustainable rate of foreign exchange sales at the auction supplemented with any information it might have on special or seasonal factors that may be expected to influence market demand. Larger sales could not be sustained for long periods.

The key factors in the sustainability of the exchange rate can be expressed as those determining the government's sales of foreign exchange to the CBI (FXP) and those determining, in large measure, the CBI's net sales to the public (FXS). The difference between these will determine the change in the CBI's net foreign assets (NFA). An

[8] This assumes that the price level is not able to adjust quickly enough to bring about the real exchange rate needed.

exchange rate that would require a steady decline in NFA, or even a significant decline for a long period is not sustainable.

5. $\Delta NFA \equiv FXP - FXS$

The government's sales of foreign exchange to the CBI depend on its revenue, which for all practical purposes is its oil export revenue (Oil),[9] plus or minus resources taken from or added to a stabilization fund (SF) for foreign exchange, and minus government imports paid for in dollars (MG). These are now defined in the government's budget. Good forecasts for FXP should be possible for six to twelve months into the future (especially if Iraq establishes and uses a stabilization fund, which would absorb variations in Oil revenues).

6. $FXP \equiv Oil - SF - MG$

The more difficult part of this undertaking is to forecast the amounts that the CBI will need to sell the market in its FX auctions in order to maintain more or less the same (or target) exchange rate. Given the dominant role of oil revenue and the fact that it goes to the government, it is useful to separate that from other exports and remittances from Iraqi's living and working abroad. Thus, the central bank's sales of foreign exchange will be determined by the needs of private sector importers (M), less non-oil export revenues and remittances (X). There are two other sources of demand for foreign exchange in the CBI's auctions that are also important: changes (shocks) to Iraqi dinar money supply that are partially offset by exchanges between foreign currencies and Iraqi dinar[10], and changes in demand by speculators and from shifts in Iraqi dinar money demand.[11] The former, shocks to base money supply, could come from unexpected changes in the government's sales of dollars to the CBI (FXP) or errors in the forecast for net, non-oil imports $(M\text{-}X)^f$, e.g., unexpected changes in remittances. The latter, shock to base money demand, could come from unexpected changes in k or in the growth rate for income.

7. $FXS \equiv f(M\text{-}X)^f + g(\Delta B^s - \Delta B^*) + h(\Delta B^* - \Delta B^d);$

where $f(M\text{-}X)^f$ refers to the forecast, rather than the actual, value of net, non government imports.

Combining the above equations gives an expression for the actual behavior of base money as a result of the underlying factors determining NFA.

8. $\Delta B \equiv FXP - f(M\text{-}X)^f - g(\Delta B^s - \Delta B^*) - h(\Delta B^d - \Delta B^*) + \Delta NDA.$

[9] Foreign aid is largely used to buy foreign goods and services and thus would not generally be sold to the CBI for dinar.

[10] While a money supply shock could dissipate into prices and income, the assumption here is that g of it will be absorbed by exchanging the excess or short fall of dinar for dollars.

[11] Any other changes in international capital flows are ignored or may be assumed to reflect themselves in foreign financed inflows in capital goods and services (which should have no effect on the CBI's supply of dollars to the market at a given exchange rate.

As noted above, attempting to use open market operations (i.e., adjustments in NDA) to achieve a base money target will almost always result in a conflict with the exchange rate target. However, the above framework can be very useful in deciding when adjustments in NDA are helpful and when they are not.

Given the base money target (B^{*}) implied in equation 2 (and the inflation target, income growth forecast, and assumed change in velocity), the forecast of the government's sales of dollars to the CBI (FXP^f) and the forecast sales of dollars to the market (FXS^f), the needed change in NDA would be[12]:

9. $\Delta NDA^{*} \equiv \Delta B^{*} - FXP^{f} + f(M–X)^{f}$

This expression defines the magnitude of open market operations needed by the CBI to achieve the base money target (approximately ΔNDA^{*}, assuming that the CBI's lending to banks and Overnight Deposits from them and direct credit to government are zero on average).

The policy strategy emerges from this relationship. With a good forecast from the MOF of FXP, the CBI should generally stick to the target for ΔNDA even when base money misses its targets. It will miss its targets as a result of the automatic equilibrating forces described earlier for a fixed exchange rate regime. This is equivalent to saying that changes in B that arise from changes in NFA should not be sterilized.

This is worth examining more closely in order to make it very operational for the CBI's policy choices. Equation 6 states that foreign exchange sales to the public will respond (and thus base money will respond) to unexpected changes in, e.g., government sales of dollars to the CBI or remittances from abroad. If the CBI does nothing to sterilize these changes in its NFAs and B, the changes in B will help defend the exchange rate target. If the government, for example, reduces FXP because of falling oil revenues, $g(\Delta B^{s} – \Delta B^{*})$ would be negative and would reduce part but not all of the reduction in NFA. The fall in NFA (when ΔNDA is held constant at its target level) has the desired effect of reducing ΔB (below its "target" rate). The reduction in base money growth is desirable in these circumstances because it helps defend the exchange rate by raising dinar interest rates relative to dollar interest rates and because it reduces the supply of money relative to its demand (which is why interest rates would rise) leading some people to sell dollars in order to satisfy their demand for dinars (the equilibrating mechanism of a fixed exchange rate). The growth in base money would fall (desirably) below its "target", and it would be a mistake to increase NDA in an effort to achieve ΔB^{*}. If anything, the CBI might consider reducing NDA to further strengthen the market's automatic response.

To take another example, if the public's demand for dinars falls (relative to the behavior assumed for k when establishing the base money target), $h(\Delta B^{d} - \Delta B^{*})$ would be negative. In equation 7 the fall in the demand for money will increase the central bank's sales of dollars to the market (FXS) and thus reduce NFA (see equation 3) and base money. But a fall in base money (though below its target) is desirable by reducing the

[12] These assumptions assume that the shock (error) terms are zero on average.

potentially inflationary impact of the fall in money demand and defending the exchange rate. It defends the exchange rate by absorbing some of the excess liquidity created by the fall in money demand (thus mitigating the fall in interest rates that might otherwise occur) and tends to bring the reserve loss (fall in NFA) to an end. Though ΔB has fallen below its target, it would again be a mistake to increase NDA in an effort to maintain the target. Again, if anything, the CBI might consider further reducing NDA in order to support and strengthen the markets automatic corrective reactions.

To summarize, as long as underlying balance of payments fundamentals continue to suggest the viability of the existing exchange rate and the CBI wishes to adhere to an exchange rate target, it should set and adhere to an NDA target. This target is set with base money and NFA (FX reserves) targets in mind. However, the CBI should allow market developments and surprises to change the behavior of NFA (as they now do because of the lack of a second instrument) in order to enjoy the equilibrating departures of base money from its target.

As experience with implementing such a policy is accumulated, financial markets develop, and foreign exchange reserves grow, the CBI will be able to chose either a hard exchange rate peg (such as a currency board) or a free float with a firmer money or base money target to anchor price expectations and behavior. Following the rules of the game outlined here it should be possible to move gradually toward one regime or the other.

III. Monetary Policy Instruments[13]

The design of a central bank's monetary policy instruments should serve both to foster efficient short-term liquidity management by banks and to deliver the central bank's desired monetary policy (which can be measured by a variety of intermediate variables, including the yield curve, the exchange rate, and the rate of growth of the monetary supply). With regard to liquidity management, the central bank's policy instruments must work together with money and securities markets and an efficient payment system to provide banks with confidence that they can always meet their payment obligations at a reasonable cost. The most certain, but also the most costly, form of liquidity is provided by excess reserves (vault cash and balances with the central bank in excess of required reserves). Intermediation spreads can be narrowed by enabling banks to minimize their holdings of non-interest yielding excess reserves. Banks ability to minimize excess reserves depends on the availability of other reliable means of liquidity management.

The CBI currently has the following active and passive instruments that affect market liquidity (base money):

- Foreign exchange auctions, in which the CBI buys or sells dollars to the market in light of its policy objectives;
- A reserve requirement regulation that requires banks to hold in relation to their customers deposits: differentiated levels of deposits with the CBI, vault cash, and MOF securities.
- An Overdraft Facility, for banks with reserve account balances at the CBI that are not sufficient to settle their net end of day payment obligations (currently charging 12%);
- A Discount Window for bills of exchange and similar bank paper with a maturity of less than 90 days and at least two endorsements (currently charging 12% for good quality paper);
- Lender of Last Resort Facility, which provides individually negotiated loans against collateral, for banks with chronic liquidity problems (currently at 6% with t-bill collateral);
- MOF Securities Window, at which banks may buy or sell MOF securities at par (i.e. at issued interest rate).

The above instruments are not adequate for the development of an efficient market oriented financial sector. In particular, they are not adequate or appropriate for developing an efficient and liquid market in government securities or for conducting a market based monetary policy. While the new foreign exchange auctions are well designed and are functioning satisfactorily, the other instruments are being redesigned.

[13] This section has gone through several drafts. It was initially written to explain the proposed changes to the CBI management and staff. In its final form below it is written to explain to banks and the public the specific changes actually proposed. It is expected that after a brief period of consultation with banks, these changes will be adopted prior to the June 24 auction of t-bills.

The reserve requirement does not provide banks with a useful liquidity management tool and would have complicated the implementation of a monetary target. It also includes a government securities requirement that should not be part of the requirement. The various lending facilities are not very transparent and do not always serve policy objectives. The MOF securities window provides much needed liquidity to MOF securities, but under terms that undercut the development of secondary trading and of an interbank market. Furthermore, the MOF securities window deprives the CBI of one of its most important instruments of monetary control by leaving to banks the discretion to buy or sell MOF securities with the CBI.

Articles 28, 29 and 30 of the CBI law establish the CBI's powers to conduct open market operations, provide standing facilities for banks, establish reserve requirements, and, under exceptional circumstances, provide Lender of Last Resort credits. These articles provide the basis for the modern policy instruments being adopted by the CBI.

Prior to the first auction of new t-bills (now expected to take place the first week of July 1), the CBI will close its overdraft and advances windows and its purchases and sales of MOF securities with banks at the banks' initiative. It will also replace the reserve requirement, including the separate requirements for vault cash and MOF securities. Banks will need to adjust how they manage their liquidity in light of these new instruments. The new instruments are designed to help banks manage their liquidity without the open MOF security window they have used in the past. In addition, banks are encouraged to deal with each other more extensively rather than the central bank when managing their liquidity. Banks wishing to buy or sell MOF securities should first look to other banks as their counterparty rather than the central bank.

The reasons for and key features of each new instrument are set out below.

Reserve Requirement

The CBI's reserve requirement, confirmed as recently as December 12, 2003, is really three separate requirements in one Instruction.[14] It requires banks to maintain frozen deposits with the CBI, which are currently 20% of their current/demand deposit liabilities of the previous month, 5% of their savings deposit liabilities, and 2% of their time/fixed deposit liabilities. In addition, the Instruction also contains two additional, basically unrelated requirements to hold MOF securities of at least 10% of banks' total deposit liabilities and vault cash of at least 5% of total deposit liabilities. These required reserves are not remunerated. The Reserve Requirement Instruction is addressed by CBI's Board of Directors to the Statistical and Research Department and the Credit and Banking Control Department. The report from banks in compliance with the Instruction is addressed to the Accounting Department.

This reserve requirement does not reflect best practice and the CBI is introducing a new requirement, better designed for the needs of monetary policy in a market economy.

[14] Under the new Central Bank Law, the reserve requirement should be issued as a Regulation in accordance with the procedures specified in the law and published in the *Official Gazette.*

Where they exist, reserve requirements almost universally are seen as a tool of monetary policy rather than banking supervision. Thus the responsibility for monitoring each bank's compliance with the revised requirement has been moved from the Credit and Banking Control Department to the Agreements and Loans Department, the department with primary responsibility for monetary policy implementation.

For monetary policy purposes a uniform requirement (i.e., the same ratio for all reservable deposits) is preferable. The ratio in the new requirement is applied to all deposit liabilities in the definition of money because that makes the money multiplier (the ratio of the quantity of money to base money) more stable and predictable. In addition, it has a neutral impact on the public's choice of deposit maturities, which from a "tax" policy perspective is preferable. Foreign currency deposits are also included in the deposit base for the reserve requirement so as not to favor foreign currency deposits and hence dollarization. The requirement against both dinar and foreign currency deposits must be meet with dinars.

The current regulation imposes separate requirements on bank's deposits with the CBI and bank's vault cash. In the new requirement these are combined so that the single, uniform requirement may be satisfied by the sum of each bank's vault cash and current account deposits with the CBI.[15]

The primary benefit to banks of the new requirement results from allowing the requirement to be met on average rather than on a continuous basis. The requirement will continue to be established for monthly periods but the current frozen deposits will be moved into the single clearing account for each bank. The assets that must be held on average to satisfy the requirement will be banks' Iraqi dinar deposits with the central bank (other than in the standing deposit facility) plus their (new) Iraqi dinar cash in their vaults. A bank may use any and all of its deposits with the CBI on any day as long as its average end of day balance (plus its average ID vault cash) is equal to or greater than the required amount.

A monthly averaging period can convert the reserve requirement into a quite useful tool for absorbing individual bank and system wide liquidity fluctuations in day to day positions.

The CBI should also remunerate the required portion of bank deposits with the central bank (the total required amount less the average vault cash over the month) at its monetary policy rate (the rate its sets for the Lender of Last Resort facility). However, this step is being deferred until later, when the economic environment is more settled.

The 10% government security requirement is being discontinued, as is the separate requirement for vault cash.

[15] A bank's deposit at the CBI in the proposed standing deposit facility would not be counted toward satisfying the reserve requirement.

A draft regulation is attached. The new regulation should apply from September 1 on the basis of deposits in August. The weekly deposit and vault cash data now submitted by banks voluntarily will be replaced by obligatory, simplified weekly reports for both fulfillment of the reserve requirement and the compilation of monetary data.

Standing Facilities

"When…financial markets, and more broadly financial systems, are not well developed, central banks have to place greater reliance on standing facilities than on open market operations. In that regard, standing facilities can act as a safety valve in response to unexpected liquidity developments or to various obstacles or inefficiencies that prevent a smooth redistribution of reserves via the interbank market. The safety valve function is also important when the liquidity forecasting framework is weak…."[16]

The new central bank law provides for the CBI to establish standing lending and deposit facilities. A standing lending facility and a lender of last resort facility will replace the existing overdraft and advance facilities now in use. The new law does not permit overdrafts of banks' balances with the CBI.

The purpose of standing credit and deposit facilities is to provide assurance to banks that they can manage their excess liquidity within a modest range of interest rates that straddle the central bank's policy objective for short term rates. In the absence of well developed interbank money and securities markets in which the CBI's open market operations can be conducted, the CBI will express its view on the short term interest rate appropriate for monetary policy through the Policy Rate it sets for Lender of Last Resort loans. The standing lending and deposit facilities will have interest rates in relation to this Policy Rate. Once the open MOF securities Window is closed, the rates on these facilities also will provide an interest rate spread between placing and receiving funds from the central bank for the given maturity period (overnight). This spread is important because it should encourage banks to develop an interbank market and manage their liquidity with each other in the first instance, rather than always dealing with the central bank. Once interbank markets are better developed, the CBI's open market operations will aim, in part, to keep short-term interbank interest rates well within the tunnel of the rates of the two standing facilities.

The rates on the standing lending and deposit facility should float above and below prevailing money market rates. Until an interbank money market and secondary trading of MOF securities are developed, the rates set on these two facilities will be set in relation to the Policy Rate of the CBI. This rate will need to be carefully monitored and set in light of monetary policy objectives.

Standing lending facility

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[16] International Monetary Fund, Monetary and Financial Systems Department, "Challenges to Monetary Policy Under Weak Initial Conditions," Draft May 2003, p31. See also: Bank for International Settlements, 1999, "Monetary Policy Operating Procedures in Emerging Market Economies", Policy Paper No. 5.

A standing Primary Credit facility will provide over night credit to banks against suitable collateral at the initiative of the banks. Banks will be able to borrow overnight a maximum amount in relation to their capital (as long as they had eligible collateral) at that day's Primary Credit rate. The interest rate will be set at a premium above the CBI's Policy Rate, the rate applicable to its Lender of Last Resort facility. Initially the premium will be three percentage points. In the future, as financial markets deepen, the facility's interest rate premium will be reduced to no more than 150 basis points above the overnight interbank rate. As a further safeguard of the intended temporary and occasional nature of the facility, a larger premium will be imposed for use the facility for more than 15 days each month under a Secondary Credit facility.

The Secondary Credit facility has the same eligibility criteria as the Primary Credit facility but can be extended for longer periods at a somewhat higher interest rate and is granted at the discretion of the central bank. Initially the prolonged use premium will be 2 percentage points above the Primary Credit rate.

It will not be profitable for banks to borrow excessive amounts under these conditions for other than temporary distress situations, which CBI should accommodate in any event. Borrowing by more seriously distressed banks will be covered by a Lender of Last Resort Facility discussed below as part of supervisory measures imposed by the Bank Supervision Department.

CBI advances under all of these facilities must be collateralized with collateral acceptable to the CBI. The CBI will publish the list of acceptable collateral for each facility and may revise the list at any time. Initially, for the Primary Credit facility the CBI will accept MOF securities with a remaining maturity of less than 180 days. Banks must pledge MOF securities they own in the MOF securities depository, by instructing the CBI to mark the required amount as pledged to the CBI as collateral.

Lender of Last Resort (LLR) facility

The new central bank law also provides for lending to distressed banks under exceptional circumstances. An example might be to stem a run on a bank hit by unfounded rumors. Another example might be to provide an otherwise sound bank time to work out of a chronic liquidity shortage. For this purpose, the bank would generally be under enhanced supervision and would be expected to carry out specific supervisory measures to correct its problems.

Most often, however, what first looks like a liquidity problem is really a solvency problem. Many countries have wasted a great deal of the public treasury propping up insolvent banks through liquidity support loans. The CBI will not generally lend to an insolvent bank. The law places strict limits on the conditions for these exceptional loans in Article 30. Such a loan is not allowed unless:

> “a. the bank, in the opinion of the CBI, is solvent and provides adequate collateral, and the request for financial assistance is based on the need to improve liquidity; or
>
> b. such assistance is necessary to preserve the stability of the financial system and the Minister of Finance has issued to the CBI a guarantee in writing on behalf of the Government securing the repayment of the loan.”

The LLR facility can advance collateralized funds for longer periods and can accept a broader range of less traditional collateral (conservatively valued). The interest rate charged on Lender of Last Resort facility loans will be the Policy Rate set by the CBI.

Deposit facility

The CBI will open a standing deposit facility that will accept overnight deposits from banks with excess reserves. Funds will not be placed in the facility unless explicitly ordered by a bank. The interest rate on these deposits will be set below the CBI Policy Rate. Initially the rate will be set at 2 percentage points below the Policy Rate. The facility will provide a floor to very short-term interest rates, which will help bring some stability to bank expectations about interest rates. Moreover, until a MOF securities market develops in which the CBI can conduct its open market operations, the deposit facility can “automatically” drain excess liquidity from the banking sector.

The Policy Rate

The monetary policy of the CBI expresses itself, in part, in the short-term money market interest rates that it brings about. That market is now very undeveloped and thus cannot yet be relied on to reflect the central bank’s policy stance. Until that market, or the secondary market in very short-term MOF securities, is adequately developed, the CBI will signal its target for overnight, interbank interest rates by setting its interest charge for the use of the Lender of Last Resort facility equal to that target. It calls this interest rate its Policy Rate. Banks are free to set their own interest rates and to deal with each other and others in the market at any mutually agreed interest rate. The Policy Rate, narrowly stated, is the rate for the LLR facility and the bench mark rate from which the Primary Credit, Secondary Credit and Overnight Deposit rates are set. It is also, however, the rate the CBI thinks is appropriate to maintain price stability and that its monetary policy will attempt to achieve (by keeping bank liquidity at levels consistent with the Policy Rate).

As long as the CBI chooses to target the exchange rate rather than a monetary aggregate, it cannot also target an interest rate. Thus in announcing its Policy Rate, it must be prepared to adjust it when it proves inconsistent with its exchange rate objectives. This is normally signaled by the market’s excessive use of either the CBI’s Overnight Deposit facility or its lending facilities. This market signal is weakened if the spread between these rates is two large.

Open Market Operations

Once the government begins auctioning new MOF securities, it becomes possible for the CBI to influence bank liquidity (excess reserves) and thus short term interest rates by buying and selling government securities. Selling MOF securities to the market from the CBI's own holding would drain liquidity from the banking system (by reducing bank's balances in their reserve accounts with the CBI). Buying MOF securities would increase banks' liquidity (i.e., their reserve account balances). Such open market operations (OMO) would provide an important second instrument (along with the foreign exchange auctions) for active liquidity management.

Various strategies for the use of OMO are possible. The CBI might, for example, choose to provide for desired long-term monetary growth through the accumulation of foreign exchange reserves. The monetary effect of higher or lower rates of foreign exchange reserve growth resulting from MOF sales of dollars to the CBI and the CBI's auctions of dollars to the market to stabilize the exchange rate could be sterilized with OMO. Once the government securities market is sufficiently developed, OMO might primarily be used to stabilize bank liquidity and keep short-term money market interest rates within the tunnel of the CBI's Primary Credit and Overnight Deposit facility rates.

OMO will generally be undertaken on an auction bases with banks. Such auctions will look very much like the foreign exchange and MOF security auctions now being conducted. With an exchange rate target, open market operations should be undertaken to achieve the central bank's NDA target. Thus a fixed quantity of MOF securities would be bought or sold at the auction. If the CBI moved to a monetary target, it might still estimate the OMO needed (every week or few weeks) to achieve the interest rates in the interbank market that should bring about the targeted money growth. However, in the early phases of such a regime, when financial markets and liquidity forecasting are not very well developed, OMO could be undertaken on a fixed interest rate bases leaving the market to determine the quantity of the operation.

After the MOF security market has developed some depth, the CBI could consider introducing purchase/ repurchase agreements (repos and reverse repos) as one of its OMO tools. In general, the CBI should not actively fine tone day to day market liquidity. The new reserve requirement and banking facility make that unnecessary. However, there might be some specific shocks to liquidity (such as MOF auctions of securities in advance of refinancing maturing securities, so call prefinancing) that it could use repos to offset.

Work plan

During July, 2004:

1. April and May reservable deposit data should be examined before the new reserve requirement ratio is set. Discrepancies between data sources on foreign currency deposits should be resolved. Software should be developed for receiving the new weekly

reservable deposits report and for monitoring compliance with the requirement throughout the Reserve Maintenance Period.

2. Draft instructions for new weekly and monthly reserve requirement report from banks should be discussed with banks during July and revised accordingly then issued.

3. The Agreements and Loans Departments internal procedures for extending and monitoring credit should be developed.

4. Instructions for use of collateral for CBI credit facilities should be issued to banks.

5. Instructions on applying for credit facilities and for making deposits to the Overnight deposit facility should be prepared and issued to banks.

IV. Government Securities Market

Under the new Central Bank Law the CBI is no longer allowed to lend to the government, though purchasing government securities in the secondary market for monetary policy purposes is permitted. Thus the MOF plans to issue new securities to the market in order to develop this important source of funding. The sale of such securities, guaranteed by the full faith and credit of the Iraqi government was authorized by the Public Debt Law that went into affect June 16, 2004. While the government has no need to raise new funds in the domestic market at this time, it does need to refinance the existing stock of ID debt of ID 4.635 trillion as it matures. The existing securities mature on three dates (ID 1.5 trillion on July 1, 2004; ID 1.762 trillion on October 1, 2004; and ID 1.373 trillion on January 1, 2005, ID). Three fourths of these securities are owned by the CBI.

The existing registry and depository system are extremely rudimentary. For the past decade or so, securities were "issued" by the MOF when its overdraft credits reached certain limits and are kept in book-entry form in records maintained by the CBI. Discreet MOF securities do not exist, and therefore there is no registration of individual securities with an identifier. The CBI merely owns an amount of MOF securities with differing maturities. Primary market issuance was solely to the CBI, but the CBI then stood ready to sell and buy securities of different maturities to and from the commercial banks at the initiative of banks. When a sale or purchase was made, the transfer of ownership was recorded in book-entry form. All of these securities have a 6 percent interest rate and trade at par. Processing is all by hand.

The MOF and CBI have agree to write off part of the CBI's existing claims on the government and for the remaining claims to issue new bonds with a 2 percent interest rate maturing at regular intervals every six months over the next 15 years. This rescheduling dramatically reduces the government's debt service burden. This is intended to allow time for the new market to develop. Much of the timing of the Monetary Policy Advisor's work at the CBI was aimed at preparing the CBI for its supporting role in launching a new MOF securities market.

For several months CPA advisors have been discussing with MOF and CBI staff and with banks the key features of the new securities and their auction to the market. Eleven Iraqi staff involved in the new MOF securities operation and two CPA advisors[17] attended a workshop on developing government securities markets organized by the IMF in Abu Dhabi June 9-12. The details of the auctions (single price, limited noncompetitive bidding, maximum share by individual bidder, next day settlement) have been agreed, and an Offering Circular prepared. The CBI will operate the primary auctions as agent of MOF and will operate the registry/depository and the clearing and settlement of transactions. The procedures for secondary trading, which have not taken place before, are now in place. Several mock auctions were held with banks and MOF and CBI staff.

[17] Craig Lund and myself.

The securities held outside of the CBI that matured on July 1 and were repaid with cash. The first auction for 150 billion Iraqi dinar took place July 18 and was very successful. The common interest rate set by the auction was 6.80 percent. Prior to the first auction, the CBI was committed to adopting the new banking facilities described above and providing guidance to bidders by announcing its Policy Rate.

In the medium term the CBI needs to buy or develop a more sophisticated book-entry system. The MOF needs to develop its role in developing a debt management strategy that minimizes the cost to the government of borrowing, with modest levels of roll over risk and with an eye to supporting the development of secondary trading.

V. Payment Systems[18]

The Ministry of Finance Central Bank team is working on four projects for improving the payment system in Iraq: two projects that are desirable for implementing in the near term, one project for implementing over the medium term, and one for implementing over the longer term.

SWIFT

The most immediate priority is to implement a SWIFT terminal at the Central Bank. SWIFT is the widely-accepted secure message system that central banks and commercial banks use for making international payments. The Central Bank expects to have this system in operation by June 30 when it will manage its international accounts, including the account holding the Development Fund for Iraq and the account for receipt of oil proceeds.

SWIFT requires that a country new to SWIFT submit information concerning telecommunications, taxation, banking and the like as part of a country approval process. Once these preconditions have been fulfilled, individual banks may apply for the service on an individual basis. The country application cycle and the bank application cycle may run in parallel so the Central Bank is pursuing both cycles simultaneously. There are four cutover dates each year. The CBI activated its SWIFT membership on the first weekend in June and other banks are expected to follow shortly thereafter.

Iraqi Local Payment Settlement System

In October, 2003, the Central Bank selected a collaborative proposal of Visa International and NSSL for a communication and payment system connecting 80 locations of the Central Bank, Rafidain Bank, and Rasheed Bank. The installed system provided a broadband satellite network connecting laptop computers and offering secure communication. The system was used for internal and external communication within and among the banks, particularly for the Iraqi Currency Exchange.

Also installed on the PCs is software that may be used to make US Dollar and Iraqi Dinar payments over VisaNet and the Visa National Net Settlement Service. The dinar payments would be made inside Iraq and the US dollar payments would be made outside of Iraq to other members of VisaNet. At the moment, US banks have requested not to receive payments from Rafidain and Rasheed banks in light of concerns under the USA Patriot Act. It is not clear when this restriction may be lifted. The restriction does not

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[18] This section was prepared by Raleigh Tozer, CPA legal advisor

apply to the private banks in Iraq or the Trade Bank of Iraq, which has signed up separately.

The Central Bank has created the Iraqi Local Payment Settlement System (ILPSS) to perform elelctronic payments. Payments over ILPSS could be individual payments for transactions or batched payments for applications such as salary payments to government employees and other recurring payments. Armor Group provides support for the satellite communication system and reports that the system provides effective communication but is hampered by users who are inexperienced in using newer IT equipment. Experience with the equipment, however, has resulted in better performance more recently.

In order to provide service to all banks in Iraq, the system has also been offered to the private banks who have almost all signed up. The private banks have installed satellite connections and been trained on using the system to initiate and receive payments. Currently the two large state-owned banks and the Central Bank have voiced some concerns about using the system but they may ultimately participate.

The system provides credit payment messages sent over the satellite link to the processors operated by Visa in four locations worldwide. Visa sorts the messages and calculates the resulting settlement obligations of the banks. At the end of the day this settlement sheet is sent to the Central Bank. The next morning the Central Bank reviews the settlement sheet. If all participants have sufficient funds and the settlement satisfies other requirements, the Central Bank debits the accounts of participants in a debit position and credits the accounts of participants in a credit position. If a participant is unable to settle, the Central Bank may reject the settlement sheet and not settle any balances. Payments that are not settled may be reinitiated for settlement on the following day.

The ILPSS will become operational when the Central Bank is prepared to begin to provide the settlement service.

Check Clearing

The existing systems

The CBI operates a check clearing and settlement operation in its Head Office in Baghdad six days a week. The clearing does not operate on Friday, the Islamic holy day. The participants in the clearing are the Baghdad branches of the six State-owned banks and the 19 private banks. Thus, all the banks in Iraq participate. It appears that on-us checks and some other checks, such as checks that can be presented locally outside Baghdad, do not go through the clearing. For example, Rafidain and Rasheed banks each operate about 70 branches in the Baghdad area and separately present checks to each other that are drawn on these branches. Before the 2003 war, each of the banks processed between 3,000 and 5,000 checks per day with volume sometimes reaching 8,000 checks per day using NCR Class 7770 reader sorter machines. These machines were damaged during the war and are too old to repair. Currently the banks process about 1,200 checks per day.

Before the war, there were also local clearings in other parts of the country. These clearings have resumed in Mosul, Basrah, and Erbil. There are also clearings at Hilla and Kirkuk that settle through the Rafidain and Rasheed banks. The Central Bank has branches in Mosul, Erbil, and Sulaimaniya in the northern part of the country and in Basrah in the southern part of the country.

In recent weeks, the check volume at the Central Bank in Baghdad has averaged a little more than 300 checks per day. Before the war the average volume was about 3,000 checks per day. Recently the average check has ranged between about 5 and 10 million dinars, or between about US$3,500 and US$7,000. This average amount has been coming down as volume has been increasing. Before the war the average amount was about 3.2 million dinar. It looks like larger checks have returned to the clearings following the war sooner than smaller checks. Checks written in both US dollars and Iraqi dinars clear through the exchanges. The experience in the other regions is similar.

The central bank clearing in Baghdad is quite simple. Depositary banks accept deposits at their branches and combine the deposits for all the branches into cash letters for each of the 24 other banks that attend the clearing. The depositary bank does not sort down by branch of the paying bank. Each depositary bank also prepares a floppy disk that contains a listing of the total value of the checks that bank will present to each other bank at the clearing. The listing does not include the number of checks or the value of each individual check to be presented.

At the clearing, the messengers from each bank exchange the packages of checks with messengers from the other banks and give the floppy disk to a Central Bank clerk. The Central Bank totals the amounts due from each bank and gives the messenger a printout showing the individual debits and credits and the net entry for the day, which the messenger can compare to the checks sent and received to see that they agree. If there is a discrepancy it is cleared up at the clearing.

The Central Bank posts the net amount of the exchanged checks on its books to the accounts of the banks at the clearing. The entry is made based on the totals submitted by the depositary bank. The entry is made on the day of the exchange with no deferred debits or credits. The messengers take the checks back to their local offices and the local office posts the checks that are drawn against local accounts. There seems to be very little centralization of processing. That is, checks drawn on the remote branches do not seem to be processed at the head office or a processing location. Rather each branch is fairly independent in keeping account records and paying checks.

Sending checks to remote branches can take some time. There is currently no reliable telephone service from central Baghdad to the remote branches. Sometimes the head office will fax a copy of a check to a remote branch to speed up the time of payment.

Returns and adjustments are handled between the sending and the paying bank. When the two agree on an entry they jointly submit it to the Central Bank and the entry is made to both accounts. The Central Bank is not at risk in the clearing process; it is functioning like the bookkeeper for a process that depends on the agreement of both sides.

If a debit to a clearing bank would overdraw the bank's account at the Central Bank, the Central Bank may refuse to make the debit and send the check back or ask the bank to make an additional deposit to its Central Bank account. The Central Bank rarely refuses a check because of an overdraft.

There seems to be a general agreement that the depositor may withdraw the amount of a check five days after it is deposited. This is apparently more time than it takes to collect a check in Baghdad but less than it takes to collect the checks on remote branches. There are estimates of three weeks or a month to get a check to a remote branch.

The payee pays a fee of one tenth of one percent of the amount of the check as a collection fee. The collecting bank keeps the fee. The Central Bank collects nothing for its services.

Each bank has a number that identifies the bank and each bank assigns numbers to each of its branches. The check stock is distinct and is probably the way the checks are actually sorted. There are about 500 total branches in the country with only about 450 operating.

Automating Check Processing

A reasonable case may be made for introducing automation to the check clearing process in Iraq. Prior to the war, Rafidain and Rasheed Banks used 6 high speed check reader-sorters. Although the pre-war check volume has not yet returned, it seems likely that it will in time as the security situation improves and the economy grows. Furthermore, it seems likely that check volume will grow to substantially exceed pre-war volume as use of bank accounts grows and as foreign banks introduce efficient automated processes. Finally, the current manual check process is working, but it is slow, prone to error, does not permit automated record keeping, and it is not positioned for growth. Accordingly, it would be advisable to introduce automated check processing equipment to permit faster collection of checks and to provide a more efficient payment mechanism than the prevalent cash-based system.

The current check clearing system may be viewed as six local check exchanges that handle local checks reasonably well but provide almost no support for collecting checks outside the local exchanges. Thus creating an efficient process for collecting non-local checks quickly would be a big improvement in the check clearing system. This could be done at the same time that the local check clearings are automated. This in turn would permit the clearings to handle greater volume and permit banks to automate their own processes for handling checks. The result would be a check collection system that collects checks faster, with fewer errors, and at less expense than the current system.

The Central Bank is acquiring high speed check processing equipment from NCR for the automated check operations in Baghdad and low speed check processing equipment for the operations in the other clearing centers. This equipment should be in place by the end of June.

Iraq Payment System

As the Iraqi banking system grows with foreign investment in banks and the growth of the economy, it will certainly require a robust payments infrastructure. The Central Bank is conducting a procurement process to select a vendor to install a modern payment system that will meet Iraq's needs.

The system would include the capacity to provide funds transfers offering real time gross settlement payments as well as an Automated Clearing House batch payment system for things such as salary payments and other recurring payments. In addition, the system should have the capability to add such other facilities as net settlement, debit and credit card payment systems, and securities settlement systems.

The US Treasury issued an RFP in June 2004 and is evaluating the proposals received. Under the RFP the selected firm would begin working with the Central Bank and the commercial banks to install the RTGS and ACH portions of the Iraqi Payment System. It is expected that preliminary work and installation would take perhaps one year.

VI. The Process of Policy Formulation

Good policy decisions require good data (or a regime that doesn't need them), good staff analysis of data, and good procedures for communicating staff analysis to the policy decision makers. An appropriate and well organized regular, as well as ad hoc, process for developing staff analysis and reporting it to management both improves the information available to management and promotes staff development and morale. This section discusses the information needed by the CBI for monetary policy purposes and how staff should analyze it and present it to the policy makers.

Collection and Analysis of Relevant Data

The CBI deals with several primary sources of data. Those derived from its own activities and reflected in its own balance sheet, those associated with its activities in the market (e.g. foreign exchange auctions), those associated with its agency functions (MOF security auctions), those collected from banks (primarily for prudential purposes, but also including the monthly reserve requirement report) and economic and price data from the Central Statistical Office (CSO).

Considerable bank data is collected by the Banking Supervision Department but the deposit data it now collects is not appropriate for the categories needed to construct money supply data. Separately banks report to the Accounting Department the data needed to comply with the reserve requirement. A new reporting format developed by Bill Dewald is also being collected weekly from all banks on a voluntary, pilot basis.[19] These reports go to the Statistics and Research Department but have not actually been used. In addition, new reports from banks are being developed to collect interest rate data.

Data now being reported by the Statistics and Research Department (from all of the above sources) are sometimes inconsistent with the same (in principle) item taken from the CBI balance sheet. The official balance sheet of the CBI continues to suffer from a number of serious problems. For example, though banks have been instructed to use current auction exchange rates when valuing foreign currencies for their reports to the CBI, the CBI itself continues to use the exchange rate of February 2003. Such problems should be addressed and corrected urgently.

One such problem with the accuracy of currency in circulation is in the process of being resolved. Some, if not all, banks that are waiting for the CBI to verify and destroy their

[19] These weekly monetary data have been reported by all banks on a pilot basis since January. However, Rafidain and Rasheed report separately for each branch and the CBI does the consolidation. A BearingPoint project (terminated slightly short of full completion) was helping Rafidain and Rasheed to automate the branch compilation process at their Headquarters. The CBI should follow up to ensure that it is being done and that the central bank is prepared to accept these data electronically without reentering them.

returned old (Saddam and Swiss) dinars, continue to report them as part of their dinar cash claims on the CBI (vault cash). Thus these old dinars are incorrectly being included in the vault cash amounts that are deducted from "currency issued" when calculating currency in circulation. As a result, currency in circulation is understated. Its growth is probably understated in the earlier months of the currency exchange and over stated now. The CBI has issued an instruction to all banks to provide from October 2003 monthly data on the break down of vault cash into foreign currency, new ID, Saddam dinars and Swiss dinars. The Statistics Department uses official CBI balance sheet data on currency issued, which reflects all currency ever issued less the amounts destroyed. The Accounts Department's balance sheet for the IMF reports currency issued as only the new Iraqi dinars issued. The advisor also determined that base money was being overstated by including bank's foreign currency deposits with the CBI. The balance sheets back to November 2003 have been corrected for this item and reissued.

M1 and M2 are being redefined to include all deposits of the non-bank public (including state owned enterprises). Thus only the deposits of the central government, other banks and cash items in the process of collection (deposits of a current nature) will be excluded. As soon as the new M1 and M2 series are available, staff should undertake a careful analysis of monetary behavior, including the development of seasonal adjustments. The following issues are of special interest.

1. The Swiss dinar was undervalued in the pre-exchange data. It had a market value of sometimes 200 or more Saddam dinars per Swiss dinar but was recorded in the money supply at one to one, thus greatly understating the true quantity of money. The understatement went away with the exchange to new dinar at the rate of 150 ID/SwissD. But this gives the false picture of a more rapid growth in money than there really was. Staff should construct an analytically corrected money series. Just noting the problem as in the June month's Brief is not good enough.

2. Deposits were built up above usual levels for the currency exchange and reduced again afterward. However, we need to see a longer time series for the revised money definition and the C/M ratio to have a better sense of what is normal. Such an analysis is needed to help judge how velocity is likely to behave for the rest of this year (and next).

A report on key economic and financial indicators should be updated and given to the Monetary Policy Committee and Governor every week. If possible, it should be issued every Sunday or Monday to reflect weekly data through the previous Thursday. Only a few items can be reported weekly. These are:

- Net foreign assets (this is now being produced every week but the periods should be adjusted to end on Thursdays);
- ID/USD exchange rate;
- Net Claims on Central Government
- Net Claims on Banks
- Excess Bank Reserves
- Base money, M1, and M2.

The rest of the indicators should be updated monthly.

The Statistics department should establish as long a time series of M0, M1 and M2 as possible with the new definitions and publish it on the CBI website and elsewhere. It needs to be easily available to all economists in the CBI (or elsewhere). And it must be clearly documented (which categories of deposits are included, etc). If there is a change in the series (for example, the recent revision of M0 to take out foreign currency deposits of banks with the CBI), it must be noted in the documentation. If it is not possible to revise old data beyond some date, the change must be noted in the documentation, etc.

The Department should also establish target schedules for releasing new data and should develop programs to making the release timelier. The weekly monetary data report needs to be made mandatory (a circular needs to be sent to the banks) but in simplified form and with minor adjustments in what is reported and how it is reported. In fact, it will be replaced all together by the new weekly reserve requirement report. The Department needs to establish more efficient means of entering data (to minimize manual data reentry) and to maintain and access it. A proposal should be developed for acquiring a proper statistical database and providing staff training in its use.

There are synergies in producing the policy Briefs for the Board’s monetary policy meetings and a monthly statistical bulletin with some analysis. These synergies should be exploited.

There can be a useful distinction between owners of data (those responsible for its relevance and integrity), collectors and maintainers of data (those who received it from whom ever produces it—e.g., banks—and store it in whatever form it is used), and users of data. The CBI should clarify what data it really needs, who owns in, who collects and maintains it and who has the right to access and use it. The CBI needs to modernize its statistical databases and provide staff with training in data maintenance and manipulation. Data backup procedures should be established and implemented. When issues arise about the data provided by banks, the Banking Supervision Department Off-site unit should be used by the Statistics and Research Department as its agent to meet with the bank and investigate or clarify the issue.

Work plan

1. The key economic and financial indicators report should be prepared and issued to the Governor and Monetary Policy Committee every week on a regular schedule.

2. The collectors and compilers of data should reconcile any differences between difference sources of data and clearly identify for all users the official version of each data series.

3. Formal instructions should be issued to all banks to replace the existing voluntary weekly monetary report with the new mandatory weekly report for the reserve

requirement. The new report distinguishes between foreign currency and ID deposits and vault cash and should also be used for compiling the monetary aggregates.

4. The Accounting Department should address known shortcomings in its accounting standards and systems with urgency. The Department should reissue its official balance sheets using current market (auction) exchange rates for each month. If there is an obstacle to doing so, the department should formulate resolutions to those obstacles for management approval (if needed).

5. CBI should make a considerable effort to minimize the reporting burden on banks by ensuring that it does not collect data it does not really need and does not duplicate data collection efforts. All data reported to the CBI should be centrally coordinated and pass a cost benefit test.

6. Those within the CBI who are users of these data should be given a responsibility to scrutinize the relevance and quality of the data they use. Those responsible for briefing the Board on key data should have a particular responsibility in this regard. The most important user of each data series should be made its owner, and thus responsible for checking the relevance and correctness of these data as they are received.

7. All data collected and maintained by the CBI should be clearly and fully documented as to its source and content (see IMF Data Standards).

8. Data access rules should be established and procedures for backing up data should be developed and implemented.

Preparation and Presentation of Policy Options to the Board

The value of these data comes from the light they shed on economic developments and what monetary policy response they call for. These messages are extracted by staff analysis. It is an important challenge for management to establish effective channels for staff to share their analysis and insights with relevant policy makers.

Staff analysis of data is generally presented to policy makers in both written and oral forms on the occasions when key policy decisions are taken. A good starting place is to assign small teams to prepare briefs for Board meetings on key economic and financial variables relevant to assessing the appropriateness of monetary policy. These teams should not all be in the Statistics and Research Departments. Important insights come from those who interact with the market in the course of conducting the foreign exchange auctions, CBI lending to banks, and t-bill transactions with banks. Thus some of the teams, or at least some of the team members, should come from the (future) Monetary Operations Department and the (future) Foreign Exchange Operations Department. The Banking Supervision Department should have analysts who study system wide banking and credit developments. They should also be represented in at least one of the teams. Information on the existence of problem banks and their potential impact on monetary policy is also needed. Staff analysis should be coordinated so as to give decision makers a coherent and integrated picture of existing and prospective conditions.

With the development of a t-bill market and the addition of open market operations to the CBI's policy tools, its Board's key policy decisions are its objectives for the exchange rate, its target for its net domestic assets, and the level of its newly established Policy Rate. Key intermediate variables for monitoring and assessing the implementation of its policy are the levels and behavior of its foreign exchange reserves and the money supply. Its ultimate target variables are inflation and the level of economic activity (employment and income).

Organization of work

In order to brief the Board on developments and prospects (forecasts) in each of these areas, the CBI has established the following Briefing Teams:

1. *Monetary Policy Options*

   Forecast and options coordinator: Dr. Mudher

In consultation with all of the briefing teams listed below, the Policy Options Brief should summarize the most important facts and assumptions about the economy and develop pros and cons regarding each of the options. The staff should be helping policy makers identify the reasonable policy options and using sound, dispassionate analysis to provide the pros and cons of each. The work of the staff should be viewed as impartial, and trusted as such. In particular, staff must explore options with regard to the range of permissible exchange rates, the net domestic assets target, and the Policy Rate. The Brief states the staff's assessment of the implications of:[20]

a. leaving the exchange rate unchanged or of allowing it to move outside the established range in one direction or the other;

b. leaving the rate of change of the CBI's net domestic assets unchanged or adjusting it in one direction or the other; and

c. leaving the Policy Rate unchanged or raising or lowering it.

These judgments will depend mainly on the recent behavior of the CBI's foreign exchange reserves (net foreign assets) and their prospective behavior under different policy assumptions and on the recent and prospective behavior of the money supply under different policy assumptions. With a somewhat longer term horizon, these policy choices are conditioned by the recent and prospective rate of inflation and whatever is known about economic activity.

The policy objective is to maintain stable prices in such a way as to maximize sustainable economic activity. Initially, a very simple model of money supply and demand, plus

[20] The following is formulated to reflect the on going nature of policy review. Obviously the first time around these policies need to be established.

educated guesses (assumptions) about real income, and an inflation target over the policy horizon (one or two years) are used as the basis for discussing alternative policy scenarios. These should be prepared by the Macroeconomic Analysis and Forecasting Group in consultation with the other briefing groups.

2. *Macroeconomic Analysis and Forecasting*

Unit leader: Dr. Shakir Mahmoud Shihals
Dr. Mariem Hasoon Kadhim

This unit will forecast (guess) income, money (or base money) demand, and foreign exchange reserves of the CBI needed to achieve the Bank's inflation and exchange rate objectives. Thus it will consolidate the analysis prepared in the Briefing Units described below, into an overall macroeconomic framework. Initially it will produce the CBI net domestic asset target implied by the estimated demand for base money with a stable exchange rate and low inflation.[21] This framework, very simple initially, can be gradually elaborated as the economy stabilizes, more and more reliable data become available, and staff analytical skills improve.

3. *Real Economic Activity*

Unit leader: Dr. Shakir Mahmoud Shihab
Maha Mirah Gorhah
Ali Mahdi Abass

Indicators of the level of economic activity and capacity need to be developed (employment/unemployment, industrial production, crop projections, inventories, etc.) and potential bottlenecks identified. A more complete analysis, reporting on and estimating the components of GDP, might be given quarterly. Short updates, revisions, and new indicators would be reported briefly at the monthly meetings in between.

In the longer run, when data availability has improved, this unit would forecast aggregate demand and its components (drawing on the other units) and ultimately would produce estimates of the output gap.

4. *Inflation and Prices*

Unit leader: Mrs. Raja'a Aziz
Miss. Bushra Mawllwood

The first and main task is to assess what the underlying inflation rate is, based on the latest CPI and other indicators and how it is trending. Seasonal variations should be taken

[21] CBI NFA behavior depends largely on the central bank's purchases of foreign exchange from the MOF and its sale to the market in its FX auctions. Assuming that the amounts sold are determined by the requirement of maintaining the prevailing exchange rate, these amounts will largely be determined by the value of net, non-government imports (excluding the oil and other export revenues going directly to the government and the imports purchased by the government) for which foreign exchange is needed. However, if government sales to the CBI (and the resulting impact on the supply of dinars to the market) are larger (or smaller) than this amount, additional (smaller) sales are likely as the public exchanges some of its excess dinars for dollars.

into account. The second task is to add any information on how inflation seems to be evolving (there is a lot of persistence in inflation numbers) and indicators of near term future prospects.

5. *Balance of Payments*

Unit leader: Mrs. Najlaa Sabri Shakir Al-Alousi
Miss. Ashwaq N. A. Maseeh
Suha Mahmod Ismail Ahman Al Mashdadani
Bashra Mahdi Saleh

Presentations on BOP developments and prospects should be prepared quarterly. Monthly briefs should reflect the implications of any new trade related data and should focus on the up to the minute behavior of CBI's net foreign assets (NFA), the implications of that behavior for monetary policy and the factors likely to influence that behavior. The key driving force here is the sales of FX to the CBI by the MOF, thus that aspect of the budget financing analysis should be incorporated here.

The existing exchange rate is either sustainable without effort or actions by the CBI, or requires a tightening or easing of monetary conditions (basically net open market sales or purchases of government securities) or a change in the exchange rate. This brief must help the Board answer those questions.

6. *Exchange rates and foreign exchange market*

Unit leader: Miss Basima Khazal
Miss Khadijah Mahmoud.

The movements of the market rate over time and why such movements are taking place should be analyzed. The analysis should incorporate feed back from market participants. It should take into account the exogenous variables that directly and indirectly affect the exchange rate movements. Thus, the analysis needs to draw on the developments being reported by the BOP unit. Any relationship between the exchange rate and the growth/decline in the level of the Currency in Circulation (Daily) should be studied and reported, as well as the link between inflation rate and exchange rate.

7. *Government Budget expenditures and financing*

Unit leader: Miss Basima Ali Jawad
Miss Hayfa'a Botras

Government expenditures and financing should be assessed and forecasted with respect to their impact on the CBI's balance sheet and the balance sheets of Rafidain and Rasheed. The MOF's borrowing schedule to refinance the existing stock of debt would be analyzed with respect to the same issues, as would the government's deposit balances with Rafidain, Rasheed and the CBI.

8. *Banking sector*

Unit leader: Mrs. Samera Husain Al Khazraji

Mr. Waleed Edia
Miss. Najat Ra'uf
Mr. Ala'a abid Al-hussain

An analysis should be provided of the condition (soundness, competitiveness, and efficiency) of the banking sector and its implications for the implementation and transmission of monetary policy. In particular an analysis of credit behavior should be given. Differences in behavior of lending by private banks and public banks should be noted. The nature of public bank lending is particularly interesting. Are Rasheed and Rafidain lending much and mainly to other state owned enterprises and what is the credit worthiness of these borrowers? Input from the Banking Supervision Department will be needed. Perhaps a more complete discussion could be given quarterly.

9. *Money Supply*

Unit leader: Miss. Jinan Ismall Al-Beiruti
Neran Jamiel
Miss Bushra Omar

Recent (six months to a year) money supply developments should be analyzed with the implications for inflation (but the analysis should be put in the context of money supply data for several years). A near term forecast for the next few months should be developed given recent behavior of base money and multiplier. Some discussion of seasonality will be needed. Any differences between the behavior of deposits with private banks and public banks should be discussed. A key question here is whether the base money target is still appropriate and whether the Policy Rate is appropriate for achieving the base money target.

10. *Interest rates and domestic financial markets*

Unit leader: Kamil Abdul Abas
Layla Joseph
Layla Finjan

The Brief would analyze recent interest rate developments and the activities in the markets that produce them (stock, turnover, rates in the interbank money market and secondary t-bill market). As longer dated instruments develop, the term structure would be assessed against other indicators of inflationary expectations.

11. *Data Management*

Unit leader: Jinan Ismall Albeiruti
Basima Ali Jawad

The data used in the Briefs, macroeconomic analysis, and policy options discussions should be available in a database with clearly documented definitions. The data needs to be updated immediately upon receipt of new data and the revision rules and procedures need to be established and well understood. Where data is collected by another unit within CBI that uses the data, that unit should own the data and be accountable for its integrity. But its maintenance in a common database would be the responsibility of this unit. The definitions and quality of the data need to be under constant review (see paper by Laxton and Scott).[22]

This unit would not generally prepare a Brief. However for the next few months, while data issues remain so important, a Brief should document the key data problems and the plans for addressing them. Progress toward fully implementing these plans should be reported. Plans for the longer run improvement of data collection and maintenance, such as the purchases of a statistical database package, should be set out.

Work plan

1. The first task of each group is to familiarize itself with the data it needs and to press the data providers for better and timelier data. Each brief should have a short executive summary of one or two paragraphs that can be inserted into the Press Communiqué to be issued after the meeting (perhaps the next day). The main body of the Brief would report on the key variable it addresses (recent and prospective behavior) and the implications of this behavior for the policy choices before the Board.

2. Each Briefing unit should decide what graphic presentation of their key variable would be most interesting and useful to the Board. There should be regular feed back from and dialog with the Board over the format of the Briefs and their charts and graphical presentations. These should be adjusted over time in light of the Board's preferences.

3. A preliminary draft of the Brief should be circulated to all other briefing teams and the policy options coordinator one week before the Board meeting. A first joint meeting of the coordinator and team leaders should take place the next day and a draft of the Policy Options Brief should be prepared four or five days before the Board meeting. Additional meetings should be held as needed to finalize all Briefs, which should be sent to all members of the Board the day before the Board meets.

The first presentation of these Briefs to the senior management of the CBI was on June 20.

The Policy Options

The Board should receive all of the information from staff needed to take the key monetary policy decisions. The current policy regime of a managed exchange rate requires three key decisions: the CBI's exchange rate target or range; its net domestic assets target; and its Policy Rate. Unlike the exchange rate and NDA targets, the Policy Rate, which is equivalent to a monetary aggregate target, cannot be independently maintained. Its consistency with the exchange rate and NDA targets must be constantly

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[22] Douglas Laxton and Alasdair Scott, "On Developing A Structured Forecasting And Policy Analysis System Designed To Support Inflation-Forecast Targeting," November 2000.

reviewed and adjustments made when needed. The Board must also determine the range of its foreign exchange reserves outside of which it would reconsider its exchange rate target. In addition, the Board should review and adjust if necessary the Primary Credit and Secondary Credit premiums over the Policy Rate, the Overnight Deposit markdown from the Policy Rate, and the reserve requirement ratio.

The Exchange Rate

The continued viability of the exchange rate should be discussed in the Briefs on the Balance of Payments and The Exchange Rate and Foreign Exchange Market and reflected in the staff's Policy Options Brief. If at the current exchange rate, net non-oil non-government imports and government sales of oil revenues to the CBI are projected to be consistent with attainment of its foreign exchange reserves objective, the Board would generally decide to leave the exchange rate objectives unchanged. It would also decide the range around the target (narrow or broader) that the rate would be permitted to occupy before the next monetary policy review. The existing approach of satisfying all or most all of the demand in the auction if that would prevent a depreciation of the rate and satisfying substantially less of the demand when that avoids an appreciation seems appropriate subject to the adequacy of reserves and the longer run forecasts of viability.

If the market itself judges that the appropriate exchange rate has changed, its bidding will change and the above procedure will result in variations in the exchange rate. The permitted range of variation around the target before another Board meeting reviews the fundamentals is clearly a matter of judgment. A range of 1420 to 1500 (or a variation of about 2.6 percent around the midpoint) might be considered.

The NDA target

The Board will also need to review the appropriateness of its NDA target. The target should be changed if the government changes its intended rate of sales of foreign exchange to the CBI or if there is clear evidence of a shift in money demand, the money multiplier or the expected real income growth rate.

Changes in the budget resulting in more than temporary changes in the rate of sale of foreign exchange to the CBI should lead to adjustments in the NDA target as soon as such information comes available.

Changes in money demand, the multiplier, and real income growth rates are more difficult to detect or confirm because of the relatively high level of noise in the data and the infrequency with which data become available. Thus these factors should ordinarily be reviewed no more frequently than quarterly.

The Policy Rate

The Board must also adopt a short term interest rate "operating" target. In the absence of an established interbank market from which to monitor market rates, the Board will adopt a **Policy Rate** as its signal to the market of the interest rate it thinks is appropriate and that it will aim to achieve. In considering the choice of the Policy Rate the Board should take into account its impact on the exchange rate, monetary growth rate and longer –term interest rates. The ultimate objective of its choice is to maintain stable prices.

The equilibrium market rate of interest (for each maturity) reflects a market clearing real rate (i.e. the interest rate adjusted for inflation) plus the expected rate of inflation over the period to which the interest rate applies. Thus assessing inflationary expectations is important, but difficult in the Iraqi context. The recently past inflation rate and the direction it is trending is an important indicator of the inflation expected in the near future, but other factors affect these expectations as well. The appropriate Policy Rate will be very different if the public expects two percent inflation over the next year than if it expects ten percent inflation. The term structure of interest rates, the relationship between the short-term Policy Rate and medium to long term rates, depends primarily on the market's assessment of the impact of current monetary policy on medium and long term inflation. In other words, the term structure is dominated by expectations of inflation over those periods. The Brief on Prices and Inflation should analyze past and prospective inflation.

The Policy Rate affects the exchange rate in several ways. Other things equal, international capital tends to move from low to high interest rate areas. Short-term financial investments (hot money) are very sensitive to interest rate differentials after adjusting for differences in risk. In Iraq these risks are particularly high and uncertain because of the lack of security, uncertainty over the viability and policies of the interim and later governments, and the uncertain costs of enforcing contracts and property rights more generally. Thus short-term capital flows are likely to become important in the future, although they are not a significant factor now. Capital inflows from remittances from Iraqis working abroad and aid are not sensitive to Iraqi interest rates.

The more important channel through which interest rates affect the exchange rate reflects the public's purchases and sales of foreign currencies as a means to adjust their holdings of Iraqi dinars to desired levels. When liquidity exceeds desired levels (i.e., when the supply of money exceeds its demand and/or the excess reserves of banks exceed their desired levels) short-term dinar interest rates will fall relative to other rates. Some of this excess liquidity will be used to increase demand for foreign exchange and will thus tend to depreciate the dinar (or visa versa when liquidity is tight). Thus setting the Policy Rate too low will put downward pressure on the exchange rate and visa versa.

The Policy Rate is closely related to the behavior of the money supply. In fact, a primary reason for the choice of the Policy Rate (or the overnight interbank deposit rate) is in order to engender the desired monetary growth rate. The over-night interest rate in the market depends on the liquidity in the market produced by monetary policy. One useful measure of this liquidity is banks' excess reserves relative to their desired excess reserves. However, the impact of a given over-night interest rate depends on whether it is above or below its equilibrium value (which has a great deal to do with the expected inflation rate).

If the equilibrium overnight rate is 10 percent, for example, (consisting of a six percent real rate and a four percent expected inflation), and the CBI provides enough liquidity to push the overnight rate down to eight percent, the effect will be expansionary. At eight percent banks will have more excess reserves than they want and will look for investments. Initially, banks may drive down the yield on government securities as they bid higher prices for them in primary and secondary markets. But over time they will endeavor to increase their relatively better yielding lending by lowering loan rates. Increased lending will lead to increased deposit growth. The more rapid monetary growth, depending on how close the economy is to its full employment output capacity, will increase the inflation rate. But an increase in inflation and inflation expectations will increase the equilibrium nominal interest rate for a given real interest rate and will require the central bank to expand liquidity even more rapidly to maintain the same nominal rate as before. Monetary growth would accelerate if the Policy Rate were kept below its equilibrium for too long. The same eight percent Policy Rate would have the reverse, i.e., contractionary, affect if it were above the equilibrium rate.

Two things would tend to cut off the excessive monetary growth resulting from a Policy Rate that is set too low. First, maintaining the liquidity in the market needed for that Policy Rate would require increasing the growth rate of the central bank's net domestic assets (i.e., open market purchases of government securities or lending to banks). Thus adhering to the central bank's NDA target will allow market liquidity to tighten until banks become regular borrowers from the Primary Credit facility at its penalty rate (which already acts to increase market interest rates somewhat). Persistent bank borrowing from the central bank's credit facility as it adheres to its NDA target, signals the Central Bank that its Policy Rate is too low. Second, the artificially low interest rate on dinar assets will encourage a shift to dollars and dollar assets. The resulting fall in the central bank's net foreign assets will (for a given NDA growth rate) reduce liquidity and (eventually) monetary growth rates. The larger than expected fall (or lower than expected growth) in the central bank's NFA is another signal to the central bank that its Policy Rate is too low.

Thus, if the central bank's NFAs are growing below target and or its NDAs are growing above target (because banks are borrowing from the standing credit facility when the central bank attempts to drain liquidity with open market operations) it needs to raise its Policy Rate. In the reverse case of growth in NFA above target and a drop in NDA as banks dump excess liquidity in the Overnight Deposit facility, the Policy Rate should be lowered.

Other interest rates

The rates on the lending and deposit facilities that are expressed in relation to the Policy Rate should also be reviewed, but from the perspective of whether the spread between deposit and lending rates is wide enough or too wide. A wider spread gives greater room for the market to deal with itself before coming to the central bank and reduces the risk of excessive use of the standing facilities. On the other hand, a wider spread increases market uncertainty about what interest rates it may face and thus encourages higher excess reserves. Adjustments to these rates (beyond their automatic adjustment to changes in the Policy Rate) should be very infrequent.

Reserve Requirement ratio

The reserve requirement should not be used as an active instrument of policy. Increases in the ratio can take a long time for banks to adjust to and tend to have large blunt effects. Reducing the ratio, however, can be useful during a liquidity crisis when system wide injections of liquidity are called for.

The current ratio is very high and is not remunerated. Thus it effectively imposes a relatively large tax on the banking system, which already has significant problems in generating sufficient income. On the other hand, until the payment system and reserve management options improve the high ratio provides a good buffer against liquidity shocks. It is recommended that the CBI gradually reduce the reserve requirement ratio starting in 2005. The liquidity freed by such reductions should be neutralized (absorbed) by the sale of government securities from the CBI's portfolio.[23] This will help raise the ratio of the CBI's foreign exchange backing of its monetary liabilities (base money). While the rate of reduction should be determined in light of the conditions at the time, a rate of one or two percentage points every six months for seven or eight years might be considered.

Staff recommendations

In addition to the background information contained in the Briefs, the staff should consolidate their views (staff consensus forecasts) into policy recommendations. Generally, staff recommendations should be accompanied by options scenarios. At this stage, forecasts are little more than guesses. Staff should give the best indication possible of the basis for their consensus forecasts and the range of uncertainty around it. The following is an example, based on the data at hand and staff analysis in their June Briefs, of how the staff recommendation statement might look.

The staff policy assessment can take different forms. Once policies are in place, the Board might prefer that staff evaluate the pros and cons of a continuation of the existing policy and of a change in one direction or the other. Board members will need to provide staff with feedback on how they want staff to present recommendations or assessments of options.

Policy Options Brief

Background and forecast

Following a 26 percent decline in 2003, staff expect income to grow 40 percent in 2004, which would return it to a level a bit about that of 2002.[24] *A continuation of recent*

[23] This assumes that the growth in the CBI's NFA will continue to be sufficient to provide for the desired growth in the money supply.
[24] Staff assumes a continuing softening of world oil prices to $29 per barrel by the end of the year and a modest increase in current oil experts to 1.525 barrels per day by year end.

security conditions or a further worsening, however, could result in stagnation in resent output growth.

No serious supply bottlenecks are expected and staff believe stable prices (an inflation rate in the range of two to five percent) are achievable on average for the balance of the year.

Money demand (or its inverse, velocity) is more difficult to forecast. Staff are of the view that the major adjustments to the currency exchange have now been made, including the initial build up then run off of deposits to facilitate the exchange, and that velocity is most likely (with a relatively high level of uncertainty) to remain unchanged over the balance of the year.

On these assumptions, desired base money growth over the balance of the year may be expected to be around the rate of 40 percent per annum, or almost 300 billion Iraqi Dinars per month. Significant improvements in the payment system, improvements in the structure of the CBI's reserve requirement, and the expected development of a liquid market in MOF securities will lower bank excess reserves and thus increase the multiplier linking base money to M1. However, staff do not expect these improvements to materialize much before next year and beyond.

The MOF is expected to sell about 1 billion dollars per month to the Central Bank through the end of the year. Best guesses about Iraqi's balance of payments through the end of the year suggest that at the current exchange rate the CBI's foreign exchange sales to the market to satisfy trade demand should average about $380 per month for the rest of the year, resulting in a growth in the CBI's net foreign assets of some $620 million per month.

Combining the growth in M1 expected to be consistent with an inflation objective in the neighborhood of 5 percent (300 billion ID per month), with the expected growth of the central bank's net foreign assets (about 900 billion ID per month), the CBI would need to reduce its net domestic assets by around 600 billion ID per month for the rest of the year. To some extent the estimated excess liquidity may lead to a larger demand for dollars in the CBI's foreign currency auctions, which would reduce the need for the CBI to reduce its net domestic assets. Most of the growth in base money is a growth in currency held by the public. Some of it is likely to be exchanged for dollars as a store of value and some will be spent on increased imports. Much of the rest is likely to increase domestic demand increasing both (but alternatively) domestic production and prices of domestically produced goods. Staff have no real basis for estimating the size of these effects, but they could be rather large. If half of the excess liquidity results in additional dollar demand and increased domestic production (without significant price pressure), the need to reduce the CBI's domestic assets each month might be closer to 300 billion ID.

The sterilization of excess liquidity by reducing the CBI's domestic assets would best be done by open market sales of rescheduled MOF securities or by allowing them to be paid off at maturity if the rescheduled maturities matched the CBI's monetary policy needs.

The rescheduling agreement with the MOF does not have these features, thus presenting the CBI with a serious challenge if it is to fulfill its stable price mandate. Raising the already high reserve requirement would increase an already high cost on banks. The best solution would be to find agreement with the MOF for an increase in its securities sales and use of the proceeds for early pay off of its securities held by the CBI. This approach would actually raise bank earnings by replacing excess reserves with interest earning government securities. From a monetary policy point of view, early pay off of the securities with the longest maturities would be best. From the government's debt management perspective, paying off the securities with the shortest maturities would be best. If no cooperative agreement can be reached with the MOF for increased sales of MOF securities, the CBI should consider issuing its own bills.

Interest rate data is currently limited to bank deposit and loan rates. After being liberalized on March 1, average bank deposit rates on six month time deposits dropped modestly. Between April and May they dropped further from 7.25 to 7.00 percent, while short term loans rates dropped from 13.5 to 13.25. Average savings deposit rates dropped from 6.30 to 6.00 percent. Short-term interbank rates and short-term MOF securities rates should fall between bank deposit and loan rates but should generally closer to deposit rates. Given the continued fall in year on year inflation and the almost unchanged CPI from January to May, inflation expectations are likely to be on the downtrend suggesting that very short-term interest rates, say on one to three month treasury bills, should be in the neighborhood of 8 percent. Bank liquidity would need to be tightened to achieving such a rate in the market.

Recommendations and options

In light of these forecasts, staff recommend *that the CBI continue to aim for an exchange rate in the range of 1420 to 1500 while reducing its net domestic assets by around 300 billion ID per month on average over the rest of the year.*

Analysis: *The assumptions leading to the need to reduce net domestic assets by 300 billion ID per month are discussed above. The CBI's sales of government securities in this amount should enable the CBI to keep the exchange rate stable in its current neighborhood while improving banks income by replacing excess reserves, which earn no interest, with government securities. A limitation on the ability of banks to buy additional securities arises because of the very small size of the banking sector and the fact that most of the excess liquidity is held by the public as cash.*

As an alternative, CBI could increase its sales of dollars to the market. Additional sales of dollars to the market beyond the amounts assumed by staff (i.e., above the expected $380 million plus $205 million) would further reduce excess liquidity and hence the reduction in the CBI's domestic assets assumed by the recommended policy (300 billion ID per month). However, such additional sales are likely to appreciate the dinar toward or below the 1420 level. At the more appreciated rate, imports would be more attractive and could be expected to increase. The dinar equivalent of oil revenues would decline, however, and some non-oil exports such as agriculture might be hurt increasing Iraq's *dependence on oil exports. Foreign exchange reserve accumulation would slow but should still be strongly positive. The maintenance of the government's dinar expenditures would require additional borrowing, which would further reduce domestic liquidity. All of these factors would add downward pressure on domestic prices and inflation and could even result in deflation.*

A third alternative is to sell the amount of dollars needed to keep the exchange rate at its current level with no change in net domestic assets (no open market sales of government securities or other liquidity draining steps). Under this alternative, base money and M1 will grow more rapidly than under the other two options. The Policy Rate of 8 percent will not be supportable in the market and relatively large deposits in the CBI's new Overnight Deposit facility are likely. Such deposits will slow the excessive monetary growth but probably not enough to prevent inflation from rising about its 5 percent target. Under this alternative, inflation expectations would raise and the nominal exchange rate would tend to depreciate requiring larger dollar sales to prevent depreciation until a higher inflation equilibrium is achieved.

***Staff recommend a Policy Rate** of 8.00 percent and a Primary Credit facility rate premium of 2 percentage points, a Secondary Credit facility rate premium of 3 percent and an Overnight Deposit rate discount of 2 percentage points in relation to the Policy Rate.*

***Analysis:** There is inadequate market information on interest rates on which to base a recommendation with much confidence. However, the modestly falling bank interest rates and falling inflation support setting the Policy Rate much closer to the most recently reported (May) six month deposit rates (which averaged 7.00 percent) than to the short term lending rate. Some staff felt that a move from the long standing 6 percent interest rate on government securities should be taken in a smaller first step. It will be challenging for the CBI to reduce liquidity in the market to a level consistent with a short –term interest rate of 8.00 percent.*

The recommended spread between the CBI's deposit and lending rates is 4 percentage points. While narrowing the ranged of interest rate uncertainty faced by banks, it is still quite wide. Staff recommend this wider range initially, when the CBI's capacity to forecast liquidity is limited, to insure that banks do not over use these standing facilities. With experience and market development, the range should be reduced.

***Staff recommend a reserve requirement ratio** for the new reserve requirement to take effect for the reserve maintenance period of September of 25 percent and a shift in at least 600 billion ID in government deposits with Rafidain and Rasheed to the CBI.*

***Analysis:** On the basis of March data, the new reserve requirement will reduce reservable deposits by more than 50 percent (primarily as a result of the exclusion of government deposits and to a lesser extend because of the exclusion of cash items in the process of collection). At the same time reservable assets will more than tripled (as a* *result of the addition of vault cash to reservable assets).*[25] *Staff estimate that a ratio of 25 percent in March on the new basis would have increased banks' free reserves by over 700 billion at a time when the central bank needs to reduce rather than increase liquidity. This result is distorted by the fact that almost all of the increases in free reserves were for Rafidain and Rasheed. These banks hold the largest amounts vault cash and the largest amounts of government deposits and thus benefit the most from the changes in the definitions of reservable deposits and reservable assets. For the rest of the banks, a ratio of 25 percent produces a very modest increase in free reserves on average.*

A ratio higher than 25 percent would reduce the undesirable increase in free reserves but the burden of the reduction would fall primarily on the private banks, which would suffer a small reduction in free reserves. The disproportionate benefit to Rafidain and Rasheed and the undesirable increase in bank liquidity can be offset by transferring a large share of government deposits with these banks to the central bank. An amount of about 600 billion ID would have been appropriate in March. The amount to be transferred in September when the new requirement is expected to take effect, which would require the agreement of the MOF, should be determined in light of the conditions at the time. If agreement with the MOF is not possible, the CBI would need to consider one of the methods discussed above for reducing liquidity.

The Policy Directive

The conclusions of the Board's policy decisions need to be communicated to those responsible for implementing it on a day to day basis, and to the public. Most central banks adopt some kind of "policy directive" for this purpose.

Historically, most central banks were reluctant to disclose the details of their policies. Often this reluctance reflected policies that relied on misleading or fooling the public such as attempting to exploit a Philips Curve trade off between inflation and unemployment. Economic experience and improved theory suggests that policy gains from fooling the public are increasingly short lived and can have long run adverse effects. In some cases the tradition of central bank secrecy may have been out of concern that giving too much information to the market could tie the central bank's hands in the face of unforeseen developments, or even feed destabilizing speculations. In many cases, however, it was a way to disguise the fact that the central bank did not have a clear strategy underlying its policy choices.

The conventional wisdom has shifted a great deal in recent years in the direction that central bank accountability and more focused objectives are best served by very substantial disclosure of their strategy for achieving their objectives. Relatively new inflation targeting regimes in the UK, Canada, Sweden, Australia, New Zealand, Poland, the Czech Republic, to name a few, rely on full disclosure to gain the market's cooperation with their efforts to achieve publicly announced inflation targets. Not only

[25] These data are distorted by the fact that Rasheed failed to satisfy its reserve requirement in March and was unable to report the required deposit data on time.

has such disclosure helped the public understand how the central bank's policy actions are meant to contribute to price stability, but it has also prodded the central banks themselves to clarify and refine their own strategy.

In the case of a managed float/soft peg regime the disclosure and explanation of policy actions is particularly delicate because of the risk of destabilizing speculation. It is helpful for the market to understand that the central bank wants to stabilize the exchange rate in order to stabilize domestic prices, but the market must also understand that the central bank is prepared to let the exchange rate adjust in the even of changes in the balance of payments fundamentals.

It is recommended that the CBI explain fully its policy strategy and decisions to the public. Policy decisions, such as setting the Policy Rate, should be taken to achieve or preserve price stability and thus the central bank should be able to share with the public its reasoning with regard to how an adjustment in the Policy Rate is expected to contribute to the achievement of its inflation target. Its capacity to do so will develop with experience, but the first Press Communiqué on this subject might look much like the model set out below in the Chapter VIII. The shorter Policy Directive is meant more as a delegation of day to day operational responsibility for implementing the policy to the Monetary Policy Committee. At present, that Directive might read as follows:

Until its next meeting on monetary policy on July 14, the prevailing exchange rate of the dinar to the U.S. Dollar[26] *is expected to remain appropriate for the CBI's goal of maintaining price stability. Current forecasts of monetary and economic forces suggest that the CBI's foreign exchange reserves will continue to increase rapidly at this exchange rate. Should the exchange rate threaten to move outside of the range of 1420 to 1500, or should the CBI's gross foreign assets drop below the level at the end of May, the Monetary Policy Committee should consult with the Board for direction.*

Until further notice, the CBI's Policy Rate shall be set at 8.00 percent. Its Primary Credit rate shall be three percentage points above its Policy Rate, its Secondary Credit rate shall be five percentage points above its Policy Rate, its Lender of Last Resort rate shall be equal to its Policy Rate and its Overnight Deposit rates shall be four percentage points below its Policy Rate.

The CBI shall endeavor to reduce its claims on government and claims on banks (thus its net domestic assets) by 300 ID per month on average over the coming months.

[26] Consideration should be given in the future to stating the exchange in reference to the Special Drawing Right (SDR) of the International Monetary Fund (IMF). The SDR is a basket of the major reserve currencies and is more reflective of Iraqi imports and exports. Though priced in dollars, oil prices reflect international demand and tend to be more stable in SDR than in USD terms. Thus the use of the SDR for setting exchange rate targets would better protect the ID from changes in the value of the US dollar against other currencies.

Work plan

1. The Board should establish the schedule for its monetary policy meetings a year in advance so that the cycle for the preparation of staff Briefs can be established. The meeting schedule should be published on the CBI's website.

2. The Board should provide feed back to staff on what it likes to see in staff Briefs (what it liked and didn't like and missed in the Briefs it receives). After some months of experimentation, the form of each Brief should stabilize.

3. The Board should agree on and implement its disclosure policy with regard to its Policy Directive and supporting information.

VII. Policy Implementation

Monetary Policy Committee (MPC)

Day to day implementation of the Board's monetary policy set out in its Policy Directive should be delegated to a Monetary Policy Committee (MPC). The MPC should be chaired by a Deputy Governor. The MPC should decide each day on the exchange rate in the FX auction and whether to undertake and open market operation and its size. These decisions should be guided by (in addition to the broad guidance of the Directive) weekly and daily data on the CBI's FX reserves in relation to its target (or sustainable path) and actual and forecast behavior of bank excess reserves and base money in relation to their targets.

The ultimate target of the CBI is its inflation target. Everything else should be focused on the requirements of achieving that target. The intermediate FX reserve and base money targets, on the other hand, are indicative targets. They are meant to help monitor whether the underlying assumptions still hold and whether some operational variables need to be adjusted (the Policy Rate, and open market operations, or even the exchange rate) if these variables deviated too much from their target values.

Work plan

1. The Governor should determine the composition and meeting schedule of the MPC.

2. The MPC should establish the regular input it expects from staff such as the liquidity forecast and exchange market briefing.

Liquidity forecasting

A unit for forecasting day to day liquidity will play an important role in the implementation of policy. However, the CBI should not be overly concerned with daily swings in excess reserves (or of foreign exchange reserves) because many of these swings will net out over the month (the reserve settlement period). The basic projections of desired (policy induced) changes in base money each month would come from the monetary programming done by the Macroeconomic Analysis and Forecasting unit. These are generally produced on a quarterly basis and the Liquidity Forecasting unit would determine the appropriate phasing of the quarterly targets into monthly amounts to reflect know seasonal patterns.

The MPC should pay particular attention to liquidity conditions going into primary auctions of government securities and the impact of maturing securities in its own portfolio (which will be reflected in the liquidity forecasts). The MOF is likely to either pre or post finance the lumpy maturities of existing securities. That is to say, it is likely to conduct regular auctions of similar amounts that will individually be too small to refinance the maturing amounts. Thus, the MOF will need to raise funds some weeks in advance of redemptions, which will build up the governments balances at the CBI and drain liquidity from the market, or will pay off the maturing securities out of dollar surpluses already in hand, and pay back the advance (from its own cash) from subsequent auctions. The Liquidity Forecast team will need to be aware of these policies and to monitor their liquidity impact closely.

In addition to monitoring actual and forecasted excess reserve behavior, the use of either the CBI deposit facility or its primary lending facility provide useful information on the state of liquidity in the market as discussed in the preceding chapter.

It is recommended that a Liquidity Forecasting team be established in the department that conducts open market operations and bank lending (i.e., the Agreements and Loans Department). Some of the members of the Liquidity Forecasting team should be on some of the Briefing teams as well. The IMF guide to Liquidity Forecasting has been provided to the staff.[27]

Team leader: Layla Joseph
Layla Finjan
Miss. Bushar Mawllwood
Miss. Hayfa’a Botras

The liquidity forecast should be updated daily and the Liquidity Forecast team should be prepared to advise the MPC on the implications of the forecast for possible open market operations. However, generally the forecast should be presented with analysis to the MPC once a week.

Work plan

1. CBI management should appoint staff to the Liquidity Forecasting team and define its work.

2. The Liquidity Forecasting team should define its forecast framework and format and establish the contacts in the MOF and elsewhere needed for information and data flows.

[27] MAE Operational Paper on Liquidity Forecasting, MAE OP/00/7, November 2000.

VIII. Transparency and Communication

Introduction[28]

Transparency of policies and procedures is important in establishing and sustaining central bank credibility. An important component of transparency is the timely communication of information to the public regarding changes in central bank policies and procedures.

After the CBI's Board of Directors is established and commences regular meetings, it will want a vehicle for communicating its policy decisions to the public. Following the practices in other countries, CBI may choose to issue a press release stating its major policy decisions, to publish minutes of Directors' meetings, to hold a press conference to announce policy decisions, to post a notice on CBI's website or to do some combination of these.

Written statements require less time to prepare and to deliver than do meeting minutes and press conferences. At the same time, they provide less complete information regarding the considerations going into policy decisions. The Directors will need to decide the balance it wishes to strike in these areas. They may decide different approaches for different policies.

For example, after meetings of monetary policy committees, central banks typically provide the press with information regarding the policy decisions taken. The Federal Reserve's policy committee reports, immediately after each meeting, the new target level for the overnight interbank lending rate and the committee's reasons for choosing that level. It publishes minutes of its meeting with a six week lag. The European Central Bank issues a brief statement of the new levels of its interest rate tools and the President of the Central Bank discusses the considerations underlying the Governing Council's decisions at a press conference shortly thereafter. The Bank of England announces its decisions on interest rates immediately following its meetings using the wire services' Bank of England pages and the Bank's website. The minutes of the Monetary Policy Committee meeting are published 6 days later.

In addition to monetary policy decisions, the CBI Directors need to develop a view on how best to publicize supervisory, regulatory and payments system developments. Specifically, what sort of announcement should be made regarding the new reserve requirement regulation when it is finalized? What sort of announcement should be made regarding the new electronic payments system?

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[28] The first section of this chapter was written by Betsy White, Senior Monetary Policy Advisor to the Central Bank of Iraq in April and early May, 2004.

Press Communiqués

An example of the kind of public statement the CBI might consider following its monetary policy meetings is presented here based on the monetary policy briefs presented by staff June 20 and the decisions taken by management following that meeting.

Summary

In preparation for the auction of Ministry of Finance securities, the senior management of Central Bank of Iraq (CBI) met on June 20, 2004, to review recent economic, monetary, and financial developments and concluded that its **current exchange rate policy is appropriate** for achieving domestic price stability while at the same time fostering expansion in output and employment.[29] That policy aims at selling enough US dollars in the CBI's regular foreign currency auctions to allow the exchange rate to remain in its current neighborhood as long as international and domestic economic conditions are in line with expectations.

In addition, the CBI set its Policy Rate at 8.00 percent until further notice. Its Policy Rate, which is defined in the new Banking Facilities regulation now being discussed with banks, reflects the CBI's view of the short-term, risk free interest rate consistent with its objective of a stable price level. The Policy Rate will be reviewed and adjusted as needed to preserve price stability on the basis of experience and new information. At the same time the CBI established the premium for its new Primary Credit facility for banks at three percentage points above its Policy Rate and the premium for its Secondary Credit facility at five percentage points above its Policy Rate. The rate on its new Overnight Deposit facility will be four percentage points below the Policy Rate. A special Lender of Last Resort facility for distressed banks under enhanced supervision by CBI will charge the Policy Rate. All of these facilities will be available beginning July 1, 2004.

Background

Article 3 of the Central Bank Law states that: "The primary objectives of the CBI shall be to achieve and maintain domestic price stability and to foster and maintain a stable and competitive market-based financial system. Subject to these objectives, the CBI shall also promote sustainable growth, employment, and prosperity in Iraq."

In the current environment of Iraq, the CBI is seeking to maintain price stability primarily by stabilizing the exchange rate. The exchange rate has a very large impact on the CPI in Iraq, where over half of domestic purchases of goods and services are imported. Furthermore, it is the most visible economic variable available to citizens and the market. In view of favorable price developments thus far in 2004 and crude indications that output and employment are improving, despite the difficult security situation, the CBI believes that the current exchange rate policy of limiting movements in the dinar is appropriate.

[29] Those present for the meet were: [list of Board members in attendance]

Exchange rate

From the beginning of the year, when the exchange rate was 1680, until June 21, when the Iraqi dinar (ID) / U.S. dollar rate was 1460, the rate has stabilized around the mid 1400's. Over the last six weeks it has remained between 1450 and 1465. The rate averaged 1,419 in March 1,440 in April and 1461 in May.

Foreign exchange reserves

Since the beginning of the CBI's foreign currency auctions on October 4, 2003, it has purchased 4,291 million U.S. dollars from the Ministry of Finance (MOF) and sold 1,700 million to the market through its daily auctions. Taking account of other modest purchases from other ministries, the CBI's foreign reserves rose by 3,680 million dollars over this period. Taking account of the government's planned expenditures (see below) and anticipated non-government net imports, the CBI expects its foreign exchange reserves to continue to grow over the rest of the year.

Inflation

Available evidence suggests that last year's inflation of about 34 percent, as measured by the consumer price index (CPI) may be over. While the CPI has been volatile from one month to the next, largely for technical reasons, the May CPI is virtually unchanged from January. This conclusion must however be qualified, in light of the fact that monthly inflation data have a distinctly seasonal pattern of low rates in the spring. No seasonal adjustments are yet made in the index prepared by the Central Statistical Office (CSO), although the CSO plans to do so soon, as one of a number of improvements in the index.

Interest rates

Bank interest rates were liberalized March 1. They have since fallen by one percentage point. The six month fixed term deposit rate fell from 8 percent at the beginning of March to an average of 7 percent in May. Short term loan rates fell from 14 percent at the beginning of March to an average of 13 percent in May. Given the stabilization of prices and increased competitiveness of the banks, these rates might be expected to fall somewhat more in the near future. The interest rate on the new MOF securities to be auctioned shortly is expected to be in the neighborhood of the CBI's Policy Rate of 8 percent.

Real income and output

Income growth prospects depend heavily on the security situation in Iraq going forward. However, it is not unreasonable to expect activity to recover to the level of 2002 or slightly above. With improvements in security, the second half of 2004 should see increased capital inflows for investment, and reconstruction and increased oil revenues.

Increased employment, production and growth in response to increased effective demand could lift nominal in income by more than 40 percent or slightly above the level in 2002.

The changes in income in the coming months will have an important impact on the money supply needed to preserve stable prices.

Fiscal policy and the money supply

Monetary behavior in Iraq is largely driven by the government's domestic expenditures of its foreign exchange revenue. The government's domestic expenditures are largely financed by selling foreign exchange received from donors and oil exports to the CBI for dinar. The government's budget for the rest of the year implies an increase in its sales of dollars to the CBI by almost 70 percent over the first five months of the year. Some of the implied increase in the growth in the money supply is expected to be absorbed by increased sales of dollars to the market by the CBI as the public converts some of its increased dinar cash holdings into dollars. However, if price stability is to be preserved, the CBI will need to further offset the excessive monetary growth budgeted expenditures imply. Its primary tool for this purpose will be to reduce its holdings of government securities either by selling them to the public or by the Ministry of Finance auctioning the additional amounts needed to pay off the maturing MOF securities held by the CBI.

Statistical Publications

The current list of statistical publications published by the Central Bank of Iraq includes the Special Issue, for the first half of 2003, the Annual Bulletin, for all of 2003, and quarterly bulletins, which are to begin with an issue for the January – March 2003 quarter. Also to be published soon is a document entitled, "Foreign Trade and Balance of Payments," for the year 2003.

Prospectively, it is most desirable for the CBI to regularize its quarterly bulletin and its annual report, while adding a monthly publication for the important current monetary and financial data, including such elements as money supply, currency in circulation, inflation, exchange rate movements, and oil export revenues. It is also important for the CBI to begin to provide commentary on, and analysis of, the data contained in its publications, and to put this commentary and analysis into context for policy makers seeking to understand conditions and trends in the economy of Iraq.

IX. Future needs

Reorganization: The CBI plans to modernize its organizational structure and operation. The advisor provided some limited advice in this area. The CBI would benefit from further technical assistance in this area (a human resources advisor to advise on the implementation of the restructuring) as well as in the following areas not otherwise touched upon above. This list reflects selected areas that came to the advisor's attention and is not meant to be comprehensive.

Internal audit: The integrity, efficiency, and reliability of the CBI's operations must set the highest standards in Iraq. The Central Bank can benefit a great deal from a better understanding of international best practice in this area. Help would be useful in defining the terms of reference of the Inspector General and the work of the Internal Audit Department as well as the Board's role in the work of the department. The CBI should also seek advice on best practice in developing the Internal Audit Department's relationship to and role in external audits.

Accounting systems: Work has been underway for some time to upgrade accounting software and systems. This work should be given some priority over the coming months and year. Accounting standards should be reviewed and adjusted as needed. Current market exchange rates should be adopted immediately for valuing foreign assets and liabilities.

Information Technology: The CBI now has a website. The website can be an important and powerful window into the Central Bank's activities and thinking. The website needs to be further developed and more extensively used. A critical aspect of a good website is the establishment of clear responsibilities for maintaining the information posted there in a timely way.

The CBI LAN needs to be upgraded and email introduced. Other IT systems need to be developed and enhancement, and IT training (word processing, spreadsheets, databases, etc.) needs to be expanded. These should include the statistical database for the Statistics and Research Department and the book entry database for MOF securities mentioned in the text above.

Foreign exchange reserve management: Investment guidelines and internal procedures need to be developed to protect the CBI's foreign exchange reserves from losses and to maintain adequate liquidity and return.

Prudential supervision and problem bank resolution: The CBI should seek assistance in developing its approaches to prudential supervision. A three to four year training program will be needed to bring supervision to acceptable international standards. The development of procedures for dealing with the resolution of problem banks should receive priority.

Macroeconomic analysis: The monetary policy briefs discussed above are the beginning of a process to develop policy analysis capabilities that will take many years to bring to satisfactory levels. The CBI should establish a long-run staff development plan in this and other areas. The IMF and several central banks offer seminars, workshops and courses on various aspects of monetary policy analysis. Economists and advisors could be encouraged to visit the CBI to work with staff in this area. A resident advisor in this area would be desirable.

Secondary trading of MOF securities: Assistance should be sought in further developing the secondary market in MOF securities.

Attachments

CENTRAL BANK OF IRAQ
ADMINISTRATIVE INSTRUCTION NO. ___DATED JULY___, 2004

Banking Facilities

The Central Bank of Iraq issues the regulation set forth below pursuant to Article 4 paragraph (3) and Article 28 of the Central Bank of Iraq Law of 2004 for the purposes of implementing the Central Bank of Iraq Law. These regulations are effective upon issuance under Article 4 paragraph (4) of the Central Bank of Iraq Law without having been published in draft form for public comment. The Central Bank of Iraq believes that the delay involved in publishing the regulations for comment would be a serious threat to the interests of the financial system because: 1) the Central Bank of Iraq Law replaced all prior inconsistent laws and there are currently no banking facility regulations in effect; and 2) it is essential to have prompt implementing regulations to make the Central Bank of Iraq Law an effective instrument.

Section 1 Authority, purpose and scope, effective date

1.1 Authority. This regulation is issued under the authority of Articles 4.3 and 28 of the Central Bank of Iraq law.

1.2 Purpose and scope. This regulation establishes the rules under which the Central Bank of Iraq (“Central Bank” or “CBI”) extends credit to banks and accepts interest-bearing deposits from banks. Except as otherwise provided, this regulation applies to both Iraqi banks and to branches of foreign banks in the same manner. The Central Bank of Iraq extends credit with due regard to the basic objectives of monetary policy and the maintenance of a sound and orderly financial system

1.3 Effective date. This regulation shall take effect on the date of issue by the Central Bank of Iraq.

Section 2 Definitions

2.1 For purposes of this regulation, the following definitions and any definitions in the Central Bank of Iraq law shall apply:

a. *Account* means a reserve or current account of a bank at the Central Bank of Iraq.

b. *Advance* means an extension of credit to the Borrower in the form of a loan, including any renewal or extension thereof.

c. *Advance Repayment Amount* means the amount of an Advance plus all accrued and unpaid interest.

d. *Bank* means a person holding a license or permit under the Banking Law to engage in banking business and other banking activities.

e. *Borrower* means a bank that incurs an Obligation to the Central Bank of Iraq.

f. *Collateral* means all the Borrower's right, title, and interest in property, including, but not limited to, accounts, inventory, equipment, instruments, investment property, documents, deposit accounts, real property, and intellectual property, and which is (a) identified on a Collateral Schedule; or (b) identified on the books or records of the Central Bank of Iraq; all cash and not-cash proceeds and all amounts paid or payable under or in connection with all of the foregoing, including, but not limited to, interest, dividends, insurance, rents, and refunds.

g. *Collateral Schedule* means a statement of Collateral pledged to secure an Obligation.

h. *Event of Default* means the Borrower fails to repay or satisfy any Obligation when due or whenever the Central Bank of Iraq deems itself insecure with respect to the financial condition of the Borrower or the Borrower's ability to perform its obligations under this regulation.

i. *Indebtedness* means the total of the Borrower's intraday or overnight overdrafts in its Account and any penalties and charges thereon.

j. *Obligation* means an Advance Repayment Amount, an Indebtedness, and any other liability of the Borrower to the Central Bank of Iraq, whether due or to become due.

k. *Overnight deposit* means an interest-bearing balance in Iraqi Dinars held by the Central Bank of Iraq for a bank under Section 12 of this regulation.

l. *Policy Rate* means the rate of interest set by the Central Bank of Iraq to reflect the rate for the overnight use of funds that the Central Bank of Iraq considers to be appropriate for the maintenance of price stability.

Section 3 Extensions of credit generally

3.1 Advances to a bank.

a. The Central Bank of Iraq may lend to a bank by making an Advance secured by acceptable collateral under Section 4 of this regulation.

b. A bank must secure an Advance to the satisfaction of the Central Bank of Iraq. Satisfactory collateral generally includes Ministry of Finance securities, and, if of acceptable quality, mortgage notes covering real estate and business and other customer notes.

3.2 No obligation to make Advances. The Central Bank of Iraq shall have no obligation to make, increase, renew, or extend an Advance to any bank under Section 4.2 or 4.3 of this Regulation. The Central Bank of Iraq may refuse to make, increase, renew, or extend an Advance to a bank under Section 4.1 of this Regulation if the bank does not satisfy the requirements of the Central Bank for primary credit.

3.3 Information requirements. The Central Bank of Iraq may require any information it believes appropriate or desirable to ensure that assets tendered as collateral for Advances are acceptable and that the borrower uses the credit provided in a manner consistent with this regulation.

3.4 Indirect credit for others. No bank that receives credit under Sections 4.2 or 4.3 shall act as the medium or agent of another bank in receiving Central Bank of Iraq credit except with the permission of the Central Bank of Iraq.

Section 4 Availability and terms of credit.

4.1 Primary credit. The Central Bank of Iraq extends primary credit on an overnight basis as a backup source of funding to a bank that is in generally sound financial condition in the judgment of the Central Bank of Iraq. Primary credit ordinarily is extended with minimal administrative burden on the Borrower. A bank may use primary credit on 15 days in a month and may use it on additional days in a month with prior Central Bank approval. A bank may use primary credit up to 20 percent of the bank's capital and may use primary credit in excess of this amount with prior Central Bank approval. Credit extended under the primary credit program is granted at the primary credit rate.

4.2 Secondary credit. The Central Bank of Iraq extends secondary credit on a short-term basis, usually with maturities up to one month, as a backup source of funding to a bank that is unable to arrange market financing if, in the judgment of the Central Bank of Iraq, such a credit extension would be consistent with a timely return to a reliance on market funding sources. Credit extended under the secondary credit program is granted at a rate above the primary credit rate.

4.3 Lender of last resort. In exceptional circumstances, the Central Bank of Iraq extends credit to a bank or for a bank's benefit if:

a. in the opinion of the Central Bank of Iraq, the bank is solvent and provides adequate collateral, and the request for financial assistance is based on the need to improve liquidity; or

b. such assistance is necessary to preserve the stability of the financial system and the Minister of Finance has issued to the Central Bank of Iraq a guarantee in writing on behalf of the Government securing the repayment of the loan.

A bank seeking support should submit to the Central Bank of Iraq a description of the program the bank is following to improve its liquidity and to enable the bank to return to reliance on market funding sources. Support from the Central Bank of Iraq as lender of last resort is available for periods not exceeding three months. The initial period of support may be extended by the Central Bank of Iraq in its discretion.

Section 5 Interest rates applicable to credit extended

5.1 Primary credit. The rate for primary credit provided to banks under Section 4.1 is a rate that is a specified increment above the Central Bank of Iraq's Policy Rate. The Central Bank may revise the increment from time to time and publishes it separately in advance of its effective date.

5.2 Secondary credit. The rate for secondary credit extended to banks under Section 4.2 is a rate that is a specified increment above the primary credit rate. The Central Bank may revise the increment from time to time and publishes it separately in advance of its effective date.

5.3 Lender of last resort. The rate for support extended by the Central Bank of Iraq as lender of last resort is the Central Bank of Iraq's Policy Rate.

5.4 Policy rate. The Central Bank may revise the Policy Rate from time to time and publishes the rate separately in advance of its effective date.

Section 6 Advance

6.1 A request for an Advance should be made to the Central Bank of Iraq in a timely fashion and must be secured by Collateral acceptable to the CBI. The CBI reserves the right, in its sole discretion, to require the Borrower to apply for an Advance under Sections 5.2 or 5.3 in writing or execute a promissory note and/or additional relevant agreements or documents at any time with respect to an Advance.

6.2 After an Advance is approved, the CBI will credit the amount to an Account agreed upon by the Borrower and the CBI. The credit is made available at the end of the banking day of the CBI.

Section 7 Interest

7.1 Interest accrues from the day an Advance is credited to the Account designated by the Borrower and is payable at the applicable rate in effect on that day. If the interest rate changes while an Advance is outstanding, the new rate applies as of the day on which the rate change is effective. Interest is computed on the basis of 365 days in a year.

7.2 If all or any portion of an Advance Repayment Amount is not paid when due (whether by acceleration or otherwise), interest on the unpaid portion of the Advance Repayment Amount is payable at a rate five percentage points higher than the applicable rate then in effect until the unpaid Advance Repayment Amount is paid in full.

Section 8 Repayment of Advance

8.1 The Borrower promises to pay an Advance Repayment Amount when due in immediately available and finally collected funds. An Advance Repayment Amount is due:

a. on demand; or

b. if no demand is made, on the due date and time specified by the CBI in writing, except that if no due date and time is specified, then an Advance Repayment Amount is due on the business day following the day the Advance was made and at the same time the Advance was credited; or

c. regardless of whether a demand is made, at the CBI’s option, upon the occurrence of an Event of Default.

8.2 If the CBI demands payment of an Advance Repayment Amount, all Indebtedness and other Obligations are due immediately, without prior demand or notice.

8.3 The Borrower waives any right to presentment, notice of dishonor, protest, and any other notice relating to payment of the Advance Repayment Amount and Indebtedness.

8.4 The Borrower may prepay an Advance under Sections 5.2 or 5.3 (together with accrued and unpaid interest on the amount being prepaid), in whole or in part, without penalty.

8.5 The CBI will debit the Borrower's Account for the amount of the Advance Repayment Amount when it is due.

8.6 If the Borrower knows or should have known that the Account has insufficient immediately available and finally collected funds when payment of any Advance Repayment Amount or Indebtedness is due, the Borrower must make arrangements satisfactory to the CBI for repaying the amount.

Section 9 Grant of Security Interest

9.1 For value received and in consideration of the CBI permitting the Borrower to obtain Advances or incur Indebtedness, the Borrower pledges to the CBI a continuing security interest in, lien on, and right of set-off against Collateral to secure any Obligation, whether now existing or arising in the future.

9.2 As further security for any Obligation, whether now existing or arising in the future, the Borrower pledges to the CBI all the Borrower's right, title, and interest in property, whether now owned or hereafter acquired, in the possession or control of the CBI, including but not limited to, investment property (including securities), items in process of collection and their proceeds, and any balance to the credit of the Borrower with the CBI.

Section 10 Collateral

10.1 An Advance Repayment Amount must be secured by Collateral acceptable to the CBI. If required by the CBI, the Collateral must be identified on a Collateral Schedule in the form and manner specified by the CBI. Collateral Schedules must be kept current and must be updated in accordance with the CBI's instructions.

10.2 Unless the CBI agrees otherwise, the Borrower must transfer or deliver Collateral to the CBI or its custodian in the form and manner specified by the CBI. The Borrower shall hold any item of Collateral not delivered or transferred to the CBI or its custodian in trust for the CBI until the Collateral is delivered or transferred in accordance with the CBI's instructions.

10.3 The Borrower bears the risk of loss for any Collateral held in the Borrower's possession or in transit to or from the CBI. The Borrower also bears the risk of any accidental loss or damage to Collateral in the CBI's possession to the extent the CBI exercised reasonable care.

Section 11 Remedies Upon Default

11.1 If an Event of Default occurs, the CBI may pursue any of the following remedies, separately, successively, or concurrently:

a. Unless an Advance Repayment Amount is immediately due, declare the same immediately payable, without prior notice or demand, and debit the Borrower’s Account accordingly;

b. Set off any Obligation against any amount owed by the CBI to the Borrower, whether then due or not due;

c. Exercise any banker’s lien or right of setoff provided by applicable law against Borrower’s property in the possession or control of the CBI , including but not limited to items in process of collection and their proceeds and any balance to the credit of the Borrower with the CBI;

d. Take possession of any Collateral not already in the CBI’s possession, without demand and without legal process. The Borrower grants to the CBI the right, for this purpose, to enter into or on any premises where Collateral may be located; and

e. Pursue any other remedy available at law or in equity to collect, enforce, or satisfy any Obligation, including exercising its rights as a secured creditor to collect income on Collateral whether or not Collateral is in the CBI’s possession.

11.2 If the CBI exercises its rights in Collateral upon an Event of Default:

a. The CBI may sell, assign, transfer, and deliver, at the CBI’s option, the whole or any part of Collateral at private or public sale, at such prices as the CBI may, in good faith, deem best, without advertisement, and the Borrower waives notice of the time and place of the sale, except any notice that is required by law and may not be waived;

b. The CBI may purchase any or all of Collateral and pay for it by applying the purchase price to reduce amounts owed by the Borrower to the CBI.

11.3 The Borrower appoints the CBI, with full power of substitution, as its true and lawful attorney-in-fact with full irrevocable power and authority in the place and stead of the Borrower, to endorse, assign, transfer, and deliver Collateral to any party, and to take any action deemed necessary or advisable by the CBI to either protect the CBI’s interests or exercise its right under this regulation.

Section 12 Overnight Deposit Facility

12.1 The Central Bank of Iraq accepts a deposit of Iraqi Dinars from a bank with a one day maturity. Interest on overnight deposits is credited at a rate set by the Central Bank below the Central Bank of Iraq's Policy Rate in effect on the day of deposit.

12.2 The amount of a bank's overnight deposit does not count toward fulfilling the bank's reserve requirement.

Issued by the Central Bank of Iraq:

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Governor Sinan Al-Shabibi

Date:________________________________

CENTRAL BANK OF IRAQ

ADMINISTRATIVE INSTRUCTION NO.___DATED JULY___, 2004

Reserve Requirements

The Central Bank of Iraq issues the regulation set forth below pursuant to Article 4 paragraph (3) and Article 29 of the Central Bank of Iraq Law of 2004 for the purposes of implementing the Central Bank of Iraq Law. These regulations are effective upon issuance under Article 4 paragraph (4) of the Central Bank of Iraq Law without having been published in draft form for public comment. The Central Bank of Iraq believes that the delay involved in publishing the regulations for comment would be a serious threat to the interests of the financial system because: 1) the Central Bank of Iraq Law replaced all prior inconsistent laws and there are currently no reserve requirement regulations in effect; and 2) it is essential to have prompt implementing regulations to make the Central Bank of Iraq Law an effective instrument.

Section 1 Authority, purpose and scope, effective date

1.1 Authority. This regulation is issued under the authority of Articles 4.3 and 29 of the Central Bank of Iraq law.

1.2 Purpose and scope. This regulation establishes the rules under which banks maintain required reserves. This regulation applies to branches of foreign banks in Iraq in the same manner and to the same extent as it applies to Iraqi banks.

1.3 Effective date. Banks shall begin to maintain reserves under this regulation on September 1, 2004 based on deposits reported in August 2004.

Section 2 Definitions

2.1 For purposes of this regulation, the following definitions and the definitions in the Central Bank of Iraq law shall apply.

a. *Deposit* means a debt liability of a bank either in account form or evidenced by an instrument issued by the bank. Deposits include borrowed funds and contingent liabilities such as derivatives contracts. Deposits do not include debt that qualifies as capital.

b. *Reserve account balance* means the balance in a bank's reserve account at the Central Bank of Iraq at the end of the banking day excluding amounts attributable to overnight deposits under Article 28.e of the CBI law.

c. *Reserve Calculation Period* means the four week period ending on the second Thursday before the end of a calendar month.

d. *Reservable Deposits* means balances held by a bank for depositors other than another bank or the central Government including deposits in a current, current nature, savings, or time account in Iraqi Dinar and foreign currency and excluding the amount of cash items in the process of collection.

e. *Reserve Maintenance Period* means the calendar month period during which a bank is required to maintain reserves against the Reservable Deposits in the preceding Reserve Calculation Period.

f. *Reserve Ratio* means the proportion of Reservable Deposits that must be maintained as reserves.

g. *Reserve Requirement* means the amount a bank is required to maintain on average during a Reserve Maintenance Period as deposits with the Central Bank and vault cash in Iraqi Dinar.

Section 3 Requirement

3.1 A bank shall maintain reserves during a Reserve Maintenance Period in an amount determined by multiplying the amount of its Reservable Deposits in the preceding Reserve Calculation Period by the Reserve Ratio. The result of this calculation is the Reserve Requirement for that bank for the following Reserve Maintenance Period.

3.2 The Reserve Ratio is the amount specified by the Central Bank in percentage form and may be adjusted at any time by the Central Bank. The Reserve Ratio in effect on the last day of the Reserve Calculation Period shall be used to calculate the Reserve Requirement.

3.3 A bank may maintain reserves in the form of Iraqi Dinar balances in its reserve account with the Central Bank of Iraq and Iraqi Dinar currency in the bank's vaults. Eligible vault cash must account for at least twenty percent of the Reserve Requirement.

3.4 A bank shall calculate its Reserve Requirement in accordance with this regulation and submit the results and the data on which it is based to the Central Bank on or before the last banking day prior to the Reserve Maintenance Period. The bank shall submit the results and the data to the Agreements and Loans Department and any other department specified by the Central Bank.

Section 4 Reservable Deposits

4.1 The deposits used to calculate a bank's Reservable Deposits are the deposits the bank holds for customers other than banks and the central Government in current, current nature, savings, and fixed accounts in Iraqi Dinar and foreign currency. The total amount of such deposits at the end of the banking day for each Thursday in a Reserve Calculation Period is averaged to determine the Reservable Deposits for that period. If a Thursday is not a banking day, the amount of the deposits on the nearest preceding banking day is used. Central Government deposits are deposits held in the name of the Minister of Finance or any of the Ministries. The amount of foreign currency deposits is converted to Iraqi Dinars at the conversion rate specified by the Central Bank.

Section 5 Reserve Maintenance Period

5.1 A bank shall maintain reserves during a Reserve Maintenance Period so that the average of the amount of reserves at the end of each banking day over the month equals the Reserve Requirement for that period. The Reserve Maintenance Period is the calendar month immediately following a Reserve Calculation Period.

5.2 A bank may hold any positive amount on deposit in its Reserve Account with the Central Bank and any amount of Iraqi Dinar in its vaults on any day as long as the average end of day amount over the month equals or exceeds the Reserve Requirement and at least twenty percent of the Reserve Requirement is satisfied with eligible vault cash.
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5.3 A bank may not permit the balance in its reserve account to fall below zero at any time during the banking day or at the end of the banking day.

5.4 The Central Bank does not pay interest on the balances in a bank's reserve account.

Section 6 Penalties

6.1 A bank that fails to maintain reserves equal to its Reserve Requirement shall pay the Central Bank a penalty equal to the interest at the Primary Credit rate plus 5 percentage points on the amount that average reserves actually maintained is less than the Reserve Requirement. The Primary Credit rate used is the rate in effect on the last day of the Reserve Maintenance Period under the Central Bank's Banking Facilities regulation. The Central Bank shall charge this penalty to the bank's reserve account at any time during the month following the Reserve Maintenance Period.

6.2 If a bank incurs penalties for reserve deficiencies for two months in a row, the Central Bank may initiate a supervisory intervention with the aim to resolve the bank's liquidity problems in a structured and timely manner.

Issued by the Central Bank of Iraq:

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Governor Sinan Al-Shabibi

Date: _________________________