

CENTRAL BANK OF THE REPUBLIC OF TURKEY



**“Reflections on the February 2001 Turkish Crisis:
Lessons from a Central Banker’s Perspective”**

Opening Lecture by Mr. Süreyya Serdengeçti
Governor of the Central Bank of the Republic of Turkey

erc/METU International Conference in Economics VI
Ankara, September 11, 2002
9.³⁰-10.³⁰ AM

I am pleased to join in welcoming you all to the METU International Conference in Economics that will address some of the core issues confronting central banks around the world today.

In my lecture today, I will not tell you about inflation outlook or market developments; instead, I would like to share with you the key aspects of the Central Bank's efforts to manage the February 2001 Crisis from a practitioner's standpoint. I believe that the discussion of our experience with the crisis management will be illuminating for many of the participants, in terms of enhancing our understanding of the practical aspects of the main issues that we have been largely following from the vast literature on financial crises.

Prior to the discussion of the central aspects of our crisis management strategy, which, *inter alia*, avoided hyperinflation by mopping up a substantial amount of liquidity arising from the bank restructuring operation in a record time, I would like to provide a brief overview of the February crisis as background information. With the benefit of hindsight, I intend to conclude my lecture by highlighting the main lessons that we can draw from our experience.

A BRIEF OVERVIEW OF THE FEBRUARY CRISIS

In an attempt to stabilize the economy plagued by chronic high inflation and high real interest rates as well as deteriorating debt dynamics, Turkey has launched an exchange rate based stabilization program (ERBSP) supported by international financial institutions, in December 1999.

A quick glance at the other stabilization episodes, indeed, seems to support this decision: countries that included some form of fixed exchange rate regime in their stabilization packages—together of course with a freeze on Central Bank domestic credit, which is an indispensable feature of ERBSPs—appear to have been more successful in curbing inflation and inducing fiscal discipline. Moreover, countries that adopted exchange rate based stabilization programs seem to have experienced faster output recovery than countries that pursued money based stabilization programs (Table 1).

In spite of its effectiveness as a nominal anchor in reducing inflation, the adoption of an ERBSP entails vulnerabilities that, depending on the country's fundamentals, usually end with the collapse of the peg. Evidence to date points to at least four main factors that often paved the path for the collapse of the program: (i) inconsistent fiscal policy; (ii) weak banking system; (iii) lack of a pre-announced exit date or strategy; (iv) adverse shocks—such as an adverse terms of trade shocks—under which adjustment of the exchange rate can in fact be welfare improving.

Table 1. The Main Empirical Regularities of Stabilization Programs

<i>Exchange Rate Based Stabilization</i>	<i>Money Based Stabilization</i>
Slow convergence of inflation to the rate of devaluation	Slow convergence of inflation to the rate of money growth
Real appreciation of the domestic currency	Real appreciation of the domestic currency
Deterioration of the trade balance and the current account	No clear-cut response in the trade balance and current account
Initial increase in real activity (i.e., real private consumption and real GDP) followed by a later contraction	Initial contraction in economic activity
Ambiguous response of domestic real interest rates	Initial increase in domestic real interest rates

Source: Calvo, Guillermo A., and Carlos A. Végh, 1994, "Inflation Stabilization and Nominal Anchors," *Contemporary Economic Policy*, Vol. 12, pp. 35-45.

At first blush, the Turkish ERBSP seems to have not suffered from the lack of an exit strategy, as the program had envisioned moving to an exchange rate band that was supposed to widen eighteen months after its inception. However, it is now clear that a smooth exit from the exchange rate peg necessitates that global economic conditions are favorable and the domestic economic program remains on track. Unfortunately, as I will elaborate on later, these conditions were not present in Turkey. The other factors that I have mentioned, however, did play a more visible role, at varying degrees, in the collapse of the program.

Now, let me turn to the discussion of the key contributing factors to the collapse of the Turkey's ERBSP.

First, as was the case with many other ERBSPs, Turkey enjoyed large inflows following the introduction of the program (Figure 1). External borrowing by the banks and the private sector constituted the large portion of these inflows, while foreign direct investment remained negligible. These developments, indeed, seem to lend some support to the widely discussed moral hazard problem, which posits that pegged exchange rates may provide implicit guarantees for those looking to borrow in foreign currency. To sustain the peg, authorities often insist that there is absolutely no prospect of it being changed. In this way, the government offers the private sector an insurance against the risk of exchange rate changes. This situation attracts capital inflows, but leaves the economy very vulnerable to external shocks. [\[1\]](#)

Figure 1. Evolution of Capital Flows
(million US dollar, 12-month cumulative)

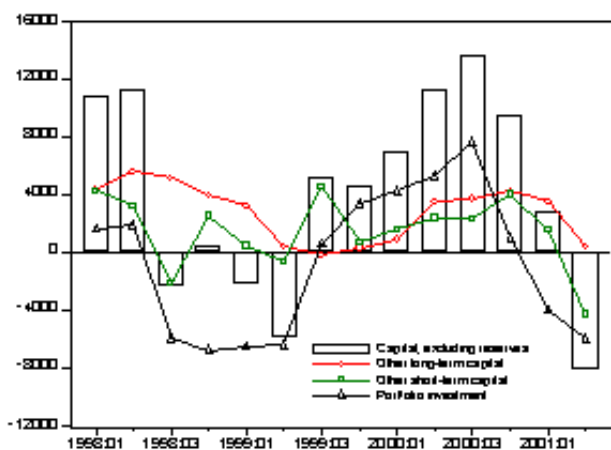


Figure 2. Growth rate of Loans (year-on-year)

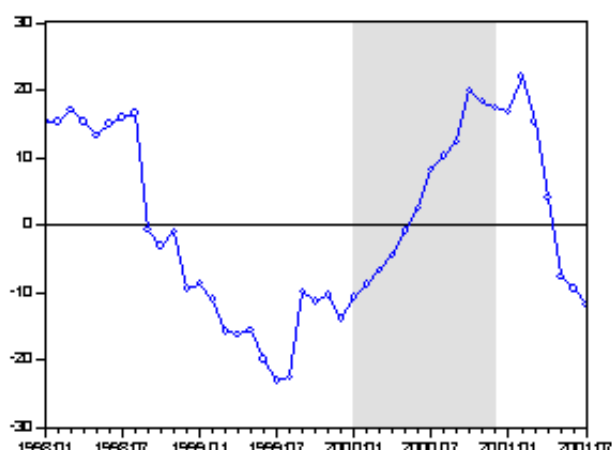


Figure 3. Share of Consumer Loans in the Total

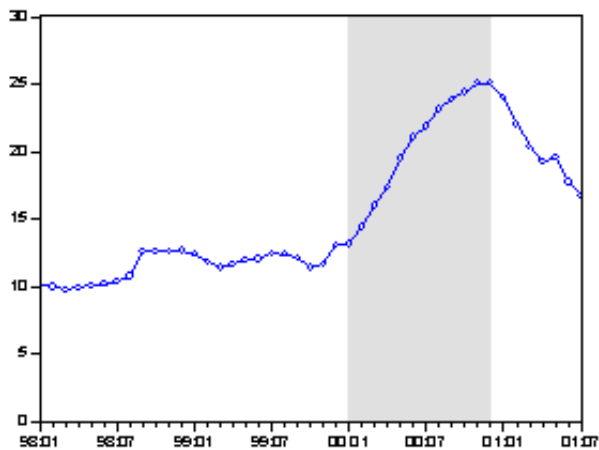


Figure 4. Evolution of the Current Account

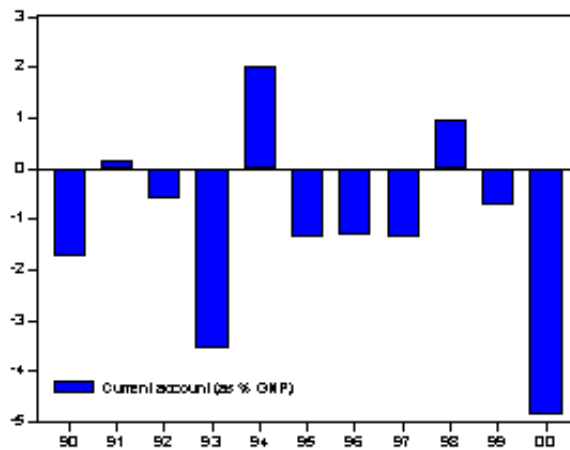
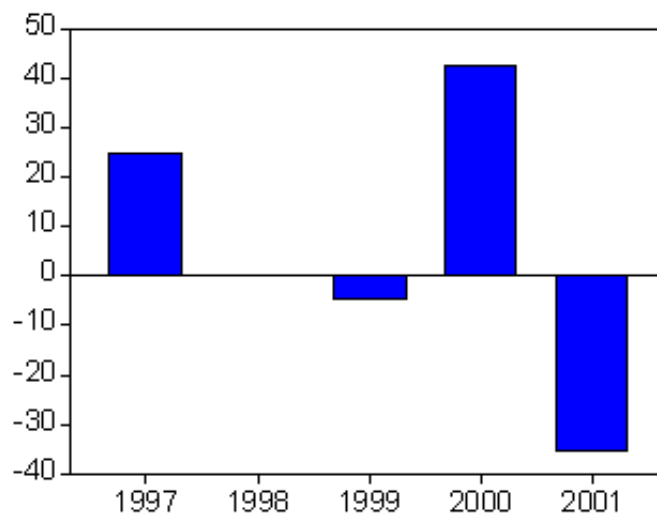


Figure 5 Growth Rate of Consumption Goods Imports
(in US\$, year on year)



The sharp rise in capital flows, in turn, increased the supply of loanable funds at banks' disposal, thereby allowing banks to engineer a lending boom (Figure 2). As is widely acknowledged, lending booms lead to financial vulnerability by contributing to an endogenous decline in the quality of banks' assets for at least three reasons.

First, banks have limited capacity to evaluate projects. Second, regulatory agencies have limited monitoring capacity and resources. Finally, the supply of "good" projects with high expected returns relative to their variance is limited.

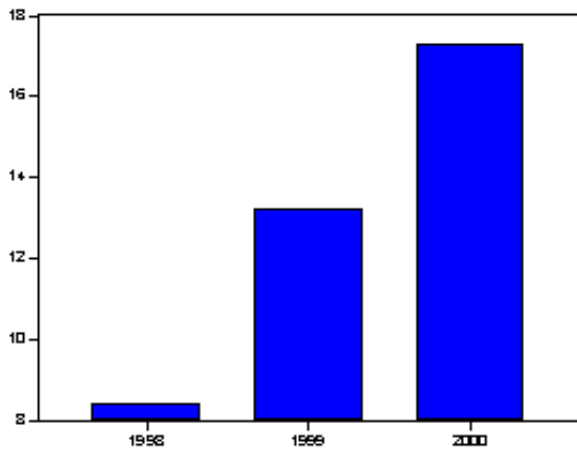
The consumption based lending boom that Turkey experienced—as reflected by the noticeable rise in consumer credit (Figure 3)—was an important contributing factor to the large current account deficit (Figures 4 and 5).

Second, evidence suggests that weak and under-supervised banking sectors have been one of the most important contributing factors to the collapse of the fixed exchange rate regimes since stabilizing the banks and keeping the exchange rate peg become mutually incompatible objectives. In this respect, Turkey was no exception: the banking supervision was not adequate for various reasons and banks were vulnerable to adverse shocks, as can be seen from a quick glance at Figure 6. All these suggest that these vulnerabilities should have been addressed or alleviated prior to the introduction of the Turkey's ERBSP.

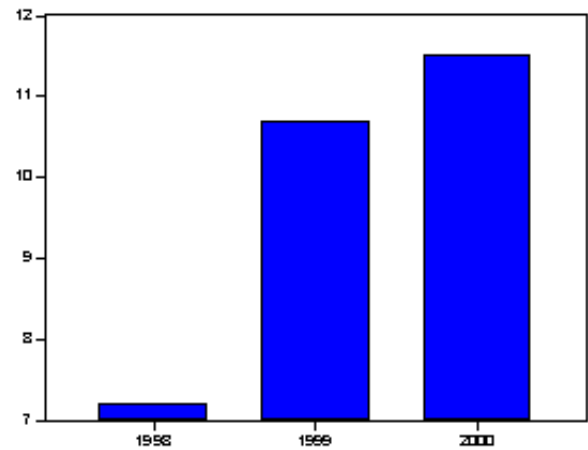
In this respect, the vulnerability of the banking sector has also implications for the sustainability of the regime from another angle, which has been largely overlooked to date. While, at first glance, the fiscal policy appeared reasonably tight during 2000, ^[2] prospective deficits associated with implicit bailout guarantees to a failing banking system raised serious concerns about the sustainability of the peg. The expectations that these future deficits would be at least partially financed by seigniorage revenues or inflation tax on outstanding nominal debt, contributed to the collapse of the peg in Turkey.

Figure 6. Key Indicators of the Banking Sector Vulnerabilities

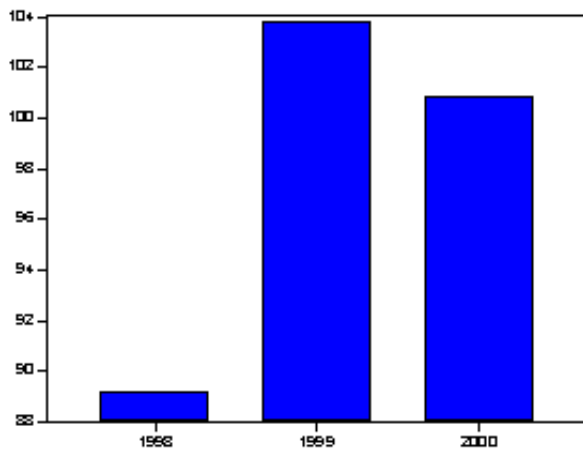
Banks' Open Position (in billions of US\$)^a



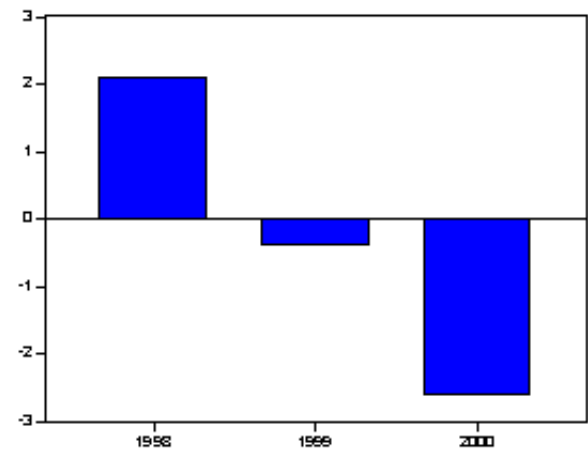
Non-Performing loans (as % of total loans)



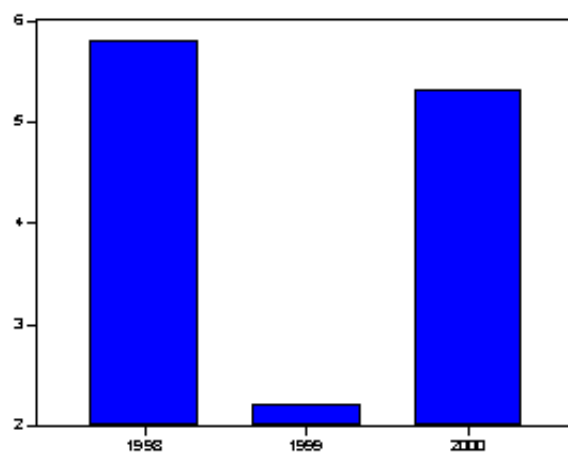
Size of the Banks' off-balance Sheet Items^b



Banks' Net Profit^b



Banks' Capital^b

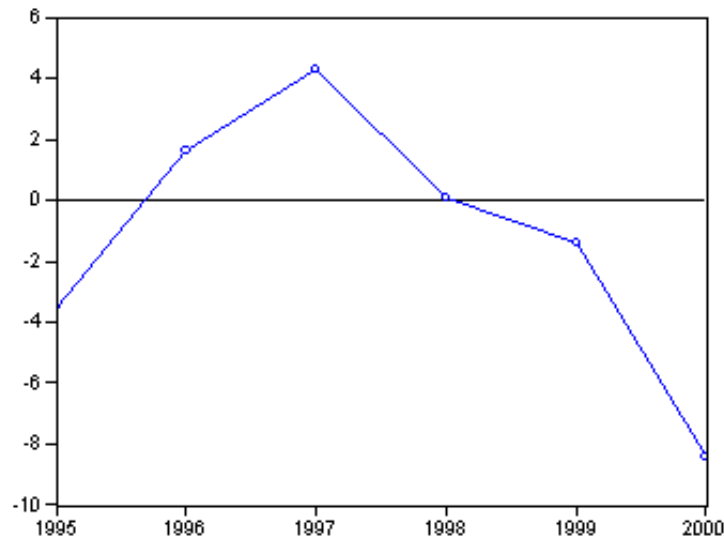


a: This calculation excludes the Banks' off-balance sheet items in view of the dubious quality of forward activities.
b: As a % of total assets.

Third, one of the least discussed contributing factors of the February crisis is the noticeable terms of trade shock that the country was subject to. As a result of the sharp increase in oil prices, among other things, the terms of trade deteriorated by 8.4 percent in 2000 compared to 1999, thereby further worsening the already large current account deficit (Figure 7). In order to return to current account equilibrium the real

exchange rate had to depreciate, which, in the absence of any adjustment in the nominal exchange rate, would call for decline in the domestic price level. Since neither the latter more painful adjustment nor the former adjustment of the exchange rate took place, the terms of trade shock further contributed to the concerns over the sustainability of the peg.

Figure 7. Evolution of the Terms of Trade (% change)



Fourth, the absence of a contingent funding facility at the outset of the stabilization program proved to be detrimental for the sustainability of the program, when we consider the fact that the possibility of a liquidity crisis could be lessened with the existence of such a funding facility.

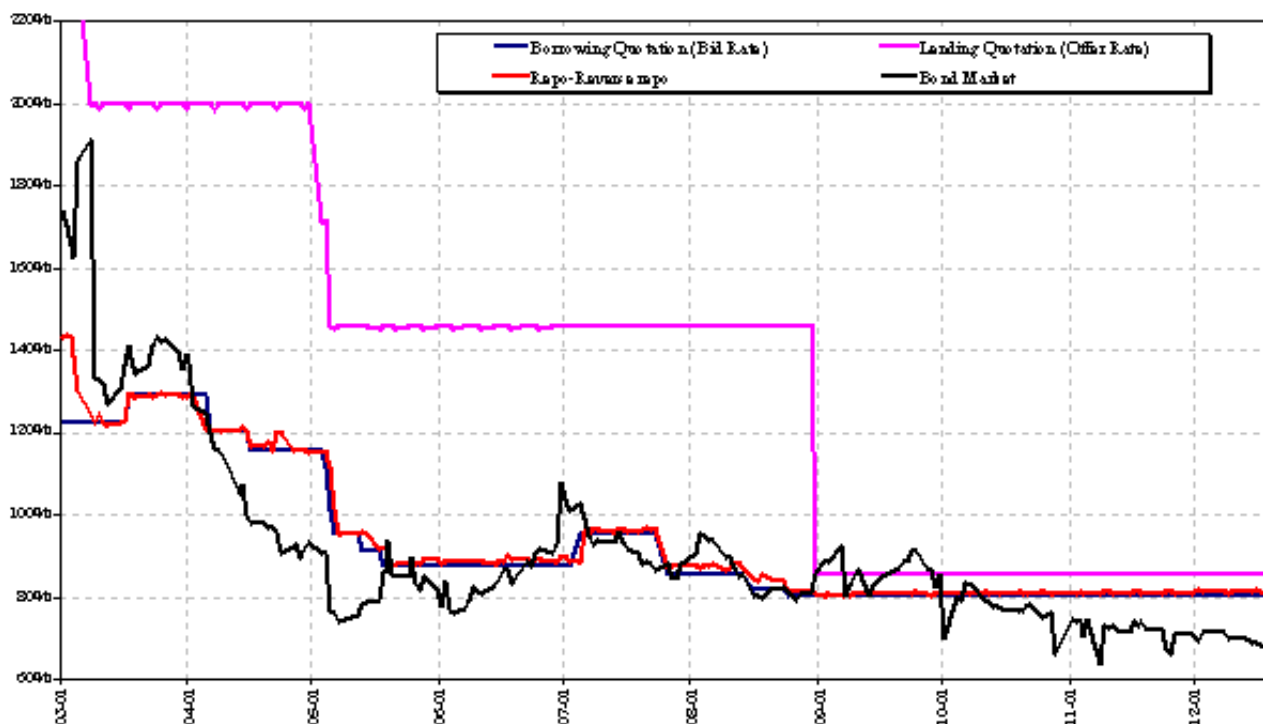
Last but not least, unfavorable external developments—particularly concerning the economy of Argentina—were not helpful for us as international investors had a tendency to associate the two emerging economies with each other, in spite of their distinct features. This, in turn, contributed to capital outflows that undermined the sustainability of the peg.

Now, I would like to turn to the discussion of the key aspects of our crisis management strategy.

KEY OPERATIONS OF THE CENTRAL BANK DURING THE FEBRUARY CRISIS

In the aftermath of the February crisis, the Central Bank's main objective was to restore the financial stability and prevent hyperinflation. In the face of the exorbitant interest rates during the early days of the collapse of the peg, which arose from the liquidity needs of the public banks and intervened banks coupled with the surge in demand for the foreign exchange, the Central Bank entered the money markets through quoting buying and selling rates with a view to restore the integrity of the payment system and bring stability back to the financial markets. The collapse of the peg and move to the float obviously made it possible for the Central Bank to lift the ban on its domestic credit. As a result, interest rates fell to more reasonable levels (Figure 8).

Figure 8. CBRT Interest Rate Quotations at the Money Markets, ISE Repo-Reverse Repo Market and Bonds and Bills Market Average Rates (Compound)



Contrary to the November 2000 liquidity crisis during which only foreigners raised their demand for foreign exchange, we have witnessed a surge in demand for foreign exchange by residents in the February 2001 crisis. Banks have encountered foreign exchange liquidity problems in the face of heavy demand from their clients and limited access to international markets as international investors began to reduce their exposures to Turkey. In order to help domestic banks to respect their foreign liabilities, the Central Bank provided banks with a one-week maturity foreign exchange deposit facility. Moreover, the Central Bank intervened in the currency markets to alleviate the excess volatility in the foreign exchange market. To this end, the Central Bank sold US\$ 2 billion by the end of March 2001.

The banking sector liquidity operation constituted the most important policy measure in view of its association with the surge in the domestic debt stock and its adverse implications for the monetary policy. On the part of the state-owned banks, the banking sector restructuring process involved establishing two executive boards, one for the public banks and one for the intervened banks, improving the efficiency of fund management functions of public banks, agreeing on a principle of no new duty losses, and preparation of an action plan for merger and sales procedures of intervened banks. On the part of the private banks, the main principle was to take over all troubled or insolvent banks under the management of Savings Deposit Insurance Fund, with a view to improve the health of the banking system.

At this point, I would like to discuss three interrelated issues. The first one is the banking restructuring operation; the second one is the mopping up of the excess liquidity engendered by the banking restructuring operation, to prevent hyperinflation; and the last one is the domestic debt swap and its consequences.

Liquidity Operation to Public and Intervened Banks

The public and intervened banks were financing their liquidity needs by borrowing in the money market from other banks and the Central Bank, even prior to the November crisis. The heterogeneous distribution of Turkish lira liquidity among banks raised both the level and the volatility of interest rates, by

reducing the effectiveness of the exchange rate peg and Turkish lira liquidity management, after the November crisis. This, in turn, has undermined the confidence in the markets, thereby triggering a run on foreign currency.

Following the November crisis, maturity in all transactions including client deposits in the Turkish financial system shortened substantially. As a result, the public and intervened banks entered the February crisis with cumulated short-term liabilities, mostly overnight, which made them extremely vulnerable with respect to the rise in interest rates. As these banks could not obtain the necessary liquidity during the crisis, the payments system broke down.

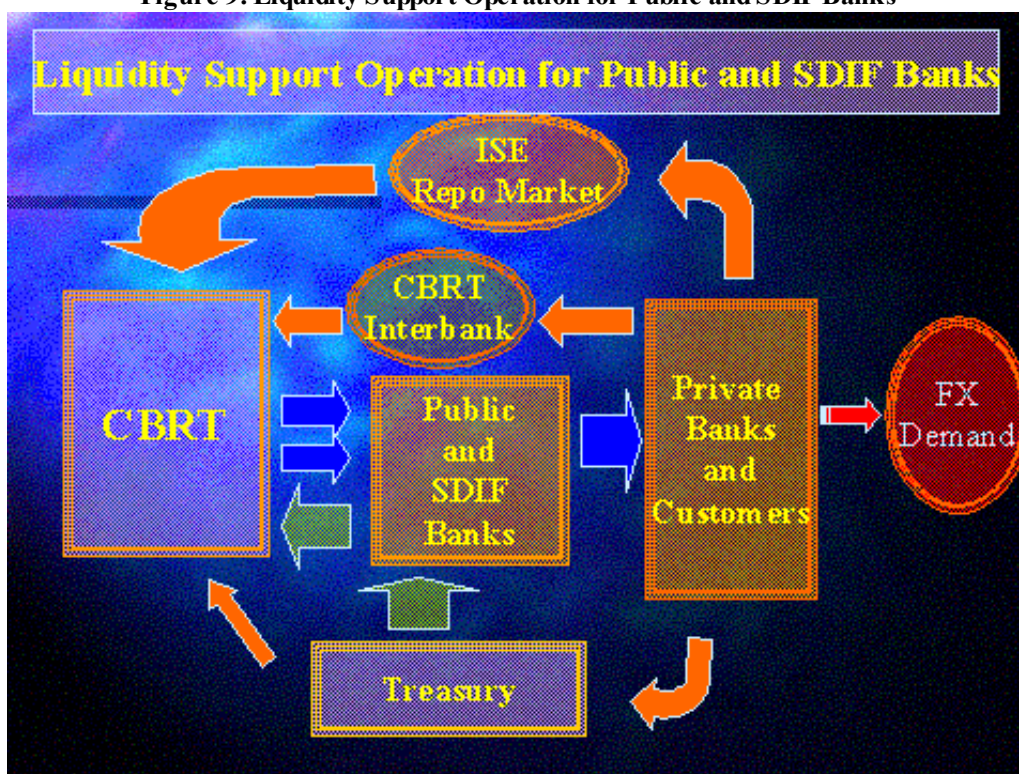
Moreover, the competition between public and intervened banks caused these banks to pay much higher deposit rates compared to those paid by other private banks. In addition, borrowing rates of these banks from the interbank market have also displayed a noticeable disparity. For example, during the crisis, the borrowing rate of one public bank was 850 percent, while the same interest rate for another public bank was 2,200 percent.

As a result of these developments, the very high liquidity needs of these banks emerged as one of the major impediments to the conduct of monetary policy. Market interest rates were determined by the liquidity needs of these banks in lieu of the liquidity management strategy of the Central Bank.

The overnight borrowing requirement of public and intervened banks rose to 21.8 quadrillion Turkish liras on March 16, 2001 from around 15 quadrillion Turkish liras on February 26, 2001. It was obvious that public and intervened banks would not be able to finance their substantial overnight liabilities and extend the maturity without distorting the money markets. We, therefore, had to urgently overcome the liquidity problems of these banks in the aftermath of the February crisis.

In addressing this problem, the Central Bank's policy actions aimed at containing the excess liquidity in the market to avoid hyperinflation, promoting financial stability, and minimizing the fiscal cost of the operation. To this end, the Central Bank and the Treasury coordinated very closely and pursued the following strategy that I would like to elaborate on briefly (Figure 9).

Figure 9. Liquidity Support Operation for Public and SDIF Banks



At the outset of the operation, the Treasury issued government debt securities to cover public banks' duty losses and intervened banks' negative capital balances. The coupon rates of these securities were indexed to the Central Bank repo rates. With this transaction, the indirect public debt turned into direct public debt, and the net public debt remained unchanged.

Next, the Central Bank made an outright purchase of the debt securities issued by the Treasury, amounting to 14 quadrillion Turkish liras. Moreover, the Central Bank provided these banks with a 7 quadrillion Turkish lira repo facility with 7-day and 14-day maturities. The amount of liquidity provided to these banks by the Central Bank reached 21 quadrillion Turkish liras.

Furthermore, the Central Bank facilitated daily coordination among these banks on common maturities and interest rates in order to avoid competition among these banks. The Central Bank made these banks close almost all of their overnight borrowing and deposit transactions by the end of May 2001. Starting from June 2001, they were not allowed to engage in overnight borrowing or accept overnight deposits.

The next step in the liquidity operation aimed at eliminating the liabilities of the public and intervened banks to their clients and private banks, which, in turn, led to the injection of an enormous amount of liquidity to the market. In an attempt to contain the presence of excess liquidity in the market, the Central Bank tried to mop up the liquidity in the hands of the private banks and the public through open market operations.

To this end, the Central Bank started to announce borrowing quotations in the two organized markets in Turkey. Excess liquidity in the markets was withdrawn by means of reverse repo transactions in the Istanbul Stock Exchange Repo Market, and overnight, 1-week, 2-week and 1-month deposit transactions in the Central Bank's Interbank Money Market.

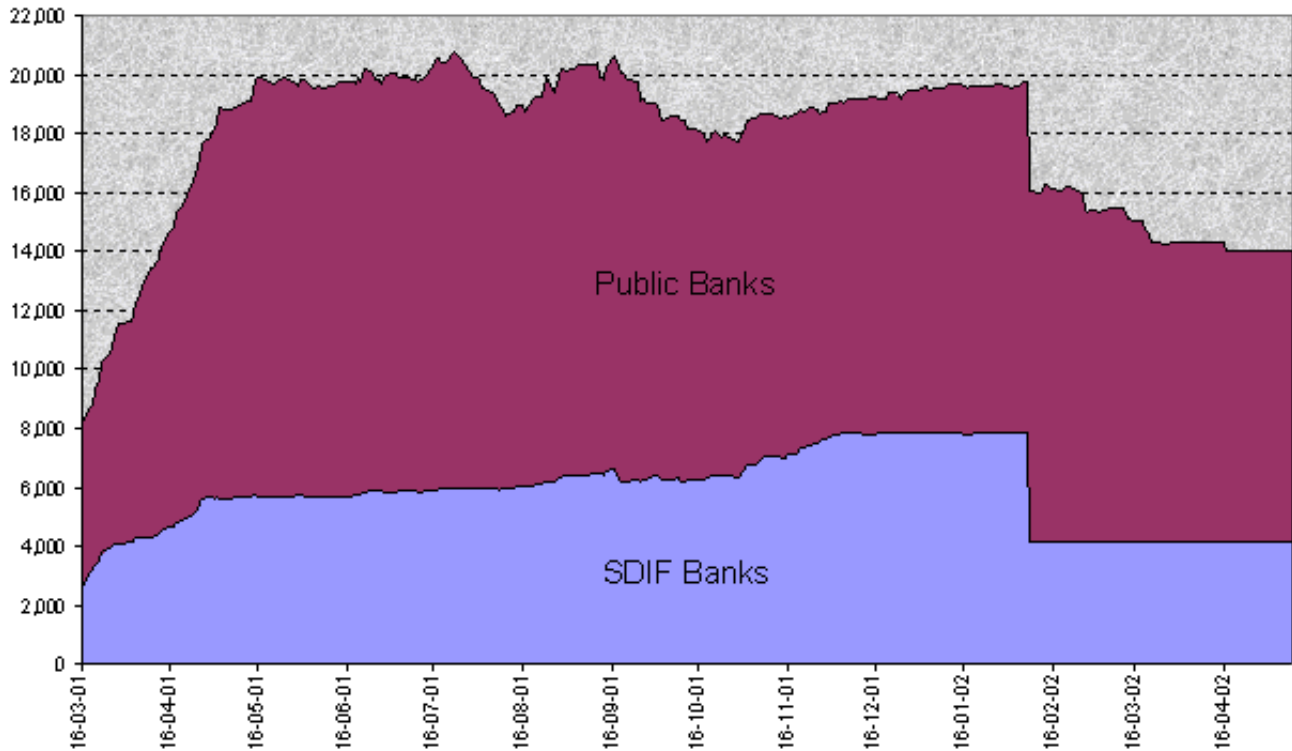
Since the liquidity in the markets was massive, the money market interest rates became equal to the rates quoted by the Central Bank and the rates announced by the Central bank became benchmark interest rates. The Treasury, in the meantime, borrowed from the market as much as the market conditions allowed and withdrew a limited part of the excess liquidity. The Treasury, then, made an early redemption for the securities in the Central Bank's portfolio, aiming at controlling the balance sheet of the Central Bank.

**Table 2. Public and SDIF Banks Liquidity Support Operation
Sources of O/N Borrowing (Quadrillion TL)**

	16.03.01	<i>Share</i>	31.05.01	<i>Share</i>
Total	21.8		20.3	
CBT Repo + Purchases	8.1	37%	19.6	97%
Private Banks	5.9	27%	0	0%
O/N Customer Deposits and Repos	7.7	36%	0.6	3%

In short, the liquidity operation regarding public and intervened banks, to a large extent, was completed successfully by the end of May 2001 (Table 2). The Central Bank continued to provide the repo facility to these banks, provided that their limit of 7 quadrillion Turkish lira is respected. The amount of repos used by these banks has gradually diminished, as the liquidity positions of these banks have improved. The repo liabilities of the intervened banks amounting to 3.6 quadrillion Turkish liras were redeemed using the IMF credit in February 2002. Public banks, on the other hand, paid their repo liabilities in April 2002, and that marked the completion of the liquidity operation (Figure 10). With completion of the liquidity operation, the state banks and the intervened banks are now being treated equally with other banks in terms of their access to Central Banks' TL liquidity facilities.

**Figure 10. Total CBRT Liquidity Support to Public and SDIF Banks
(Outstanding Repo+Outright Purchase, Trillion TL)**



Use of the IMF Credit

In addition to the liquidity operation, another factor raising the liquidity in the market in 2001 was the use of IMF credit through the Central Bank by the Treasury for budget finance purposes. The Central Bank obtained 9.9 billion dollar credit from the IMF, and the Treasury used the 9.6 billion dollars of this amount to finance the budget. The Treasury used a large portion of the IMF financing for the Turkish lira payments in the domestic markets. Consequently a vast amount of liquidity has been injected to the markets.

Needless to say, mopping up this substantial amount of liquidity without placing a pressure on the exchange rate was a hard task. There were also other factors at play exerting pressure on the exchange rate. These were the increased currency substitution, capital outflows, and open positions of both banks and firms. Therefore, the monetary policy in 2001 involved a large amount of foreign exchange sales aiming at sterilizing the excess liquidity so as to reduce the pressure on the exchange rate as much as possible.

The Central Bank used outright foreign exchange sales method by the end of March after the February crisis. However, after March 2001, the Central Bank started to use the auction method in foreign exchange sales without undermining the spirit of the floating exchange rate regime (Figure 11). Accordingly, the foreign exchange sales of the Central Bank have facilitated a more efficient sterilization on the one hand, and provided the banking sector the much needed foreign exchange without disturbing the functioning of the floating exchange rate regime on the other (Figure 12).

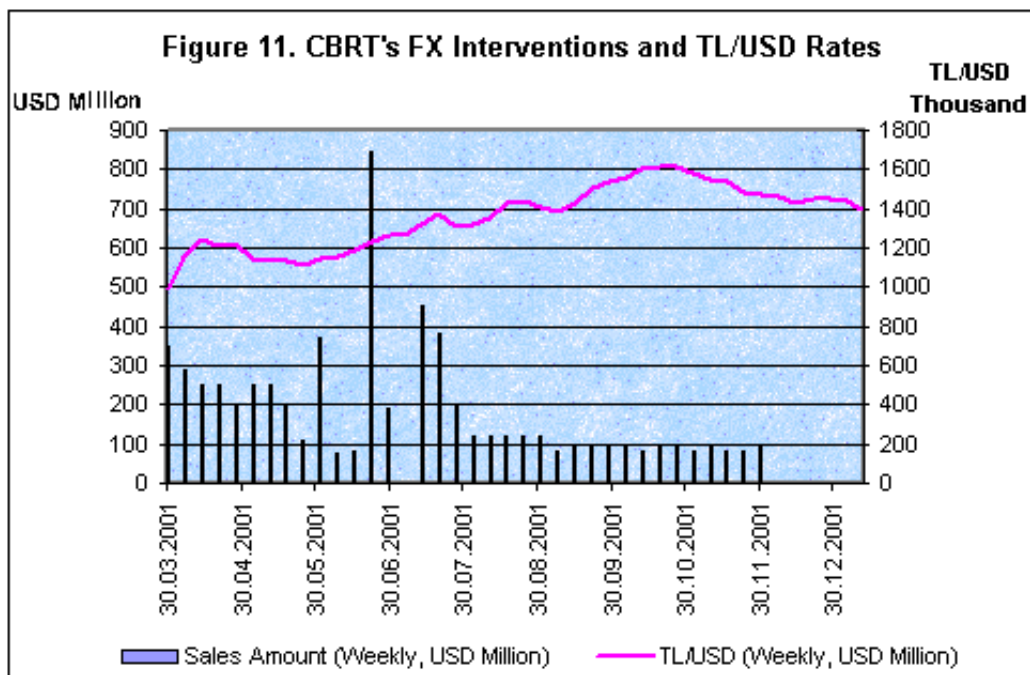
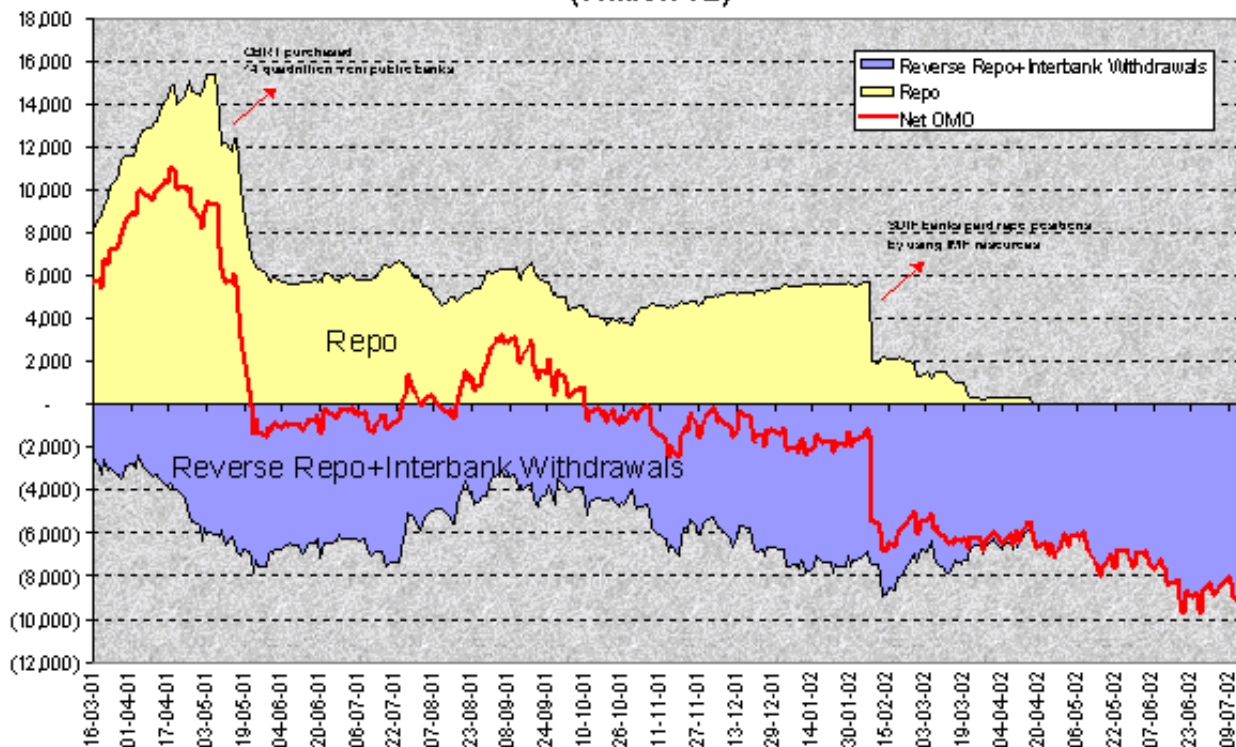


Figure 12. Outstanding Repo - Reverse Repo+Interbank Withdrawals (Trillion TL)



Domestic Debt Swap

Another important operation after the February crisis was the domestic debt swap operation. The aim of the debt swap undertaken in mid-June 2001 was to reduce the rollover risk of government debt, facilitate a decline in interest rates, and help banks close their open foreign exchange positions.

The swap involved the exchange of domestic treasury bills and longer-dated fixed and floating rate bonds for a package of US dollar indexed bonds and Turkish lira bonds. By extending the debt service profile from an average of 6 months for the old exchanged bonds to 37.5 months for the new bonds, the swap generated substantial cash flow savings (Table 3).

Table 3: Debt Swap Operation

Quadrillion TL Average Maturity

Redemption	9.3	6 Months
New Issue	9.3	37.5 Months
FX Linked	6.2	
TL Linked	3.1	

In addition, the swap reduced the banks' foreign exchange open position significantly. Prior to the swap, the on-balance foreign exchange open position of private banks amounted to US\$ 7.6 billion. As these banks bought the bulk of the new dollar indexed bonds, the swap led to substantial reduction in the on-balance open position. The increase in the exposure of the Treasury to foreign exchange risk was relatively limited, as the swap raised the stock of public sector debt denominated in (or indexed to) foreign exchange by only some 13 percent.

WHAT ARE THE MAIN POLICY LESSONS?

I was told that in Chinese the word for "crisis" also means opportunity, which, I believe, also applies to public policy as well. A crisis can be an opportunity to do things better. In this respect, I think our experience is a case in point. In response to the February crisis, the implementation of the much-needed deep-seated structural reform measures coupled with prudent fiscal and monetary policy not only rendered the Turkish economy more resilient to adverse shocks and less vulnerable to crises, but also improved the prospects for the attainment of sustainable growth.

With this in mind, I would like to summarize the key policy lessons that can be garnered from the recent Turkish financial crisis. I will also underline several issues on which I did not elaborate on in great detail during my speech to keep my lecture focused and succinct. Nevertheless, I believe that these issues and the associated policy implications are lucid enough.

First, based on our experience, I cannot emphasize enough the importance of the swift policy response and the close coordination among the central bank and other institutions. As we have seen in other countries, the inflationary consequences of bank restructuring operations could be a major policy challenge. In our case, the Central Bank worked in close cooperation with the Treasury and the Banking Regulation and Supervision Agency (BRSA) to prevent the presence of excess liquidity in the market. In the absence of the supplementary policy actions taken by the Treasury and the BRSA, the Central Bank's efforts to control liquidity alone would have been much less effective.

Second, we have also witnessed that the transparency of the operations during the crisis management is of vital importance for market's perception on the potential fiscal risks, particularly associated with bank recapitalization. This, in turn, improves the credibility of the operations in the eyes of the market participants and the public.

Third, the February crisis confirmed once again the sensitive role that banks play in a crisis. It is often the case that announcement of tough banking rules—like the absence of banks bailouts, are seldom enforced. Therefore, banking liabilities are, to a large extent, contingent fiscal liabilities. Consequently, a banking crisis could lead to a currency crisis due to large prospective deficits associated with implicit bailout guarantees to failing banks. To the extent that market participants expect that future deficits will be financed, at least in part, by higher seigniorage revenues, future monetary policy will be perceived as being inconsistent with the maintenance of fixed exchange rates. This would lead to a currency crisis before the deficits actually begin to be monetized. From this perspective, government guarantees are the key conduits by which real shocks transform a banking crisis into a currency collapse.

Fourth, we witnessed during the implementation of the Turkish ERBSP that capital markets are quick to forget good structural reforms, quick to notice the slightest failures again in structural reforms, and tend to overreact to short-run financial turbulence. Even in the case in which capital inflows are highly permanent, benefits from capital inflows may be significantly lower than the costs associated with comparable outflows.

As a result, it is better to err by underestimating than by overestimating the permanence of capital flows and, at any rate, policy makers would be well advised to keep a ‘cool head’ and restrain the fervor of ‘animal spirits’ during capital inflow episodes.

The above considerations provide a rationale for running a positive fiscal balance during capital inflow periods. This has the advantage of cooling off the economy, and generating public sector savings that could be utilized during capital outflow periods to increase aggregate government expenditure. These extra savings would be particularly valuable if, during those periods, the country is rationed out of the capital market

Fifth, as we experienced during the recent crisis, governments are inclined to adopt stopgap measures to improve their liquidity position. I argue that such measures could be highly unproductive. As was the case in Turkey, the governments tend to react by imposing taxes that are easy to collect in the short-run, but which have a deleterious effect on output. Therefore, stopgap measures themselves may lead to insolvency crisis.

In the area of fiscal policy, based on our experience, I would also like to draw attention to the importance of debt maturity and currency denomination as crucial characteristics of public debt instruments. The occasionally exorbitant steepness of the term structure is one of the main reasons for countries to choose short-maturity public debt. In addition, countries are sometimes led to ‘short-termism’ in their attempt to fulfill ambitious price stabilization targets. For example, authorities may have made fiscal policy announcements that could be carried out if short-maturity debt, with its attendant low interest rates, is issued. It is true that extending debt maturity may not be an easy task and could involve heavy costs. The latter, however, should be a signal to policy makers that credibility is weak. As a result, the main line of attack should be to build credibility by, for instance, adopting a tighter (but efficient) fiscal policy.

All told, Turkey’s exchange rate based stabilization experience underlines the complementary relation between macroeconomic stability, financial stability, and satisfactory progress with proposed structural reforms. Alone, none of these is sufficient. Based on the experience with other emerging economies, it is clear that temporizing with any one of them significantly raises the risks of undermining the others as well.

Thank you.

[1] Moreover, under pegged regimes, borrowers have little incentive to hedge their foreign exposures.

[2] There is a caveat to this conjecture since it could be argued that the fiscal stance should have been tightened in view of the growing current account deficit in 2000.