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THE FINANCIAL CRISIS IN TURKEY BETWEEN 1994 - 2001

In the last decade the Turkish economy was hit by two crises. This paper we will discuss answers these questions. What are the causes of the 1994 and 2001 crisis? Could the financial crisis have been avoided?

What are the lessons that can be drawn from these crises?

DEFINITION OF THE 1994 CRISIS

Up to May 1981, there was a fixed exchange rate system in Turkey. At this time, the Central Bank adopted the crawling peg regime in which exchange rates are daily adjusted. In February 1990, Turkey applied to the International Monetary Fund (IMF) for the full convertibility of the Turkish Lira. As of the end of December 1993, the IMF, in its annual report on exchange arrangements and exchange restrictions, stated that “Turkey follows a flexible exchange rate policy under which the exchange rate for the Turkish lira against the
U.S. dollar is determined in the daily fixing sessions held in the Central Bank.” This managed float system is still the current regime prevailing in Turkey.

Under such a system, a central bank can intervene in the foreign exchange market to prevent exchange rate fluctuations that it renders as undesirable. Hence, to measure pressure in the market, in addition to exchange rate changes, one should also consider changes in reserves and interest rates. Using monthly data, an ad-hoc pressure index is calculated as in Eichengreen, Rose and Wyplozs (1995)¹, as a weighted average of monthly rates of changes of exchange rate, official reserves and overnight rates. Monthly percentage change of each variable is weighted by the inverse of its variance. Since interbank market is open as of 1987, the end of the period is December 1997.

This period along with its mean and mean plus and minus two standard deviations which are indicated by horizontal lines. Note the uniqueness of the extreme values attained by the period in the 1994.02-1994.04. This result is robust to the type of weights used. There is one more period during which the value of the index is two standard deviations above the mean regardless of the type of the weight used. This is March 1991 which represents the turmoil in the Turkish financial markets during the Gulf War. November 1989 also appears as a crisis period. However, this result is not robust to types of weight used. Only in one of these periods, namely during the 1994 crisis, monthly rate of increase of exchange rate exceeded its mean plus two standard deviation level what follows we analyze the unique 1994 crisis.

In the period preceding the crisis, fiscal stance was poor, current account deficit was high, the Lira was overvalued, the government was illiquid according to international

standards, and banking sector was relatively weak. However, it should be mentioned that economic fundamentals of the post crisis period are not better than those of the period preceding the crisis.

**Anatomy of the 1994 crisis**

The striking fact is the radical change in the way public sector borrowing requirement was met in the period preceding the crisis. Through the end of the 1993 and in the first quarter of 1994, resource to the Central Bank advances enormously increased. At the same time, domestic debt, financing as a ratio to GNP continuously declined and became negative in the last quarter of 1993 and the first quarter of 1994. Was this a reflection of a change in the expectation of domestic debt holders? Or, was it a deliberate choice of the government?

In the 1989-1993 period, annual inflation rate fluctuated around 65 percent with a standard deviation of 5.2 percent which is calculated from monthly data. That is, there was a substantial inertia in the inflation rate. Note that the same period witnessed a more than doubling of the public sector borrowing requirement.

How could have the inflation rate remained almost constant when fiscal stance was seriously deteriorating?
A prolonged and stable high inflation process is not unique to Turkey. It was also observed, for example, in Israel. Blanchard & Fischer and Bruno & Fischer (1989)\textsuperscript{2} among others discuss reasons behind this apparent lack of correlation between fiscal fundamentals and inflation. The answer to above posed question lies in the way public sector borrowing requirements is met. If budget deficit is financed by domestic (excluding the central bank) borrowing, then there will not necessarily be an increase in base money. This prevents an increase in inflation rate; hence the absence of a significant correlation between inflation rate and public sector borrowing requirement.

In early models of balance of payments crises, it is gradual depletion of reserves which eventually leads an economy to currency crisis. Main reason behind gradual depletion of reserves is the special way by which public deficits are financed; that is by domestic credit expansion. This excess supply of base money increases demand for foreign currency; hence, the gradual depletion of reserves. However, gradual depletion of reserves can be prevented by changing financing mechanism. Domestic borrowing not only blurs the correlation between inflation rate and public deficit but also masks foreign exchange losses.\textsuperscript{3} The important point, however, is that if real interest rate is positive and there is primary deficit, domestic debt financing is not stable. This process will sooner or later come to an end, but the timing depends upon actions of main actors of domestic debt market. First, despite the demand for domestic debt continues, government (supplier of debt) can change its financing mechanism. It can shift to tax financing, or rely on monetization or simply renege on its debt. Second, in this case, even there is no change in the attitude of the supplier, bond demanders can, due to whatever reason, no more desire to hold government securities.

\textsuperscript{2} Blanchard, O.J. and S. Fischer (1989), Lectures on Macroeconomics, Cambrdige: The MIT Press.
We have realized that economic fundamentals were weak just prior to the crisis. However, the crisis was largely unexpected as reflected by steady levels of foreign exchange reserves and interest differentials prior to the crisis. Only soon after two important shocks given to economy, pressures in the exchange market sharply increased and culminated to crisis. First, in the second half of 1993, to prevent a further rise in the cost of servicing the domestic debt, the government cancelled various domestic debt auctions or accepted a small percentage of short maturity offers. Second, it relied heavily upon the Central Bank resources. These shocks triggered a run for foreign currency.

We have indicated that prior to the crisis, starting from the late 1980s, heavy reliance on domestic debt finance of continuously increasing budget deficit prevented both an increase in the inflation rate and depletion of reserves. To maintain this outcome, in the absence of corrective measures, domestic debt finance should have been continued. However, continuation of this process depends on actions of both sides of the debt market. In the Turkish case, it was the supplier who changed its behavior.

The main policy lesson that can be drawn is that countries with open economies which mask undesired consequences like high inflation and reserve losses of public deficits by relying upon domestic borrowing should abstain from changing rules of the game. That is, in the absence of radical stabilization measures, governments of such countries should do their best to continue debt finance. A failure in fulfilling this condition causes governments to face the inevitable collapse rather early.
The 2000 & 2001 Financial Crisis in Turkey

The second crisis preceded by a financial turmoil that burst in the second half of November 2000 just at the midst of an exchange rate based stabilization program. The pressure in the market calmed down soon after a new letter of intent was presented to international Monetary Fund. However, as of the end of December, the average interest rates, both the overnight rate and secondary market bond rate, were almost four times higher than the pre-announced year-end depreciation rate of the Lira. This unsustainable situation ended on the February 19, 2001, when the prime minister announced that there was a severe political crisis that ignited a crisis in the highly alerted markets due to what had happened at the end of 6200 percent in uncompounded terms. Three days later, the exchange rate system collapsed and Turkey declared that it was going to implement a floating exchange rate system from that time onwards.

The effects of the 2000-2001 crises were more severe than that of 1994.

What were the reasons behind the 2000-2001 crises?

Why did the crisis burst in the midst of the IMF-supported stabilization program?

What are the lessons that can be drawn?

Identifying the Crisis

In February 1990, Turkey applied to the IMF for the full convertibility of the Lira. Up to January 2000, managed floating exchange rate system was operative. At the end of 1999, Turkey signed a stand-by agreement with the IMF and started to implement a stabilization program one of the pillars of which was a pre-announced crawling peg exchange rate regime. The novelty of this exchange rate regime was that both the exit strategy and the date of exit were publicly known at the very beginning of the program: It was announced that, after eighteen months, exchange rate would be allowed to fluctuate in a continuously widening
band. However, a sky-high overnight rate as much as 6200 percent in uncompounded terms and a huge decline in foreign exchange reserves of the Central Bank, on February 23, 2001, just four months before the exit day, the exchange rate system collapsed and the Central Bank declared that it would allow the lira to float freely. By this announcement, the dollar rate jumped from a level of 685 thousand liras to 958 thousand liras in a day.

In the five-year period preceding the crisis, the macroeconomic fundamentals of the last two years were the worst. However, despite a record high level of current account deficit of 2000 and real appreciation of the Lira, almost all of the indicators displayed a positive stance in 2000 compared to 1999. This positive stance may be attributed to the IMF supported stabilization program.

One of the main reasons that make the Turkish 2000-2001 crisis an interesting case is that the high public sector borrowing requirement was mainly financed by issuing domestic debt in the period preceding the crisis. This financing mechanism by limiting excess money supply prevented both inflation levels to be at higher than the realized and already high levels and a continuous depletion in international leading to a first generation type crisis. As well documented elsewhere, is that if real interest is positive and there is not an offsetting primary surplus, domestic debt financing is not stable. This process will sooner or later come to an end, but the timing depends on actions of dept market rendering the economy open to self-fulfilling attacks.

One can imagine a situation where government aims at implementing a stabilization plan, but due to for example a forthcoming election postpones the plan and continues domestic debt financing. Or, the country may already be implementing a stabilization plan that addresses fiscal imbalances. However, the initial level of the deficit can be at such a high
level that it may only be feasible to realize the fiscal discipline gradually which means that debt financing should continue. Based on fundamentals there is no natural collapse and hence such an economy does not deserve at first-type crisis; in the absence of speculative attacks, the prevailing exchange rate system can collapse, because of the attack of speculators who anticipate that the government would abstain from taking necessary measures against an attack. A high public debt or a fragile banking sector may lead to such anticipations.

**Does this scenario fit the Turkish case?**

Although it is difficult to answer this question, based on what had happened in the post-crisis period, one can still be provided. Note that there should not be an output decline in the aftermath of a crisis. In words of Krugman ⁴ “If a speculative attack drives a currency off its peg, this does not imply a negative shock to employment and output indeed, in this case the contrary should be true: because the policy constraint of a peg is removed, the result is actually positive for short-run macroeconomics.” Evidently this did not happen in Turkey. The economy contracted sharply, by 8.5 percent in 2001, after a 6 percent growth attained in 2000. In the similar vein, Flood and Marion note that second-generation type crisis models require that in the post-crisis period there should be expansionary policies that validate anticipations of speculators. However, post-crisis policies in Turkey were not expansionary. On the contrary, in May 2001 the Turkish authorities signed a new stand-by agreement with the IMF, and the primary budget registered a record high level of surplus.

The discussion so far reduces the possibility of a second-generation type currency crisis. This necessitates a discussion of other explanations. Was the principal cause of the

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Turkish crisis a prospective deficit in this case an additional deficit on top of the existing one-associated with implicit bail-out guarantees to a failing banking system? Or, was the root cause of the problem financial fragility in the banking sector in the sense of a third-generation model? Note that third-generation models. Due to some reason capital flies and either the banking or the corporate sector or both of them collapse pushing economy into a deep recession. Below we see that the root cause of the crisis was the combination of a fragile banking sector and triggering factors that made this fragility crystal-clear.

**Banking Sector**

Two different types of dichotomy were observed: There was, first, the dichotomy between private and state banks. The second dichotomy was within the private banking industry.

Liquidity ratios were stable up to November 2000 and only a slight deterioration was materialized before February 2001. Moreover, the magnitudes of alternative ratios are small compared to those of crisis countries. For example, Sachs et. al. report that a similar ratio took a value of 7 in Mexico in mid-1994 and 10 just before the crisis.

It is argued that a rapid credit growth is a signal for an increasing credit risk for the banks. It is clear that the credit growth in Turkey in 2000 was rather high.

If we look at on three groups indicators for the credit risk, foreign exchange risk and the interest rate risk. All of these indicators clearly show that the vulnerability of the banking sector to capital reversals increased throughout 2000.

In the period preceding the crisis, open foreign exchange position was a structural feature of the Turkish banking system.

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Maturity mismatch is another structural feature of the banking system in Turkey due to the inability of domestic banks to borrow long term in the domestic currency.

All of these signals clearly points to a significant deterioration in the banking system in the period preceding the crisis.

Despite the fact that both the private and state banks had accumulated risks on the road to the crisis, the nature of the problem was different. On the asset side, the increasing size of “duty loss” accumulation of the state banks and the need to finance it by short-term domestic bank liabilities were the source of the problem. On the liability side, the ratio of Lira to foreign exchange liabilities shows one major difference between the two groups. The ratio was much lower and moreover was decreasing for private banks. While the state banks were more open to interest rate risk, private ones were more prone to exchange arte risk. This is why the November 2000 crisis had hit the state banks hardest and the effect of the currency collapse in February 2001 was just the reverse.

There are two major interest-earning assets in the Turkish banking system commercial loans and government debt instruments.

The loan to government debt instruments portfolio ratio is systemically lower in the case of state banks noting the smaller size of their commercial loan portfolio. Moreover, from 1997 to 2000, this ratio continued to decline. The interest-earnings assets to total assets ratio shows that the size of the commercial loan portfolios of state banks was rather small. Notice that the ratio for state banks is about half of the ratio for private banks. The reason for this discrepancy lies in the share of loans granted to the Treasury by state banks and later treated as a duty loss by the Treasury. The share of duty loss accumulated reached more than 30 percent of total assets.
The liability side feature of private commercial bank balance sheets is that it reflects their inability to borrow long term in domestic currency. The high ratio of REPOs to Turkish Lira deposits is an indication of this.

Another distinguish feature of the private banks was their heavy reliance on the foreign exchange denominated deposits of residents. The ratio of foreign exchange to Lira deposits captures this feature. However, the maturity of foreign exchange deposits was also short as in the case of Lira deposits. Heavy reliance of private banks on foreign exchange deposits made them more vulnerable to problems of international illiquidity crisis. In the period preceding the crisis, private banks relied more on foreign exchange loans from international banks. This was an additional factor that rendered them more vulnerable to capital reversals.

**Summing up: A third-generation crisis?**

Based on the above discussion, we can understand that the Turkish financial system, which was dominated by banks, was vulnerable to a jump in both the exchange rate and interest rate that a sudden capital reversal could cause. Moreover, this weakness sharply increased in 2000.

The banking sector problem in Turkey was basically a result of the mechanism chosen to finance very high public sector borrowing requirement. Firstly, this led to an increase in government debt instruments especially in balance sheets of private banks. Secondly, it caused a significant deterioration in state owned banks by accumulating duty losses. Risk accumulation in bank balance sheets in order to carry the domestic debt stock looks to be an important element to understand crisis dynamics. When due to excessive risks accumulated in the balance sheets, credit lines to some banks that were acting as market makers in the government debt rollover problem increasing interest rates. The rise in interest rates turned
CONCLUSION

The last decade of 20th century witnessed two Turkish crises: 1994 and 2000-2001. The effects of the second crisis were more severe than that of the first one. In this paper we discussed the reasons behind two crises. Our main conclusion is that the root cause of the crisis was the combination of fragile banking sector and a set of triggering factors that made this fragility crystal-clear.

Finally, we should be note that the root cause of the fragility of the banking system was high public sector borrowing requirement and the way it was financed. Note that especially starting from early the 1990s, there was no close link between rising deficits and inflation. The main reason was that budget deficits were mainly financed through government securities. However, the sustainability of this financing mechanism was conditional on the continuation of demand for government securities. In the absence of a program that reduces borrowing requirement, a halt in demand would force authorities to monetize and hence cause a jump both in the exchange rate and inflation rate. This led economic policy makers to do their best to prevent a decline in demand for government securities. Both the upward trend in government debt instruments portfolios of the banks and such policies increased the vulnerability of the banking system.
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