METU CONFERENCE IN ECONOMICS
SEPTEMBER 6, 2003
OPENING LECTURE BY SÜREYYA SERDENGEÇTİ
GOVERNOR, CENTRAL BANK OF THE REPUBLIC OF TURKEY

I. Welcoming Remarks

1. I am very pleased to welcome you all to the METU International Conference in Economics. It is a great pleasure for me to present the opening remarks. The issues to be addressed in the following days will be of great interest and value not only for academic purposes but also for practical issues in central banking. In my lecture today, I would like to address some of the key issues of the design and implementation of the current monetary policy in Turkey.

2. In recent literature, there is increasing consensus among economists on two broad principles of monetary policy: The first one is that monetary policy should aim to stabilize some nominal aggregates, which addresses the need for a nominal anchor. The second principle is the desirability of a credible commitment to that nominal anchor as an explicit target. It is now apparent from experience that there are substantial gains if central banks commit themselves in advance to set a policy, rather than leaving themselves free to exercise unconstrained discretion. Inflation targeting offers not only a strong nominal anchor for monetary policy and reflects a clear commitment, but also allows for a desired level of operational flexibility.

II. Monitoring Price Stability: Primary Objective of the Monetary Policy

3. The primary objective of central banks is another issue subject to widespread agreement. In this context, the primary objective of the Central Bank of Turkey is to achieve and maintain price stability, which is most widely defined to be a situation where inflation is low and stable enough so that it no longer affects people's economic

decisions. Yes, agreement on this general principle of monetary policy is reflected both in the views' of governments and in the practice of central banking in the modern world, but several other important questions about the objectives for monetary policy are less settled: Should there be other complementary objectives? If so, what should be the level of emphasis on the other objectives? And, how should the priorities evolve throughout different macroeconomic environments? Given that the ultimate goal of macroeconomic policy (including the monetary policy aspect) is not inflation stabilization, but rather welfare maximization, is emphasizing price stability only too narrow a framework for monetary policy?

III. But, Is There a Trade-Off Between Growth and Inflation?

4. The questions above obviously bring about the issue of trade-off between inflation and growth. The literature, of course, has much theoretical study and empirical evidence to offer on this hot debate of macroeconomics.

III.1 Why not High Inflation?

5. Let me summarize the findings on this issue briefly by emphasizing the costs of anticipated and unanticipated parts of inflation as proposed by the literature. Under a fully anticipated inflation environment, there is no time-inconsistency in price adjustments. Therefore, inflation will not have long-run effects on real variables like growth and, unemployment. As the rate of inflation increases, inflation uncertainty raises, contributing to the unanticipated part of inflation.[i] There are several consequences on the costs of unanticipated inflation. High and unstable inflation distorts price signals in the economy and raises the volatility of the unanticipated part at least during some adaptation period. Hence, implementing price changes varies across firms and, relative prices are disturbed due to the asyncronization in price

setting. Due to nominal rigidities in the economy, relative price changes induce resource misallocation.[ii]

6. In addition, inflation uncertainty leads consumers and investors to make decisions that are perceived to be sub-optimal ex-post. This is directly related to the fact that high and unstable inflation, due to the inherent uncertainty component, raises the risk premium.[iii] Such uncertainty forms myopic agents, prevents them from making long-term contracts and leads to a contraction both in credit demand and supply, the latter mainly due to the adverse selection bias. Meanwhile, increased uncertainty attracts financial assets that are supposed to hedge agents against the highly risky environment. Overall, inflation provides an incentive for firms and households to devote more resources to activities that are not the engines of sustained growth.[iv]

7. Third, inflation can be considered as a tax that alters income distribution. High inflation erodes the value of incomes and savings. Some economic agents can anticipate inflation, adjust their contracts accordingly and preserve the real value of their incomes. However, particularly people on fixed incomes do not have enough power on their contracts and therefore become particularly vulnerable to inflation.

8. Fourth, high and unstable inflation raises uncertainty and undermines the economy's ability to generate long-lasting growth and job creation. Due to the fact that investment is irreversible, firms will not invest until marginal cost is equal to marginal profitability, which includes the additional compensation for the uncertainty. Moreover, firms will have to squeeze their profit margins so as to maintain their competitiveness in international markets when productivity increases cannot compensate wage increases. In the mean time, rising labor costs lead to rising unemployment.[v]

9. And, lastly, weakened competitiveness of the firms due to rising costs, restricts their foreign finance abilities as well. At the same time, the uncertain environment prevents long-term foreign capital inflows while short-term speculative capital inflows speed up, which in turn, adds to the fragility of the domestic financial sector.

III.2. Unstable Inflation Hurts Sustainable Growth Path: Some on Literature

10. Existing empirical evidence supports the view that high and unstable inflation is harmful for sustainable growth performance. One part of empirical studies concentrate on the effects of inflation on growth through two channels. The first is the investment channel, which is the change in the rate of investment. The second is that of efficiency, described as alteration of the marginal productivity of capital. Fisher (1991), for a sample of 73 countries during 1970-85, found that 10 percent inflation reduces growth by about 0.7 percent, of which 0.5 are due to efficiency channel and 0.2 to the investment channel. When the results are extended for a wide variety of macroeconomic indicators, the analysis concludes that only one third of the effects of inflation on growth is through the investment channel.[vi]

11. The poor growth performance of Latin America and Africa, excluding the investment channel, is due to their high inflation rates.[vii] Latin America has been the region with the highest inflation rates, where the effects are assumed to be more significant. This is indeed the case where the estimation results show a reduction of inflation of 20 percent increasing growth by 0.4 percentage points.[viii]

12. Categorizing inflation into low, medium and high inflation shows that effect of inflation rates on growth declines from low to high inflation countries. This is perfectly understandable as rising inflation from 10 to 20 percent is much more serious than from 200 to 210 percent.[ix]

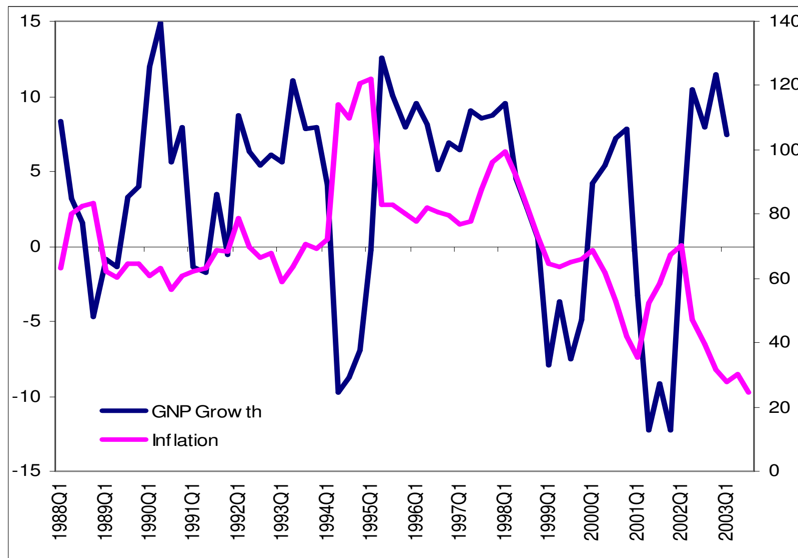
13. One can argue that the direction of causality between inflation and growth, namely the endogeneity problem, should also be taken into account. Consider a negative supply shock that would reduce output and at the same time increase inflation, which cannot be interpreted as an adverse effect of inflation on growth. However, there are empirical studies taking into account the endogeneity problem of inflation. They show that even though the endogeneity problem stemming from adverse supply shocks or constant monetary policy growth is controlled, the effect of inflation on growth is still negative though statistically less strong.[x] In short, Gregorio (1996) quotes the cost of inflation on growth as:

> *"Being efficient and competitive at the production and distribution of goods and services become less important to the real outcome of socioeconomic activity. Forecasting inflation and coping with its consequences become more important."*

IV. Struggling with High Inflation in Turkey

14. When the growth performance and the inflation history of Turkey in the last two decades are analyzed, the following points are worth mentioning: First, due to chronic inflation environment and the consequent severe financial crises, inflation and growth generally seem to exhibit a negative relation throughout the last two decades. In other words, during the periods following the crises we observe strong recoveries in economic activity along with declining trends in inflation after the first round negative impacts. Second, the variability of inflation increases the variability of output, which is for sure a source of loss in social welfare. These observations are consistent with our general view that sustaining public confidence in economic policies and reducing uncertainties will be the major components of disinflation in Turkey, which will in turn decrease output variability and enhance the growth performance.

Figure 1: Growth And Inflation In Turkey



15. Since there is no doubt about the costs of inflation, especially for the case of Turkey where inflation is an indicator of uncertainty in the macroeconomic environment, it is then necessary to ask two related questions: First, why has it been so difficult to achieve low and stable inflation in Turkey where a lower inflation level would be clearly beneficial to all agents in the economy? Second, what are we, the Central Bank of Turkey, doing to achieve low and stable inflation? Answering these questions requires to pin down the main causes of the inflationary process in Turkey. In this respect, it is now clearly understood that fiscal policy and expectations have had the two major roles in inflationary process in Turkey for almost three decades.

16. Along with these main causes, market failures due to imperfect competition in goods and services markets, openness to external shocks, uncertainties caused by political instabilities and other factors originating from demand and cost components are some other elements of the inflationary process in Turkey.

IV.1. Fiscal Dominance as a Determinant of Inflation

17. According to the monetarist view, the existence of a tight relationship between the monetary base and inflation lies behind the focus of the monetary policy on controlling inflation.[xi] However, even though there exists a close relationship between the monetary base and inflation, under several conditions, monetary policy could be constrained in terms of controlling inflation. This constraint depends on how the composition of the resources needed to finance the government budget deficit is formed in terms of borrowing and seignorage revenues. Furthermore, even though seignorage revenues do not directly finance the deficits, real interest rates greater than the growth rate would increase debt stock to unsustainable levels. Higher interest rates increase the debt-servicing burden for the government further and add to the stock of debt, resulting in a vicious circle of high interest rates and higher debt, thereby shortens the maturity of borrowing (Figures 2, 3).[xii]

Figure 2: CPI Inflation and T-Bill Interest Rates (compound, weighted by the net amount of sales)

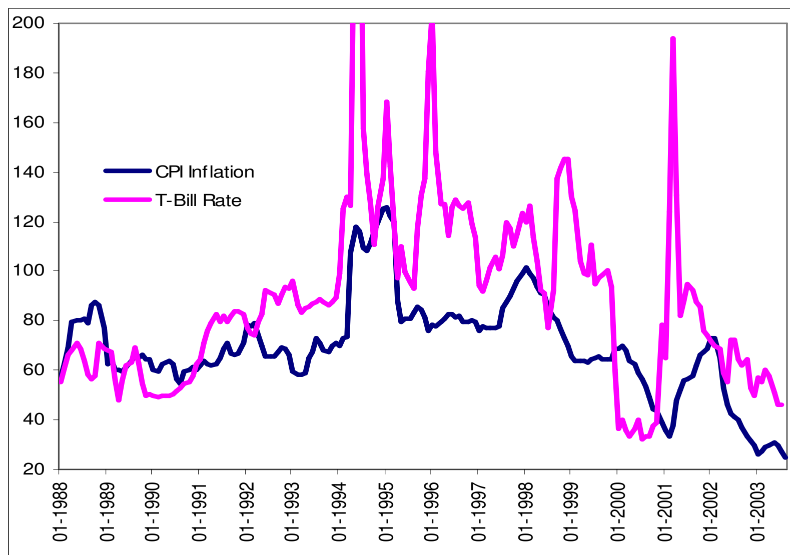
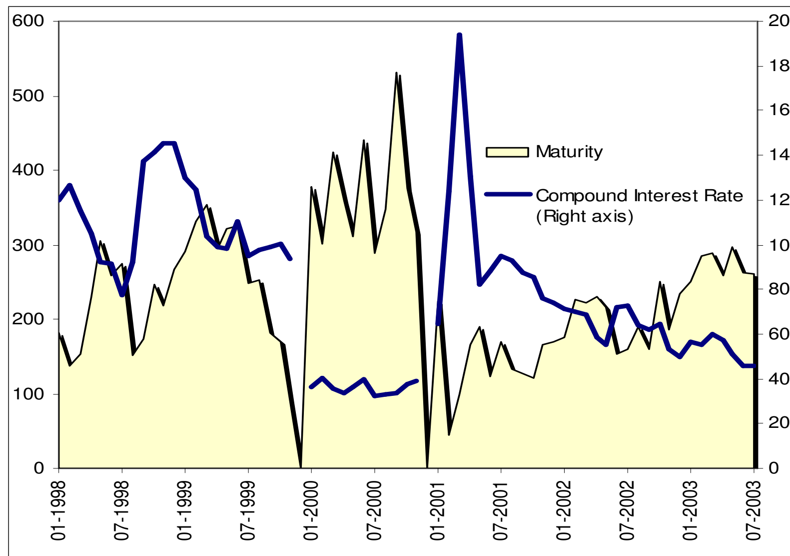


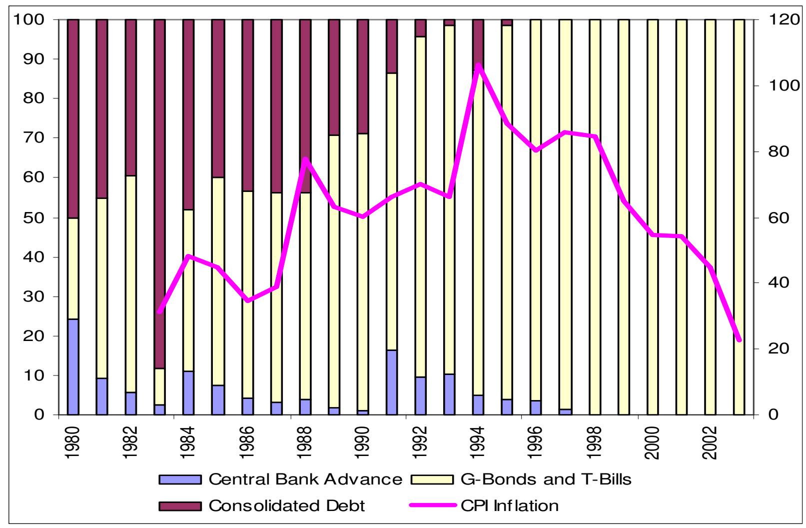
Figure 3: Compound Interest Rate and Domestic Borrowing Maturity*



* Covers government borrowing through TL denominated discounted T-bill and government bond auctions

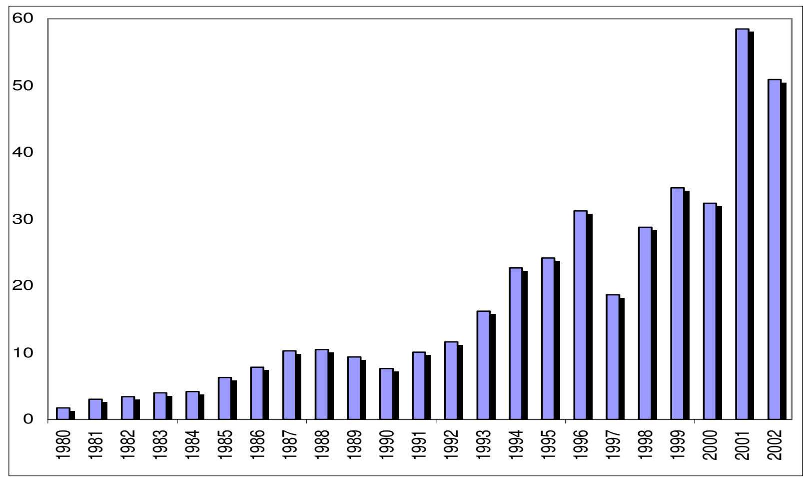
18. Abandoning the creation of the seignorage revenues is proven to be insufficient for the effectiveness of monetary policy. The connection of fiscal and monetary policies goes well beyond the possibility of using seignorage as a source of revenues for the government. Moreover, even though a central bank announces instrumental independence, it cannot move independently and implement effective monetary policy in a highly dominant fiscal environment. Also, non-Ricardian fiscal policy, where the need of fiscal solvency is important in price level determination, could affect inflation not only by forcing the monetary policy to create seignorage revenues, but also through the high level of debt burden which is a much more crucial channel (Figure 4).[xiii]

Figure 4: Means of Domestic Debt Financing and CPI Inflation in Turkey



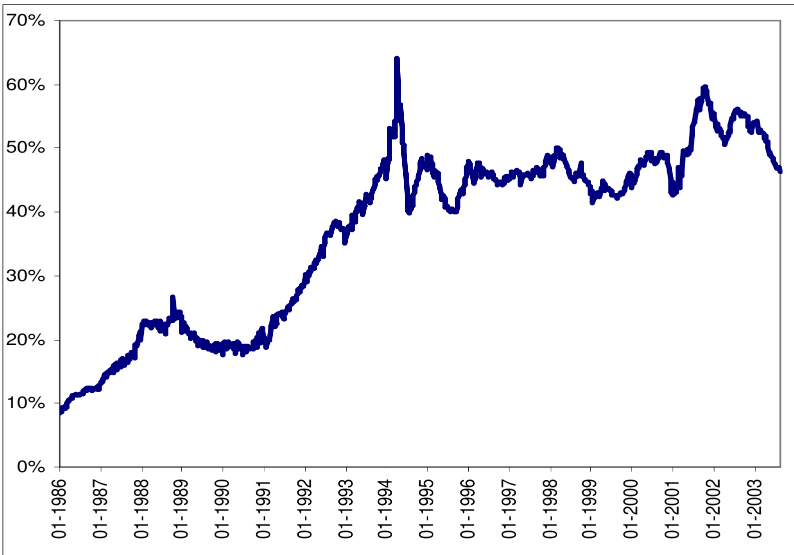
19. This exactly matches with the Turkish inflation history. Late 1970s and early 1980s in Turkey can best be described by direct financing of the budget deficit through Central Bank resources. By mid-1990s, although Central Bank resources in deficit financing were abandoned, it was not sufficient to reverse the inflationary process due to the accumulated debt stock of previous periods. Indeed, domestic debt service to GNP ratio increased from 15.4 percent in 1997, when Central Bank short-term advances were abandoned, to almost 50 percent by 2002 (Figure 5).

Figure 5: Domestic Debt Service to GNP Ratio



20. Two factors dominated this picture: (i) Economic agents, faced with frequent unsuccessful or incomplete stabilization programs, hedged against inflation where the most common hedging mechanism was to index one period ahead income to accrued inflation, thereby transferring realized inflation rates to the future. Moreover, highly limited foreign sources with the lack of Central Bank resources led to growing domestic borrowing to roll over the ever-accumulating debt stock. Consequently, in order to limit the rise in real interest rates, financial markets expanded at the same pace with the accrued inflation rate. In other words, inflation inertia strengthened during this process; (ii) As a part of the hedging mechanism, foreign exchange indexed and/or denominated contracts, pricing and saving decisions became more common as well (Figure 5). Thus, exchange rate changes became one of the major determinants of the inflation rate through this channel also.

Figure 6: Foreign Currency Deposits to M2Y Ratio



21. We have now come to a point where it is well understood by the public and politicians that high and unstable inflation hurts economic and social welfare. This situation is exacerbated in such a macroeconomic environment where accumulated debt stock and

the composition of the resources needed to finance the government budget deficit are the main sources of inflation. Hence, bringing inflation down is the common objective of the Government and the Central Bank, as it directly concerns the whole society, and it is the *sine qua non* pre-requisite for sustainable growth and rising welfare. However, fiscal dominance, the very reason of high inflationary environment, limits the ability of the Central Bank to target the inflation rate, as it would be targeting something that ultimately it does not control.

IV.2. Fiscal and Monetary Policy Coordination

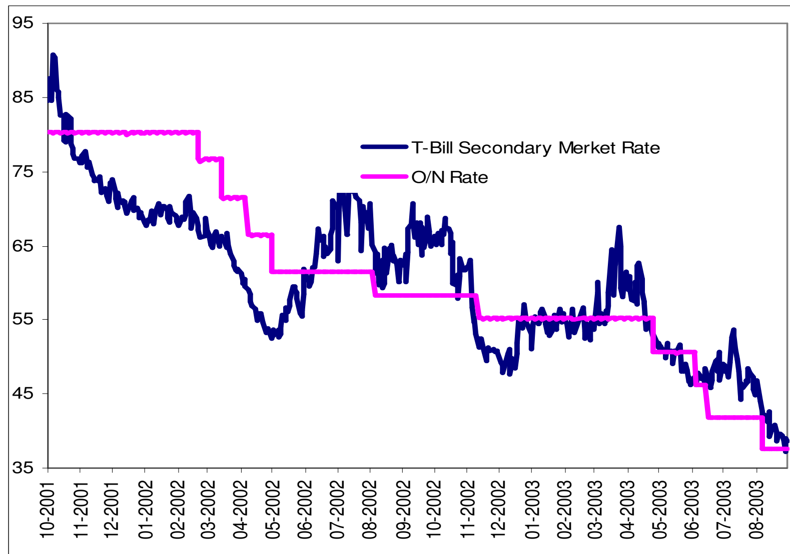
22. This simple framework brings about the issue of coordination between monetary and fiscal policies. It should be obvious that high levels of public debt combined with conflicting objectives in macroeconomic policies in general, will coincide with an undermined credibility of the disinflationary effort. This in turn, increases the cost of the disinflation process resulting in tighter monetary conditions than that would otherwise have been the case, or even totally corrupting the role of the nominal anchor of the monetary policy.

V. Expectation Formation

23. It is well known that monetary policy has direct control over only a specific short-term interest rate, namely the policy rate. Whereas, the response of longer term interest rates and all other macroeconomic variables heavily rely on credibility and consistency in macroeconomic decision-making, and vary considerably depending on the market sentiment or expectations in particular. In other words, the ability of monetary policy to affect longer term interest rates and to shape the yield curve through short-term policy rates, is an important issue to be questioned, especially in the case of Turkey under the presence of heavy fiscal dominance. One should never

forget that all these issues are closely related to credibility and that they involve a learning process for the market participants or public in general.

Figure 7: O/N Rates, Secondary Market T-Bill Rates

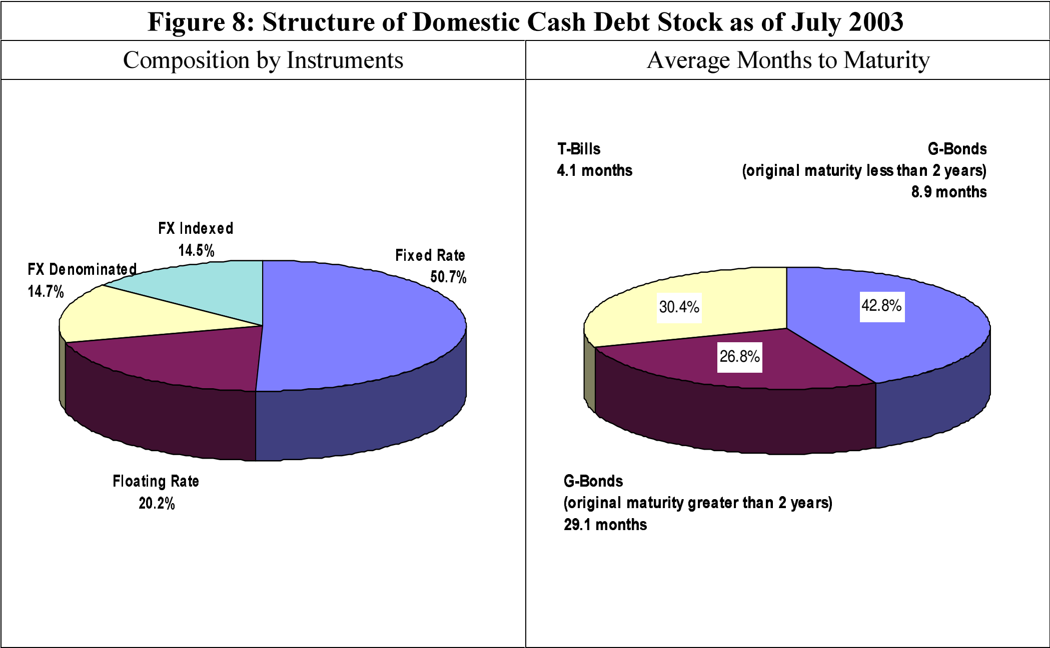


24. In the context of Turkey, I would like to point out to the fact that continued disinflation contributes to falling nominal interest rates through two channels: The first, and the obvious effect is the fall in the inflation component of nominal interest rates. The second, and the more important effect is through increasing credibility and market confidence, which also contributes to stabilization of the interactions between macroeconomic variables. Recently, we observe that the relation between longer term interest rates and short term rates becomes more and more evident in a macroeconomic environment experiencing continuous disinflation along with the fading negative effects of external shocks after the settlement of the war in Iraq.

25. At this point, let me emphasize the role of expectations as a major determinant of inflation in Turkey, especially in recent years, which is also an important channel of monetary transmission. It is an issue of increasing interest in the literature especially in the context of inflation targeting as well.

26. In Turkey, the structure of the debt stock undermines the effectiveness of monetary policy in forming expectations. 73.2 percent of the total cash debt stock will be redeemed in less than one year. Furthermore, government securities denominated in foreign exchange and indexed to inflation constitutes 49.3 percent of the cash debt stock. This structure, in turn, makes the debt stock management more fragile and raises frequent arguments on debt sustainability. The fragile debt structure exposes negative expectations and therefore, becomes a factor that diminishes the effectiveness of monetary policy, thereby forming a self-fulfilling circle.

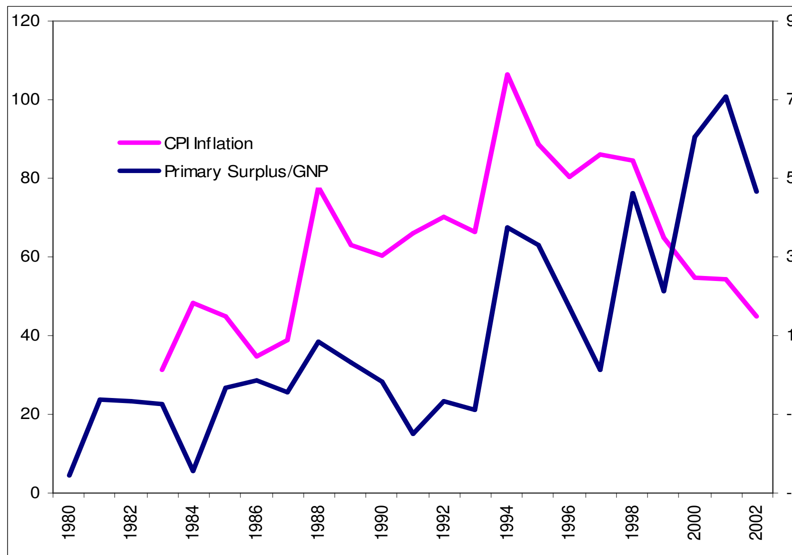
Figure 8: Structure of Domestic Cash Debt Stock as of July 2003



27. Given the unique debt dynamics of Turkey, we face the crucial issue of market concerns about the sustainability of the debt stock, which, in our view, is the main determinant of expectations forming process. Ample levels of primary surplus have assumed the role of being the focus and the main indicator of a sound and prudent fiscal policy in the current dynamics of the Turkish economy. Hence, the importance of primary surplus is worth emphasizing strongly, in the framework of the following interaction mechanism: First, a resolute stance on the primary surplus targets will

limit, to a great extent, the uncertainties regarding debt sustainability shaping the expectations positively. This, in turn, will contribute to a declining risk premium and thereby falling real interest rates. Second, declining risk premium along with fading uncertainties will bring about a strong position of the Turkish lira contributing to the debt dynamics as a second round effect. Third, falling real interest rates and stability in the exchange rate, constituting a favorable environment for increasing consumption and investment confidence, will more than offset the retrenching effects of running primary surpluses on aggregate demand, contributing therefore to sustainable growth.

Figure 9: Primary Surplus to GNP Ratio and CPI Inflation



VI. Current Monetary Policy Implementation

28. After explaining why it has been so difficult to achieve low and stable inflation in Turkey, I now turn to the second question asked in the beginning, namely, what we are, the Central Bank of Turkey, doing to achieve low and stable inflation. This question brings us the policy implementation of the Central Bank.

29. Under the new economic program, the overriding objective of monetary policy is to bring down inflation to single digits over the medium term and to maintain price stability. To this end, the Central Bank has been pursuing an implicit inflation targeting framework and it has been using base money as a supplementary anchor. Under implicit inflation targeting strategy, although targets for base money are fixed as of periods consistent with the inflation target, monetary policy decisions are essentially made by considering the developments in future inflation. More specifically, the Central Bank has been using short-term interest rates as its policy instrument in a forward looking manner to reach the inflation target set jointly with the Government—a strategy similar to the inflation targeting framework. Once the preconditions are met, the Central Bank intends to introduce formal inflation targeting.

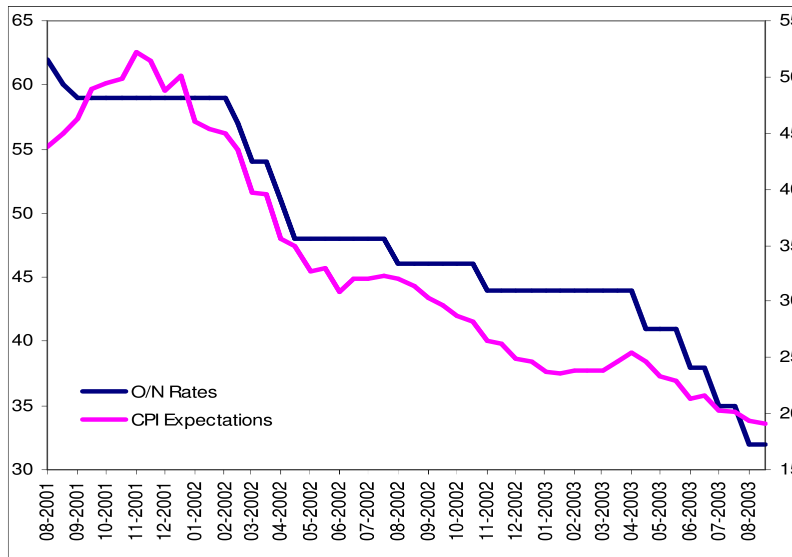
30. In this monetary policy framework, the level of base money is set as a performance criteria in such a way that its growth is consistent with estimated growth in the economy and the inflation target.

31. In terms of the exchange rate policy, the Central Bank has been committed to the floating exchange rate regime. However, the monetary authority has also indicated that it may intervene in the market in a strictly limited manner to smooth out excessive short-run exchange rate volatility as it might endanger price stability. The Central Bank would not, though, target a certain trend level of the exchange rate at this stage of the stabilization program. The Central Bank also conducts foreign exchange purchase auctions to improve its international reserve position conditional on the strength of the balance of payments position and reverse currency substitution.

32. In the context of the IMF program, Central Bank has met all the performance criteria and indicative targets in 2002 and in the first half of 2003. In addition to the autonomy of the Central Bank and strong commitment to the floating exchange rate regime,

these provided clear signals to the markets, which, in turn, have helped to reduce inflation expectations. Hence, we were able to reduce overnight interest rates from 59 percent in late 2001 to 32 percent in August 2003.

Figure 10: Central Bank O/N Rates, 12-Month Ahead CPI Inflation Expectations



33. Strong commitment to the program has helped bringing inflation down. In addition, insufficient demand and favorable food prices contributed to the disinflationary process. The inflation outcome of 2002, 29.7 percent, was well below the target and the lowest end year level of the last 20 years. Despite adverse developments during the first quarter of 2003 –namely rising exchange rates and high oil prices due to the Iraqi war, as well as increases in food and agricultural prices—inflation so far is in line with the end-year target.

34. At this point, I would like to comment on the vulnerability of the Turkish economy to external shocks, which was the main source of relatively unfavorable temporary inflation developments in early 2003. In our opinion, the main source of vulnerability and high levels of volatility in asset pricing, is, again, the issues of credibility and fragile debt dynamics, i.e the fiscal stance. However, it should be obvious that a well

functioning financial system along with political stability, resolute and consistent stance in policy making, have much to contribute to financial stability, decreasing the level of vulnerability to external shocks. We continue to make progress in strengthening the money and foreign exchange markets in pursuit of supporting the monetary program and the floating exchange rate regime.

VII. Monetary Policy Prospects

35. As I have indicated earlier in my speech, we as the Central Bank of Turkey, view inflation targeting regime as the ultimate framework of monetary policy due to its role as a strong commitment on the price stability objective as well as its potential flexibility on the operational side depending on the design.

36. In transition to formal inflation targeting strategy, the Central Bank has already completed its institutional and technical preparations. Besides the earlier legal and institutional framework preparations including amendments to the Central Bank law and increased communication with the public enhancing transparency and accountability, preparations have also included: (i) strengthening economic databases and reporting packages; (ii) development of inflation forecasting systems; and (iii) construction and ongoing dynamic development process of a core quarterly macroeconomic model.

37. Regarding the timing of adopting inflation targeting, still, there remain some problems on the preconditions side, i.e., mainly short-term high debt burden. However, in the light of the recent developments, it should be mentioned that the Turkish economy is moving towards a relatively stable macroeconomic environment, which in our opinion, will constitute the basis for the full fledged inflation targeting regime.

VIII. Concluding Remarks

38. In my concluding remarks, I would like to emphasize the issue of transparency and communication with the public in the context of our monetary policy implementation. The experience of almost all the inflation-targeting countries has demonstrated that central banks need to communicate clearly with the public the reasons for their policy actions.

39. Inflation targeting may be defined as a framework for policy decisions in which the central bank makes an explicit commitment to conduct policy to meet a publicly announced numerical inflation target within a particular time. Inflation targets may help provide a clear path for the medium-term inflation outlook, reducing the size of inflationary shocks and their associated costs. Since long-term interest rates move along with inflation expectations, targeting low inflation rates would lead to more stable and lower longer term interest rates. When central banks can communicate their strategy on inflation clearly, it is expected to clarify the longer term outlook for macroeconomic policy and thus lengthen the planning horizon of private agents.

40. It is very important for the policy maker to build a longer term outlook. Such a clear identification of the objective and transparent implementation of the policy decisions would also force the monetary authority to become more accountable to the public. They need to explain the reasons and the consequences of policy actions. These, in turn, increase the confidence of economic agents and help shaping the expectations to be more forward-looking.

41. Greater public understanding about what the central bank is doing and why, will help to increase policy credibility, particularly in the event of some deviation from the target. As I have mentioned several times during my speech, greater credibility can

improve the variability trade-off by ensuring that inflation expectations do not adjust rapidly to inflation shocks. The advantage of a clearly articulated inflation target is that it provides a framework with which the central bank can explain its actions.

42. Finally, I would like to refer to the remarks of my colleague, Guy Debelle, from Bank of Australia during a conference:[xiv]

> *"I think to some extent inflation targeting is cheap talk of the weak. But, unfortunately, we are the weak and we are not the strong. And you cannot become the strong just by wishing upon a star... ... In the end, actions matter, but the reason why you do all this communication is that communication becomes a mechanical nominal anchor."*

43. Thank you.

[i] Friedman, M. (1977), "Nobel Lecture: Inflation and Unemployment", *Journal of Political Economy*, June, 451-472.

[ii] Andres J and I. Hernando (1997), "Does Inflation Harm Economic Growth? Evidence from the OECD", *National Bureau of Economic Research (NBER) Working Paper*, No:6062.

[iii] Garfinkel, M. R. (1989), "What Is an 'Acceptable Rate' of Inflation? – A Review of the Issues", *Federal Reserve of Bank of St. Louis Economic Review*, July/August, 3-15.

[iv] De Gregorio, J. (1996), "Inflation, Growth and Central Banks: Theory and Evidence", *World Bank Working Paper*, February, No:1575.

[v] McDonough (2002), "The Importance of Central Bank Independence in Achieving Price Stability", Remarks before the National Bank of Poland, July 2.

[vi] Fisher, S. (1993), "The Role Macroeconomics Factors in Growth", *Journal of Monetary Economics*, 32: 485-512.

[vii] Barro, R.J. (1991), "Economic Growth in a Cross Section of Countries", *Quarterly Journal of Economics*, 104: 407-433.

[viii] Cardoso, E. and A. Fishlow (1989), "Latin American Economic Development: 1950-1980", *NBER Working Paper*, No: 3161.

[ix] Fisher, S. (1993), "The Role Macroeconomics Factors in Growth", *Journal of Monetary Economics*, 32: 485-512.

[x] Cukierman, A., P. Kalaitzidakis, L. H. Summers and S. B. Webb (1993), "Central Bank Independence, Growth, Investment and Real Rates", *Carnegie Rochester Conference Series in Public Policy*, 39: 95-140.

[xi] Friedman, M. (1968), "The Role of Monetary Policy", *American Economic Review*, 58: 1-17.

[xii] Sargent, T. J., and N. Wallace (1981), "Some Unpleasant Monetarist Arithmetic", *Quarterly Review of Minneapolis Federal Reserve Bank*, Fall, 1-17.

[xiii] Woodford, M. (2001), "Fiscal Requirements for Price Stability", *NBER Working Paper*, January, No: 8072.

[xiv] Debelle, G. (2000), Discussion, Conference on Monetary Policy and Inflation Targeting in Emerging Economies, July 13-14, Bank of Indonesia.