



# **CENTRAL BANK OF THE REPUBLIC OF TURKEY**

**Durmuş YILMAZ**  
Governor

**October 1, 2007**



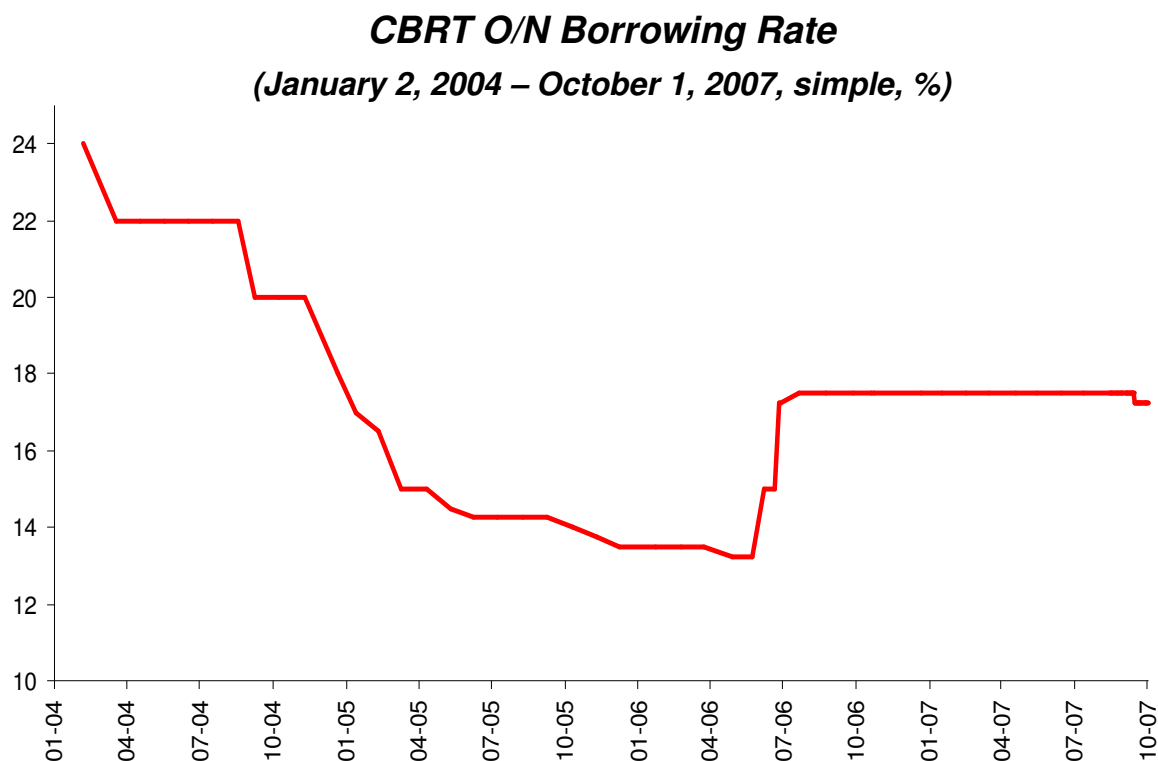
# Presentation Outline

- ✓ **September Interest Rate Decision**
- ✓ **Why Was The Rate Cut?**
  - **Favourable Developments in Inflation**
  - **Moderate Domestic Demand Conditions**
  - **Developments in International Credit Markets and Impacts on The Turkish Economy**
- ✓ **Monetary Policy Stance**
- ✓ **Monetary Policy and Communication**
- ✓ **Inflation Targeting and Data Dependency**



# Interest Rate Decision

✓ On 13 September 2007, the Monetary Policy Committee decided to cut the overnight borrowing rate by 25 basis points.



Source: CBRT



# Why Interest Rate Cut?

**Current conditions require launching measured rate cuts**



1. Favourable developments in inflation (especially in services inflation)
2. Modest recovery of domestic demand
3. Downside risk to growth due to developments in global financial markets (especially in light of US employment data announced on September 7, 2007)



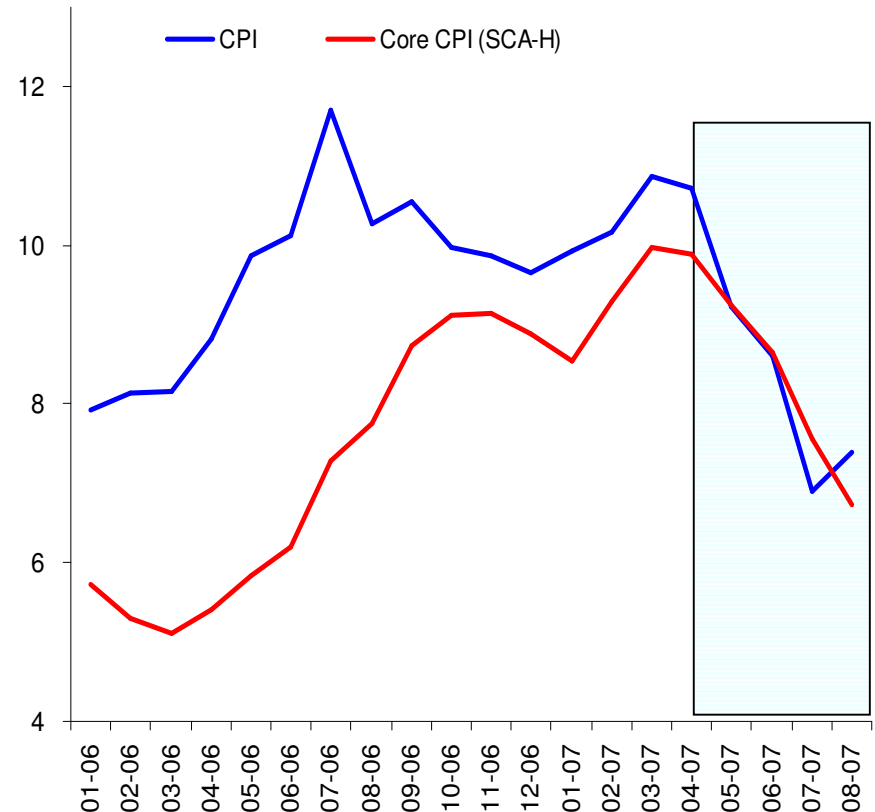
# Favourable Developments in Inflation

✓ Due to fluctuations in financial markets during the May – June 2006 period and the deterioration in inflation expectations, there was an interruption in the disinflation process.

✓ However, following the strong monetary tightening and its lagged effects, inflation was brought under control and put back on a track consistent with the target.

✓ The disinflation process became more discernible especially in the second quarter of 2007.

***Inflation – CPI and SCA-H***  
***(January 2006 – August 2007, percentage)***



Source: TURKSTAT

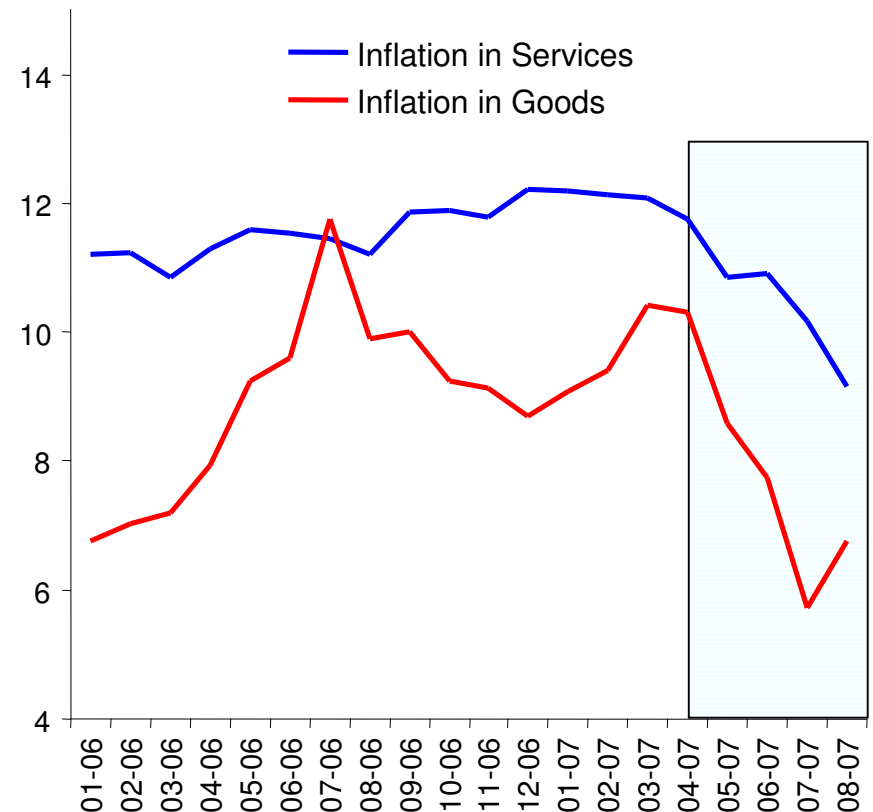


# Favourable Developments in Inflation

✓ The downward trend in services sector inflation (where monetary policy is relatively more effective) is **more favorable** than expected – and it has become especially more significant since April (a **cumulative decline of 3 percentage points** since the beginning of 2007)

✓ Strong monetary tightening has also continued to put pressure on prices of goods (consumer durables, in particular).

**Goods and Services Inflation**  
(January 2006 – August 2007, percentage)

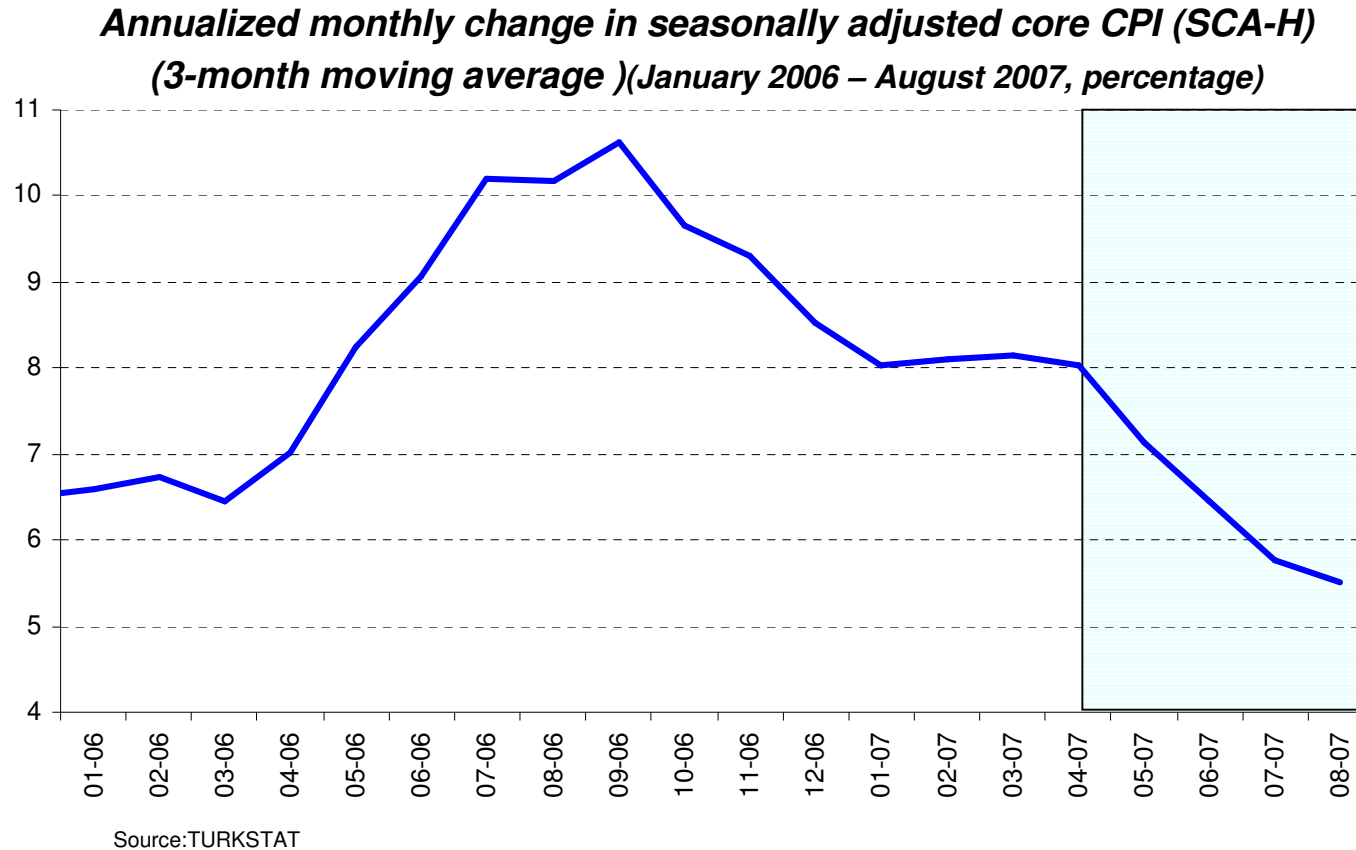


Source: TURKSTAT



# Favourable Developments in Inflation

✓ Quarterly trend in prices of all goods and services points to a continuation of the downward trend in inflation.

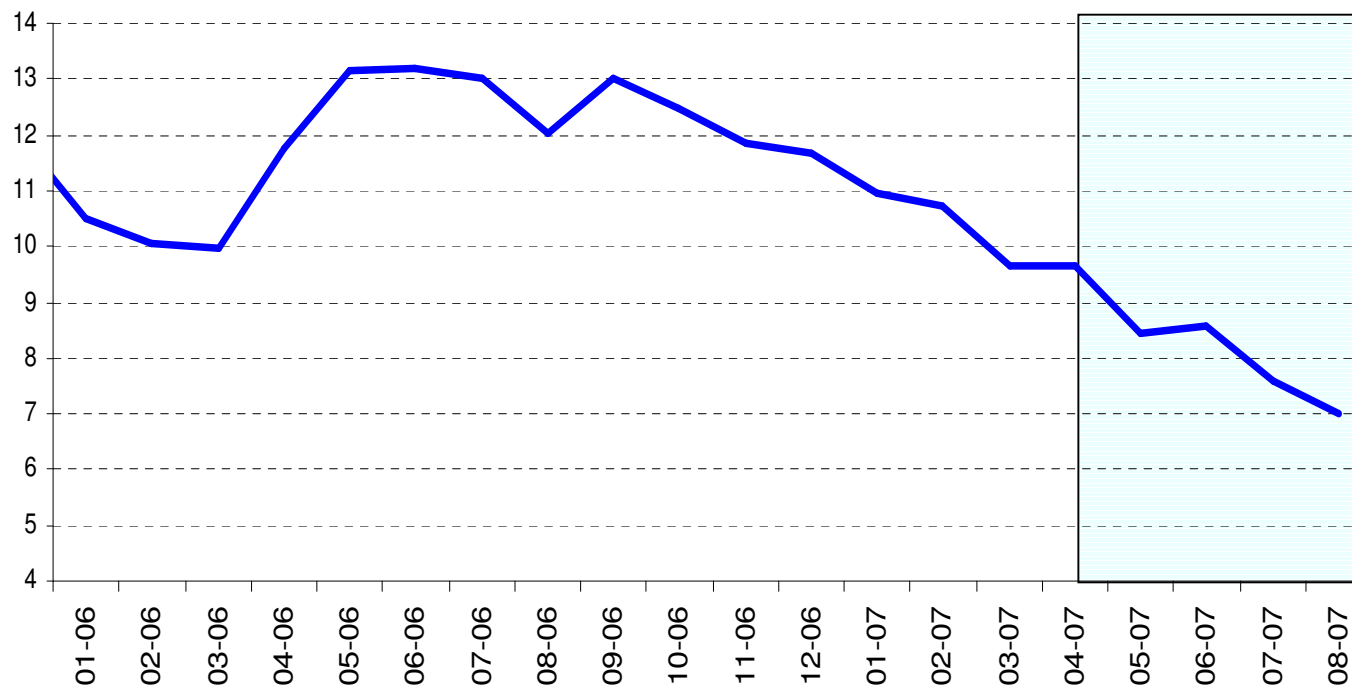




# Favourable Developments in Inflation

✓ Quarterly trend in services sector inflation is also favourable. Having peaked in mid-2006, services inflation has declined rapidly and fell to 7.0 % as of August 2007.

*Annualized monthly change in seasonally adjusted prices of services sector (3-month moving average) (January 2006 – August 2007, percentage)*



Source: TURKSTAT





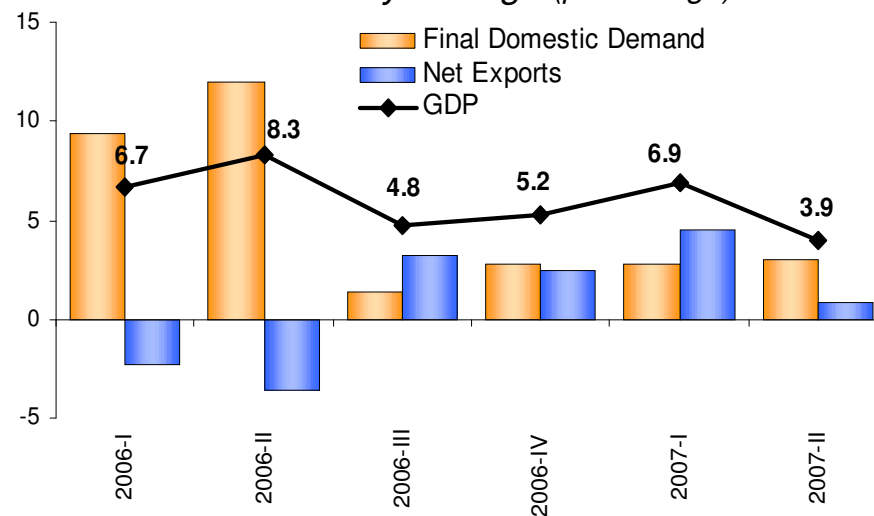
# Moderate Domestic Demand

✓ Cautious monetary policy stance followed since mid-2006 has been influential in controlling domestic demand.

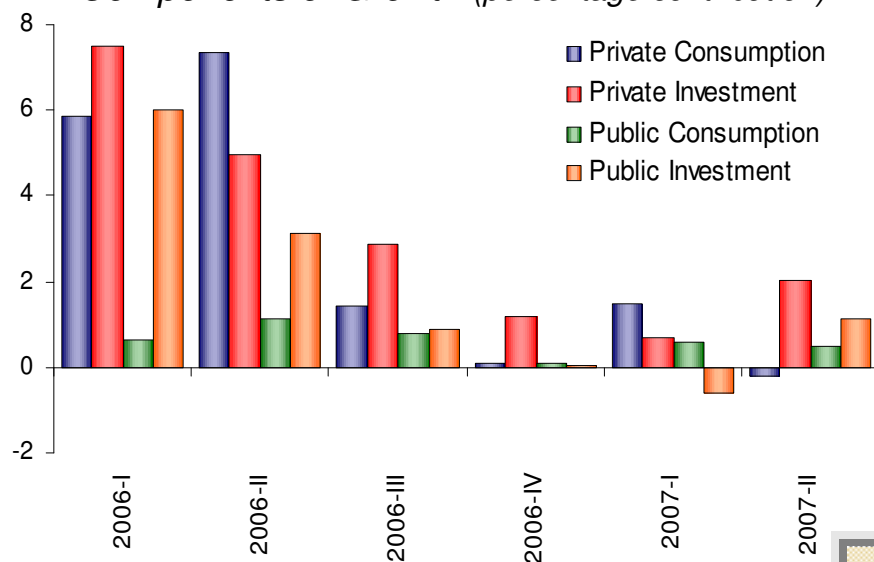
✓ Economic activity over the past year was consistent with the outlook presented in the July Inflation Report.

✓ Strong monetary tightening restrained domestic demand significantly while net exports continued to support economic growth.

*Quarterly Change (percentage)*



*Components of Growth (percentage contribution)*



Source: TURKSTAT



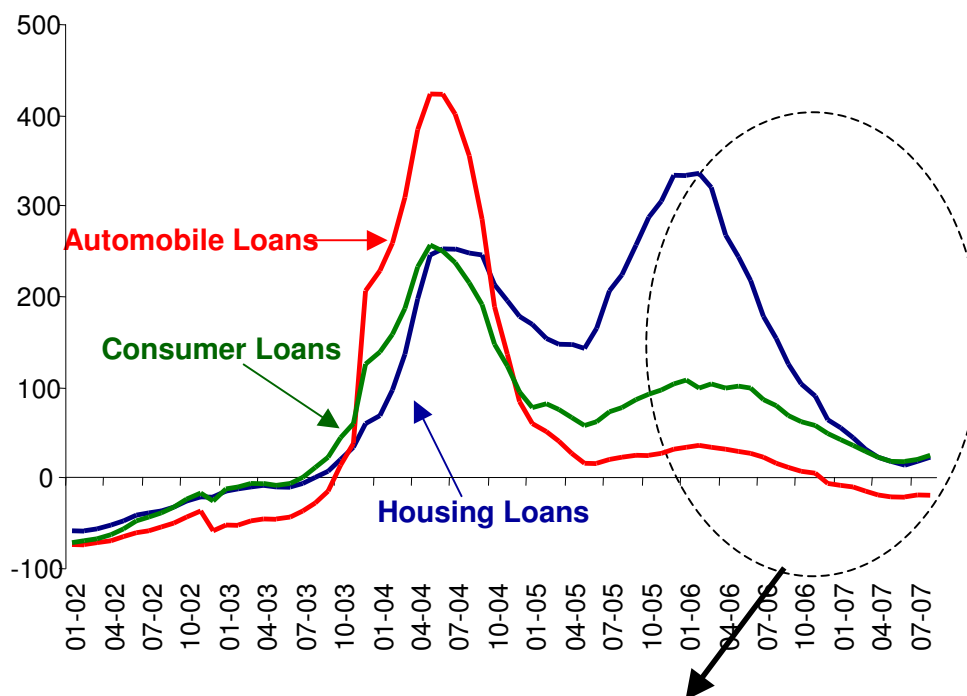
# Moderate Domestic Demand

The pace of growth in consumer credit does not point to a notable acceleration in private consumption expenditures.

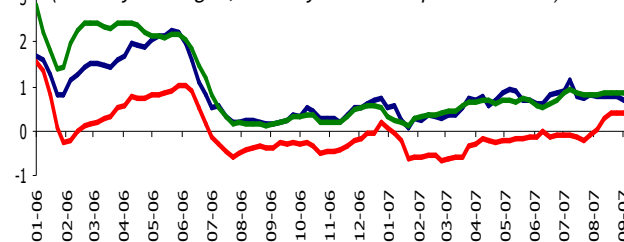


✓ The amount of consumer credit in real terms continues to increase at relatively low rates compared to the first half of 2006 (when domestic demand followed a strong course).

*Consumer, Automobile and Housing Loans  
(January 2002 – August 2007, annual percentage change, real)*



*Weekly Percentage Change, Nominal  
(Monthly Averages, January 2006 – September 2007)*



Source: CBRT

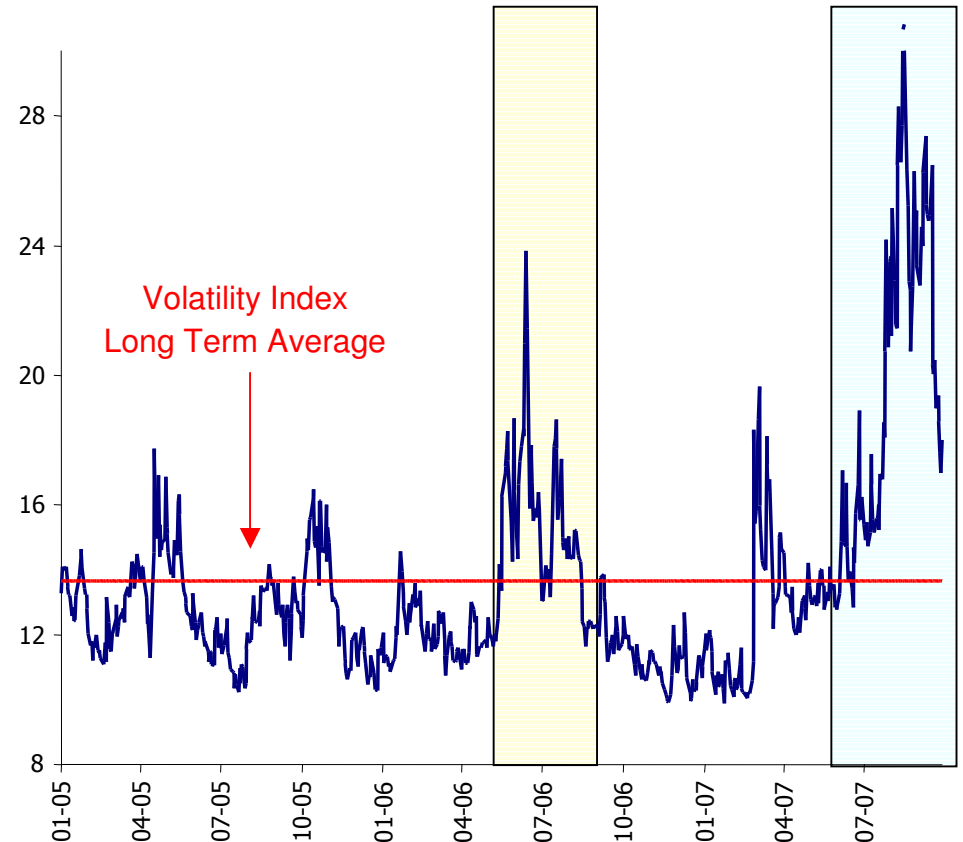


# International Developments

✓ Recent turbulence in global financial markets, which emerged in late July 2007 due to concerns over the “subprime mortgage” market in the USA, has not yet subsided.

✓ Concerns over the quality of asset-backed securities have forced international banks to shift their focus on default risk and become reluctant to lend. This has led to a worldwide liquidity squeeze, especially in the European banking system.

*Volatility Index\**  
(January 3, 2005 – September 28, 2007)



\* The Market Volatility Index (VIX) is a measure of implied volatility in trading of S&P 500 futures on The Chicago Board Options Exchange.

Source: Bloomberg



# International Developments

## USA

- ✓ Following the rise of interbank rates to 6 %, the US Federal Reserve provided 38 billion dollars of liquidity to the markets on August 10.
- ✓ That was the second highest amount provided by the FED since September 14, 2001 (81 billion dollars).
- ✓ In August, the Federal Reserve lowered the discount rate applied to banks' direct borrowings to 5.75 % from 6.25 %.

## EUROZONE

- ✓ In Germany, state banks provided liquidity to two investment firms, IKB and Sachsen LB, to cover their losses.
- ✓ On August 9, 2007, BNP Paribas of France freezed redemptions of three funds that were investing in the US mortgage market.
- ✓ On the same date, the European Central Bank provided liquidity to the markets in the amount of 95 billion euro for the first time since 2001. The amount of liquidity provided on September 12, 2001 was 69 billion euro.

## UK

- ✓ In June, two “hedge funds” managed by Bear Stearns came close to bankruptcy.
- ✓ Northern Rock Bank faced a liquidity crisis on September 14, 2007 and was bailed out following the first bank saving operation since 1997.
- ✓ On the same date, the Bank of England provided 4.4 billion pounds of liquidity to the markets, and bank deposits were put under state guarantee.



# International Developments

✓ The US non-farm payroll employment figures released on September 7, 2007 were below expectations (a decline of 4 thousand against an expected gain of 100 thousand); the first decline since August 2003. Previous figures were also revised downwards (81 thousand in total).

✓ These figures indicated that the turmoil in financial markets are affecting real economic activity.

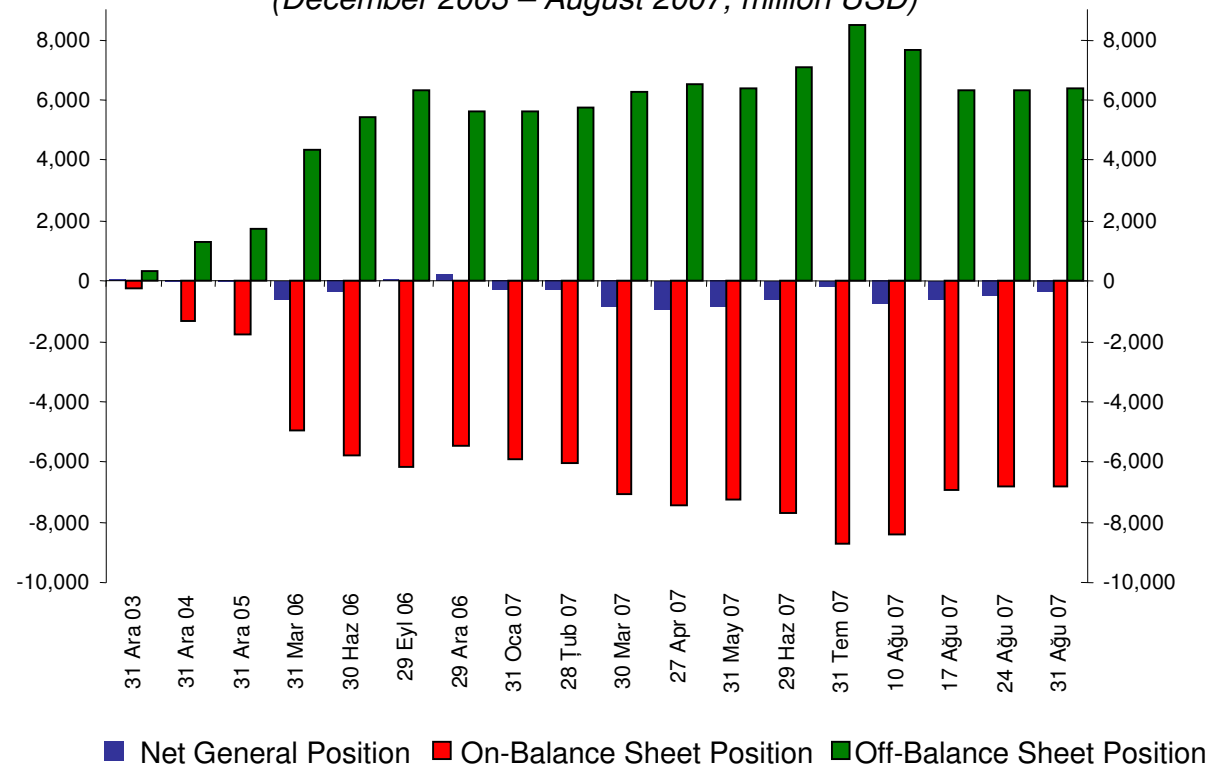
✓ Recent credit market problems have hampered the eagerness of banks to take risks and triggered a decline in asset prices. This has the potential to trigger a slowdown in US and European economies.



# International Developments

✓ Meanwhile, heightened risk perceptions abroad are leading the banking sector in Turkey to be more reluctant to borrowing from abroad and lending in the domestic market; a development which would restrain the recovery in domestic demand.

*Banking Sector Foreign Currency Position  
(December 2003 – August 2007, million USD)*

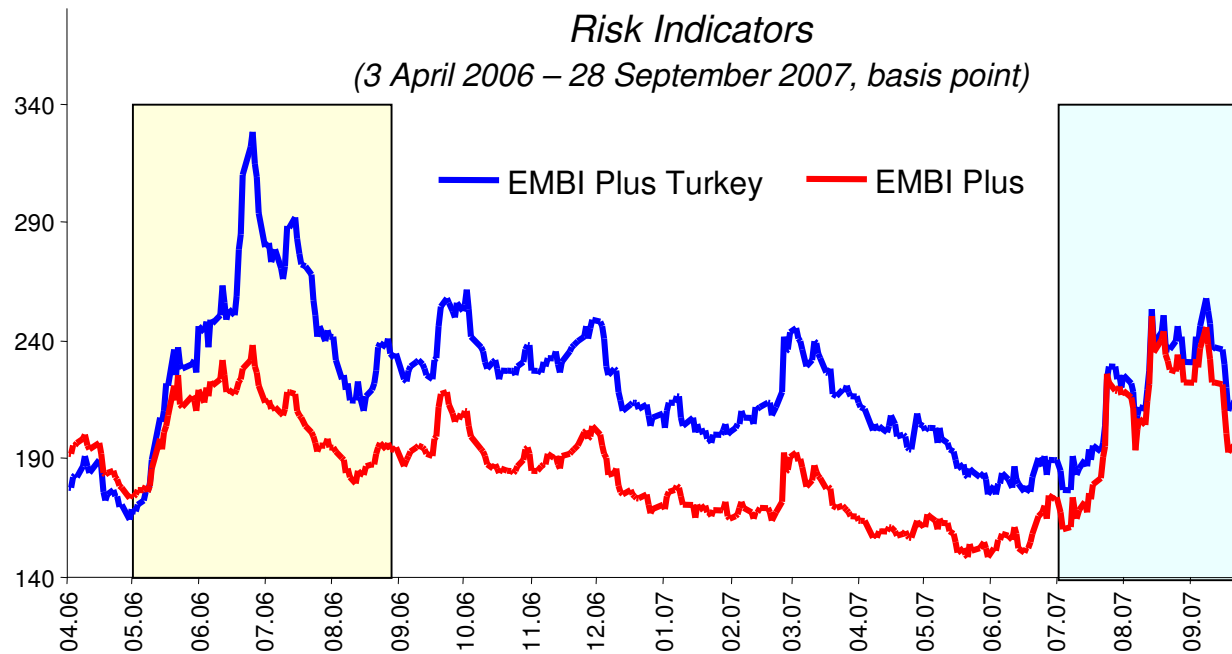




# International Developments

✓ The recent developments in 2007 have fundamental differences from the turbulence in 2006.

✓ Risk premiums of developing countries initially increased due to investors' risk-averse attitude. However, since the “subprime mortgage” markets are not fully developed in these countries, they have not suffered as much as those in developed ones.



Source: JP Morgan



# International Developments and Impacts

✓ In sum, fluctuations in external markets are expected to restrain both domestic and external demand.



1. **Slowdown in global economy** → would limit growth in external demand

2. **Problems in credit markets** → would moderate the pick-up in domestic demand due to a deceleration in domestic loans financed via foreign credits





# Monetary Policy Stance



# Monetary Policy Stance

**Although the Central Bank decided to initiate rate cuts in September, the cautious monetary policy stance is intact.**

✓ According to the latest Expectations Survey on September 20, 2007, the inflation expectations for the next 24-month period is 5.4 %, which is above the inflation target of 4 %.

✓ Yet, it is projected that the annual inflation rate would remain below the 4 % target by the end of 2008, under a **cautious and measured rate cut cycle**.

✓ Therefore, the Central Bank believes that the Bank can play an active role in realigning the public's inflation expectations by putting more emphasis on its own institutional forecast.



# Monetary Policy Stance

**Inflation target set for end-2008 is 4 percent.**

As emphasized in the Inflation Report on July 27, 2007, under the assumption of moderate rate cuts starting from the fourth quarter of 2007, it is estimated that with 70 % probability the annual inflation rate will turn out to be

➤ **between 5.1 % and 6.9 %  
(midpoint 6.0 %)  
at the end of 2007.**

➤ **between 1.5 % and 4.9 %  
(midpoint 3.2 %)  
at the end of 2008.**



# Monetary Policy Stance

**The rate cut decision on September 13, 2007 was made with the assumption that budgetary spending in 2007 would be within the appropriations approved in this year's budget law.**

**The Committee did not make any additional assumptions on the fiscal front.**



✓ One of the factors that will affect the pace of rate cuts in the upcoming period is the government's determination to continue tight fiscal policy and the consistency between the 2008 inflation target and **wage increases in the public sector and the 2008 budget.**

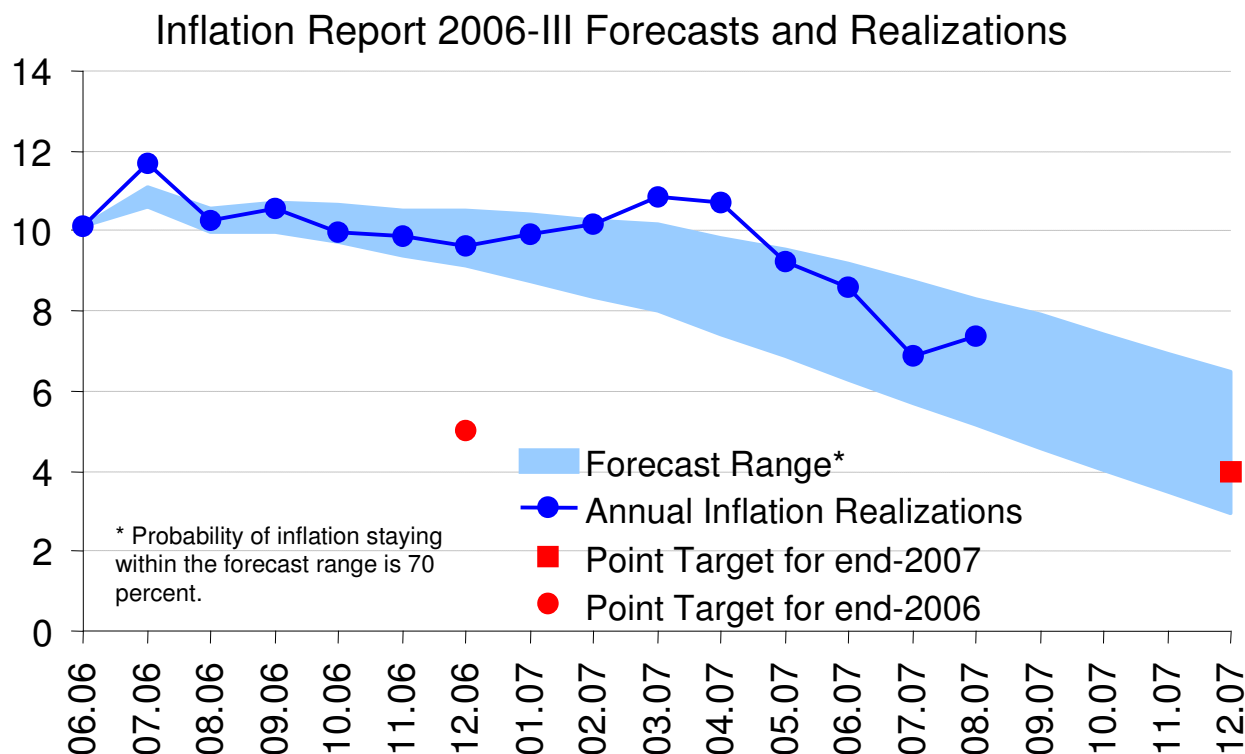


# Monetary Policy Stance

## The success of the CBRT's inflation forecasts



The inflation figures that have been released since mid-2006 have been broadly consistent with the projection stipulated in the Inflation Report of **28 July 2006**.



Source: CBRT.



# Monetary Policy and Communication



## The Monetary Policy Stance Before the Decision

July 12,  
2007

✓ The Monetary Policy Committee stated **for the first time** that the rate cut cycle may be launched **in the last quarter of the year**.

July 27,  
2007

✓ July 2007 Inflation Report emphasized that this message did not imply a rate cut in **October**. Possible rate cuts can be considered earlier as well as later depending on the flow of incoming information regarding external demand, public expenditures and other determinants of the medium term inflation outlook.

August 14,  
2007

✓ The Monetary Policy Committee highlighted its previous message and stated that the **timing** and **amount** of rate cuts would differ depending on the flow of economic data and other developments.

September  
6, 2007

✓ In a speech delivered in Erzurum, it was reiterated that flow of economic data and other developments would determine the exact **timing** and **amount** of rate cuts.



# Independence of the Central Bank

**The inflation targets are set by the Government and the Central Bank together. The Central Bank is independent in using its instruments to achieve these targets.**



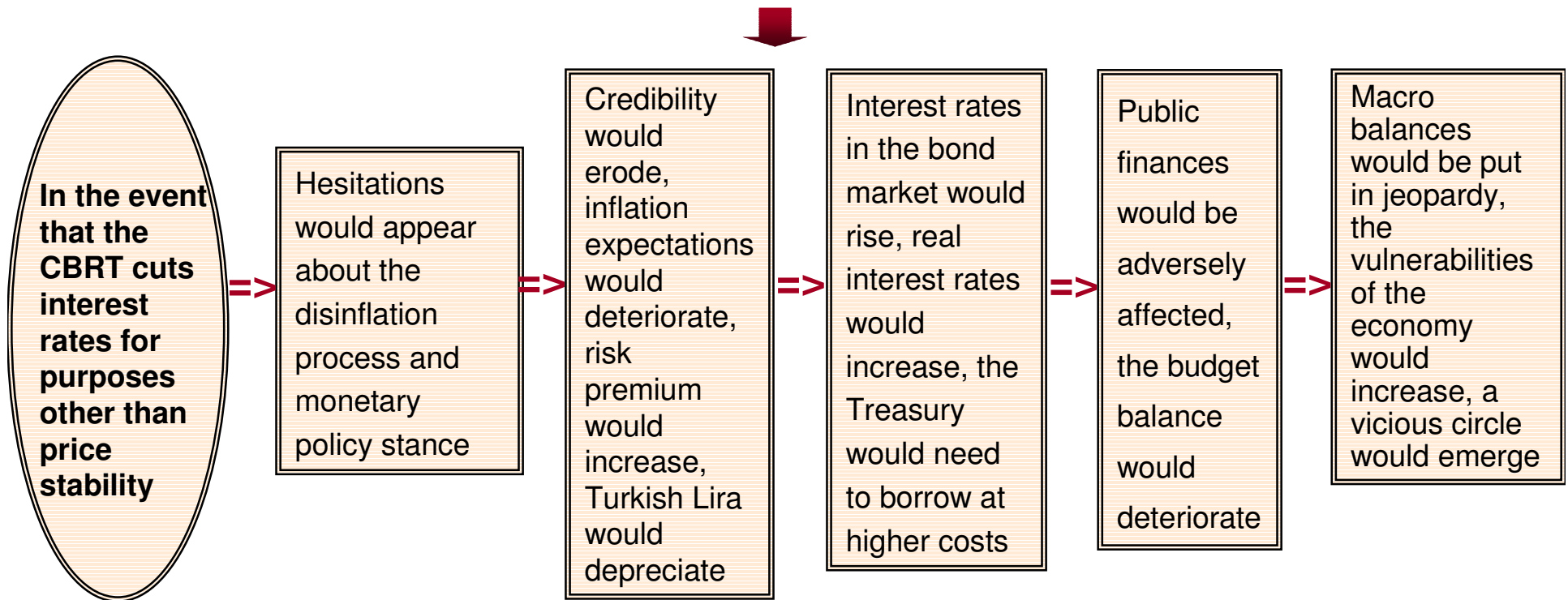
- ✓ The interest rates are set by taking into account the impact of the monetary policy stance on the future course of inflation.
- ✓ The Central Bank aims **price stability** to eliminate the most important obstacle in the way of achieving sustainable growth.
- ✓ The comments and recommendations by Cabinet members on monetary policy have the potential to raise doubts about the instrument independence of the Central Bank and add to the complications of the monetary policy decision process.





# The Credibility of the Central Bank

**The assessments presented in the Governor's speech in Erzurum on September 6, 2007 are valid at all times and for every country.**





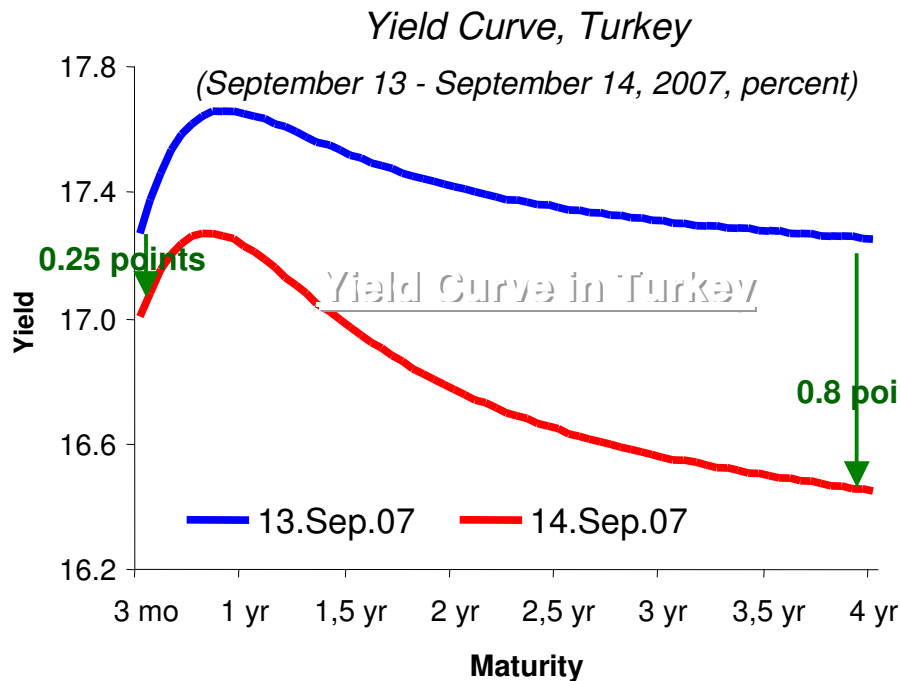
# Credibility of the Central Bank

The rate cut provided a strong signal to the market helping inflation expectations converge to the target.

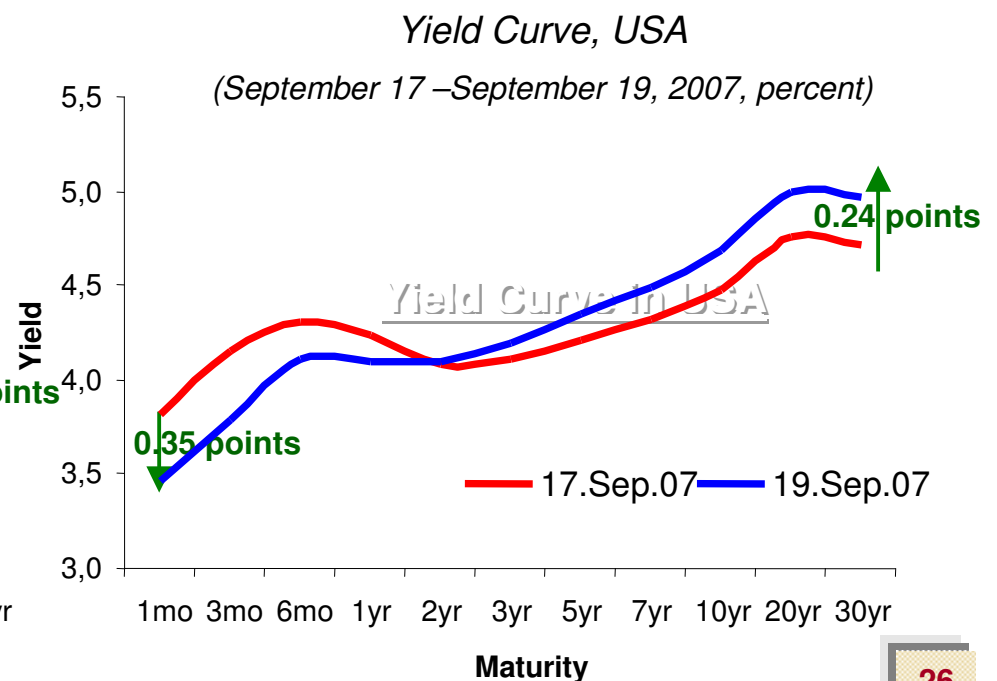


The data on yield curves point to an improvement in investors' medium term inflation expectations.

In this context, movements in opposite directions observed in the yield curves in Turkey and the US following the announcement of rate cut decisions deserve close attention.



Source: CBRT.



Source: Bloomberg



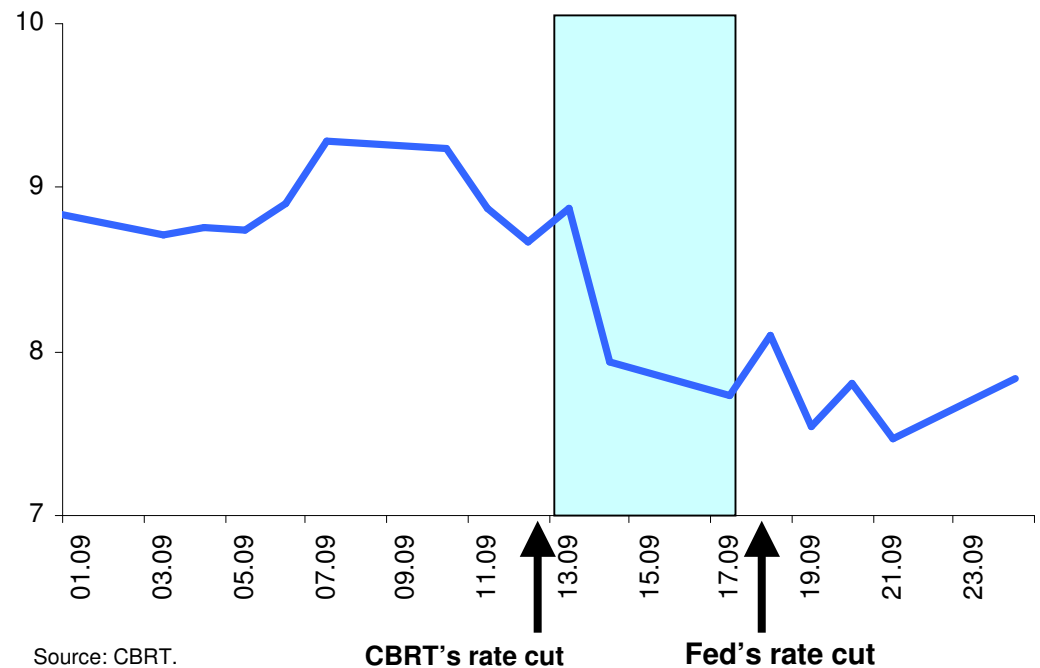
# Credibility of the Central Bank

✓ Another way of measuring inflation expectations is “**inflation compensation**”, which is calculated from the CPI-indexed and fixed-yield government domestic borrowing securities. It consists of inflation expectations and inflation risk premium.

✓ The inflation compensation declined about one percentage point following the rate cut.

✓ The primary reason for the post-decision decline in long-term interest rates is the improvement in inflation expectations and the easing of inflation uncertainty.

*Inflation Compensation\* (inflation risk premium + inflation expectations) (September 1 –September 24, 2007, percent)*



\* Turkey's risk premium (EMBI+ Turkey) did not display a significant change during the period between the interest rate cut of the CBRT and that of the Fed.



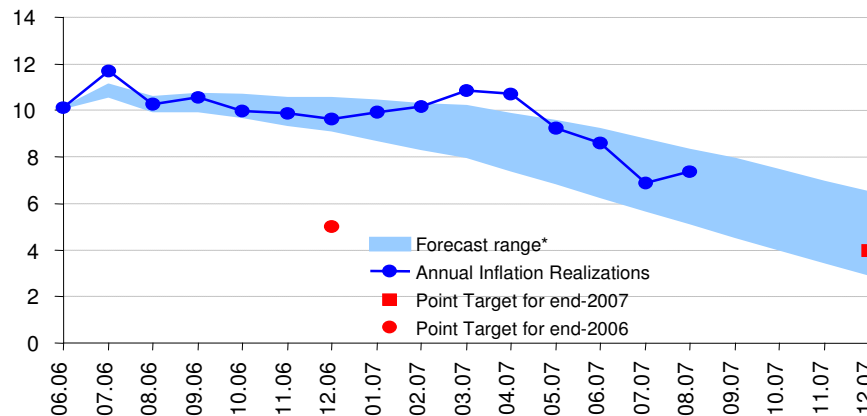
# **Inflation Targeting and Data Dependency**



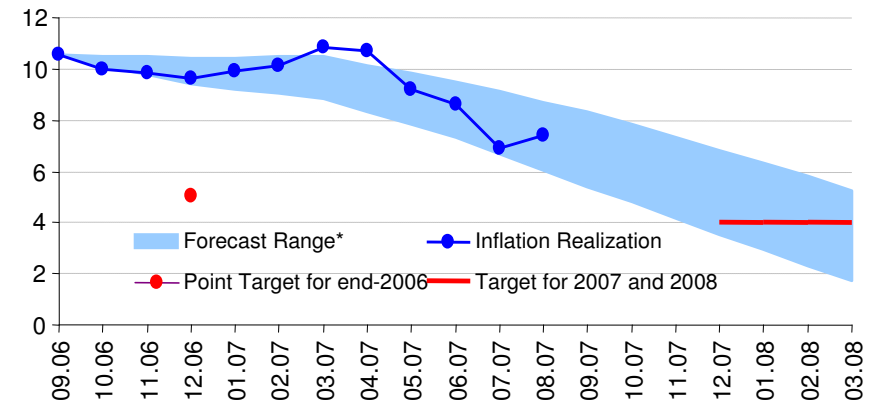
# Inflation Forecasts and Realizations

✓ The consistency between the forecasts presented in the Inflation Report and the the inflation figures reflects the accuracy of the Central Bank's forecasts.

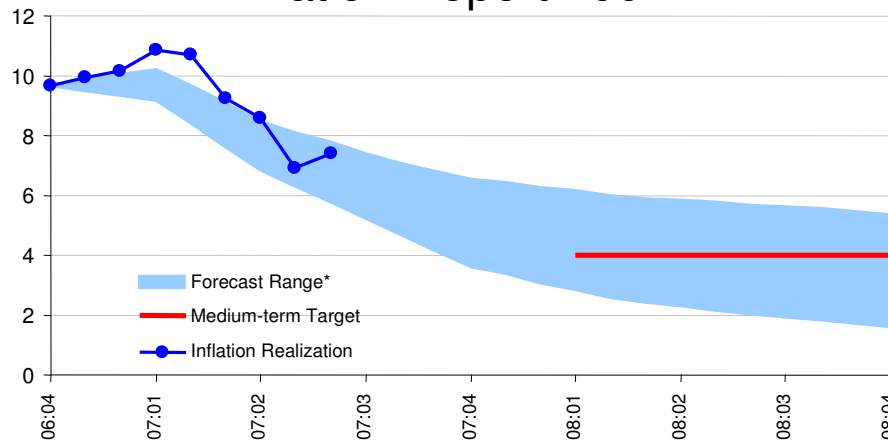
## Inflation Report 2006-III



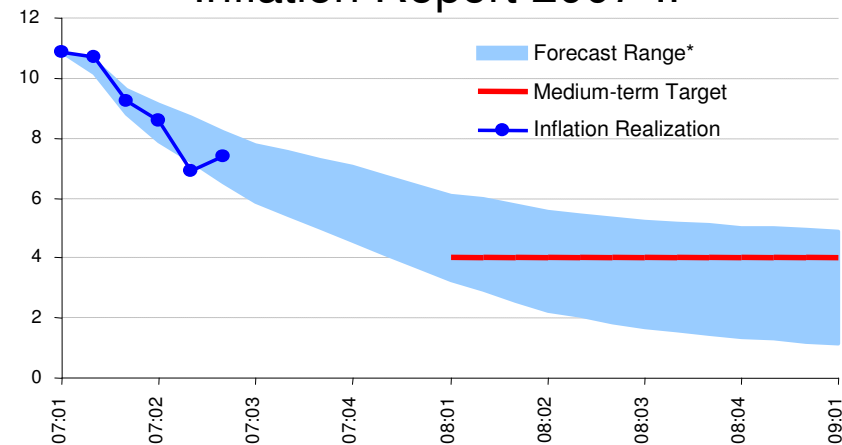
## Inflation Report 2006-IV



## Inflation Report 2007-I



## Inflation Report 2007-II

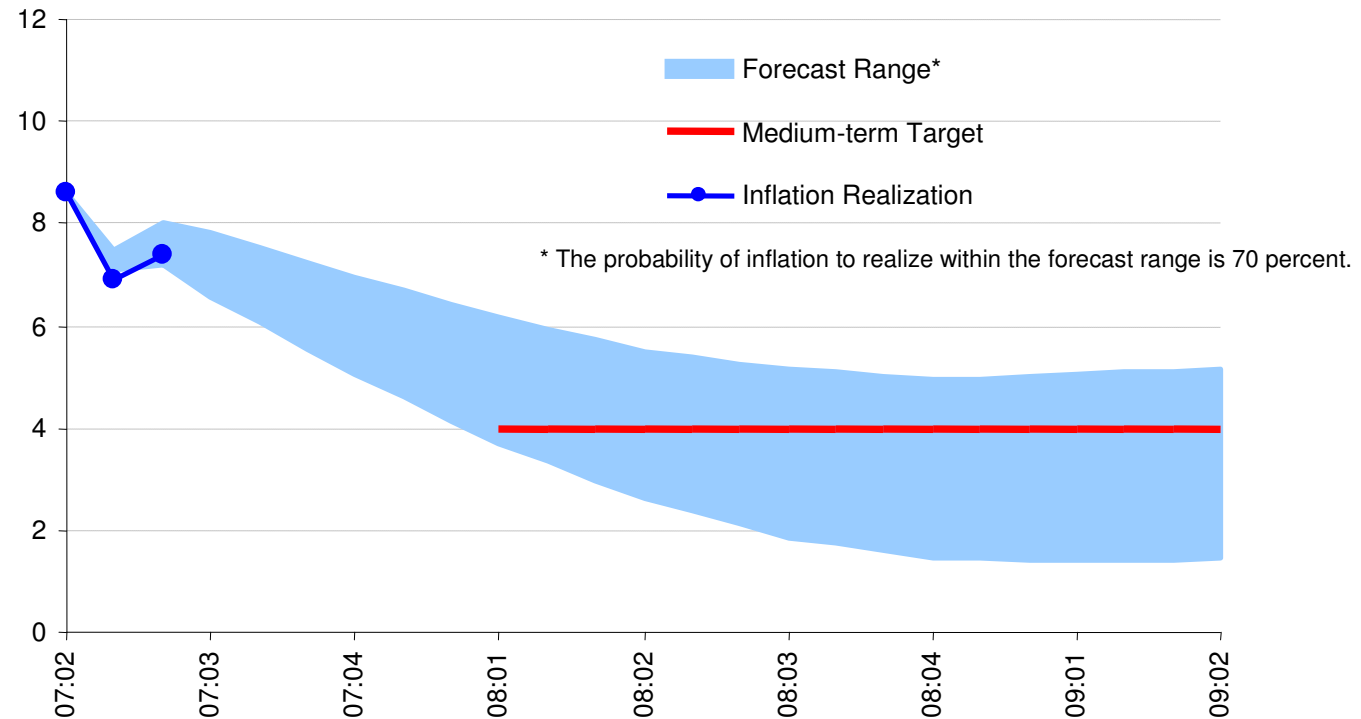




# Inflation Forecasts and Realizations

## The latest inflation forecasts announced in the July 2007 Inflation Report

### The 2007-III Inflation Report Forecasts and Realizations



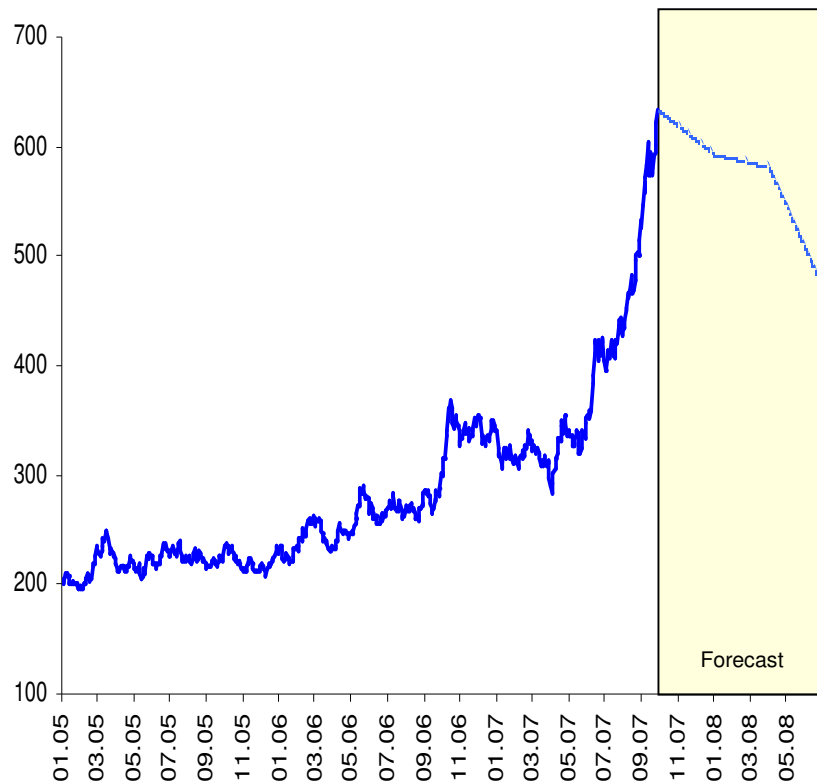
Source: CBRT



# Developments in Energy and Commodity Prices

## Wheat Prices\*

(January 3, 2005 – September 27, 2007, index)

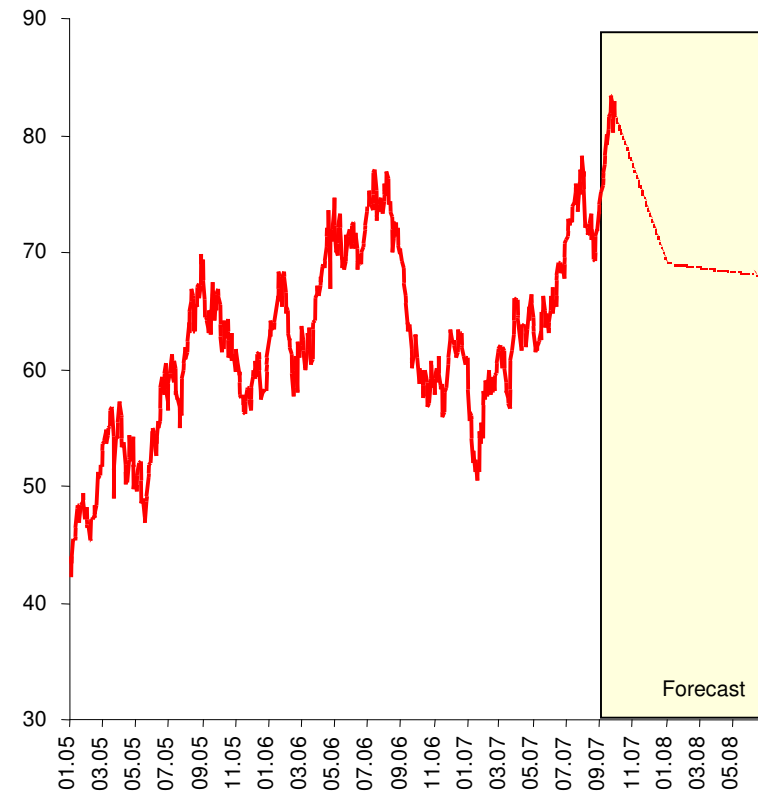


Source: S&P Goldman Sachs, Forward prices, CBRT calculations

\* The y-o-y inflation in wheat prices was 120 percent as of September 27, 2007.

## Crude Oil (WTI)

(January 3, 2005 – September 27, 2007, US dollars)



Source: Bloomberg, Consensus Forecasts, CBRT Calculations



# Inflation Forecasts

## The assumptions and the policy stance behind the July 2007 inflation forecasts

### Assumptions:

- ✓ Average crude oil price will be 65 dollars
- ✓ In the Euro zone, the growth rate will be **2.7** percent in 2007 and 2.2 percent in 2008, whereas the inflation rate will be 2.0 percent in 2008.
- ✓ The Central Bank will maintain a tight monetary policy stance
- ✓ The pick-up in domestic demand in the rest of 2007 will remain moderate and inflation in services sector will display a **gradual** slowdown.

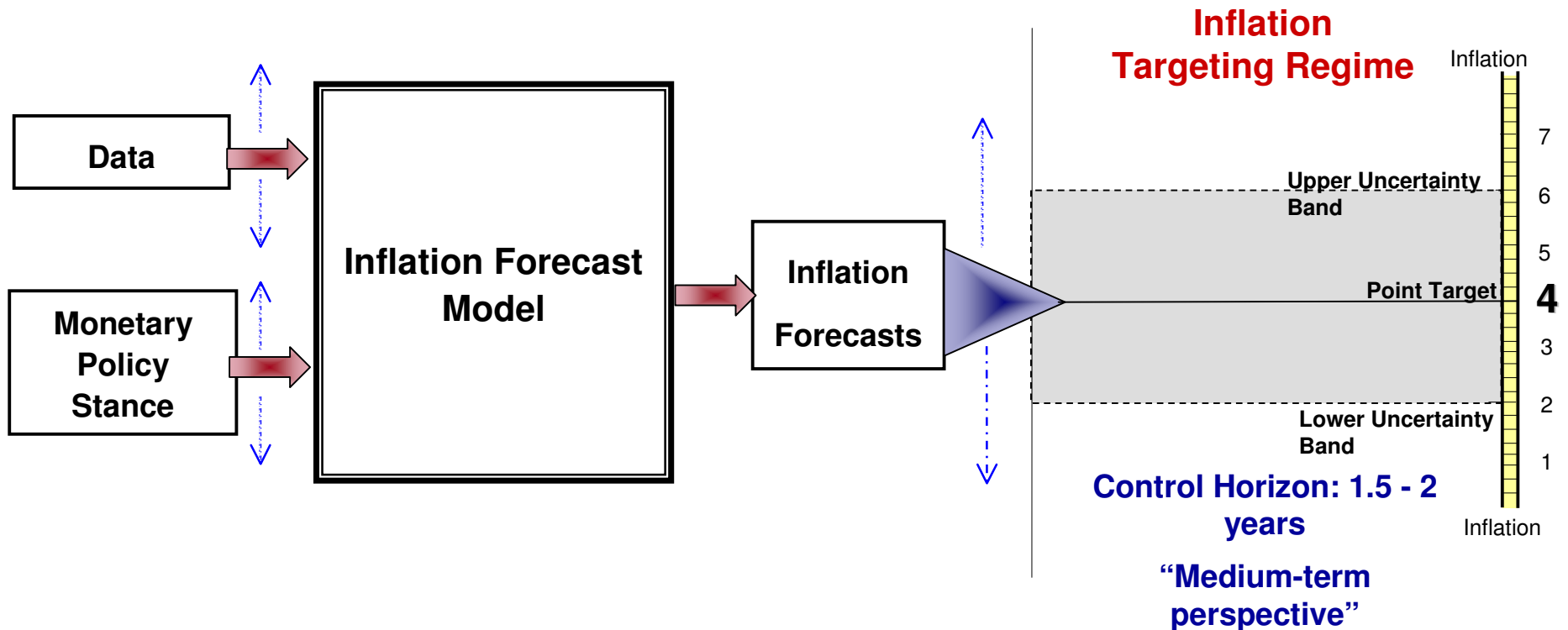
### Monetary Policy Stance:

- ✓ While the measured policy rate cuts started as of the last quarter of the year, the cautious monetary policy stance will be maintained.





# Forecast Model and Inflation Targeting



**Data dependency in monetary policy is a natural outcome of the inflation targeting regime.**

**Under the inflation targeting regime, revisions in the monetary policy stance is not an exception but a rule.**



# Forecast Model and Inflation Targeting

## Examples for "data dependency":

- ✓ **Loosening of fiscal policy:** It would push the inflation forecast above the target, the monetary policy stance would be tightened so that the medium term inflation forecast envisaged in the model would go back to the inflation target.
- ✓ **Signs for slowdown in European economies:** It would restrain the external demand, pull the inflation forecast below the target, the monetary policy stance would be eased due to a likely deviation from the target.
- ✓ **Deterioration in risk perceptions in international credit markets:** The volume of credit obtained by domestic banks from abroad would decline causing a slowdown in domestic demand, inflation forecasts would fall below the target, monetary policy would be eased due to the probability of deviation from the target.
- ✓ **Supply shock in food prices:** If the inflation forecast model envisages no secondary effects, there would be no change in the medium-term inflation forecast and the monetary policy stance would be intact.



# Transmission Mechanism

How The Transmission Mechanism Works;



✓ “Lagged effect” in the demand channel

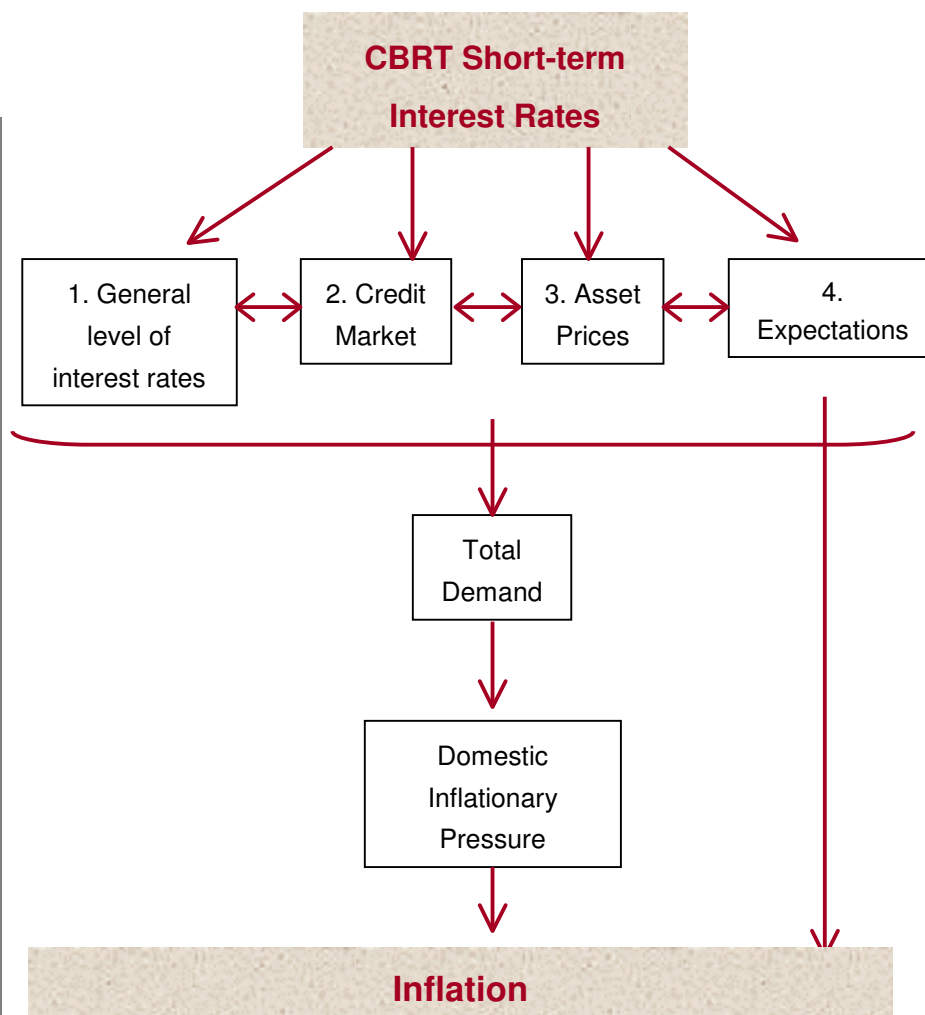
Impact horizon for interest rate decisions:

<i>On economic activity</i>	<i>On Inflation</i>
<i>1-3 quarters</i>	<i>1-2 years</i>

✓ Exchange rates (mostly short-term impact)

✓ Cost channel (short-term and limited impact)

*A Simplified Transmission Mechanism*

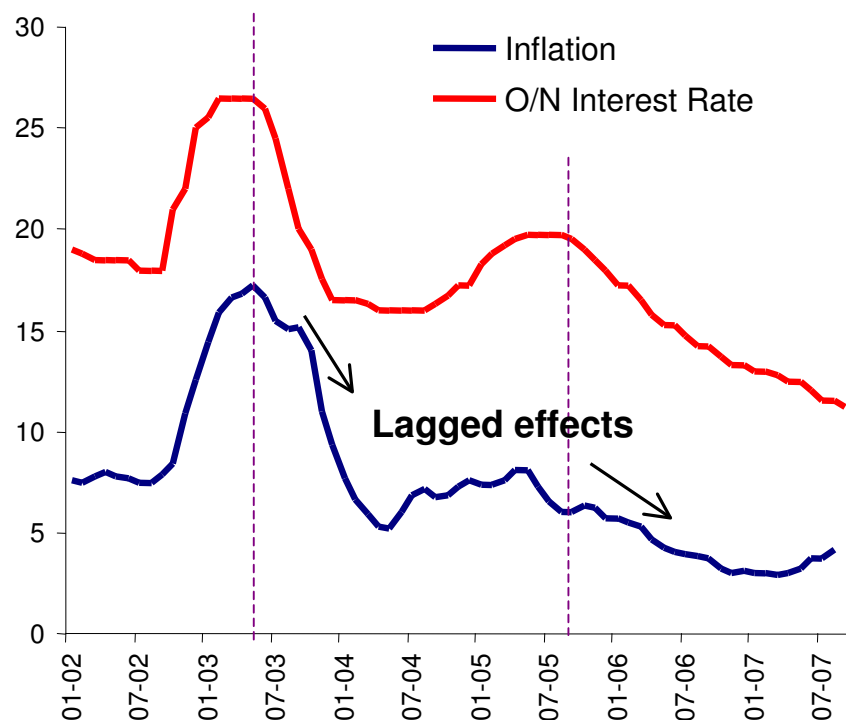




# Examples

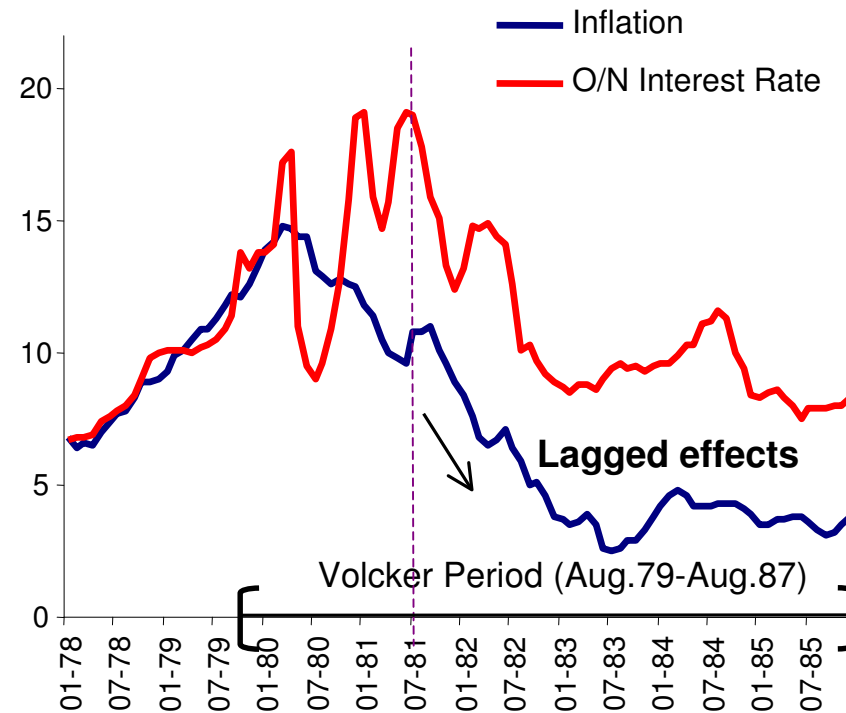
## Examples of monetary tightening

### Brazil 2002-2004



Source: Central Bank of Brazil

### USA 1981-1983



Source: Federal Reserve

- ✓ Both central banks managed to get inflation under control via strong monetary tightening.
- ✓ Inflation continued to fall due to the lagged effects observed during the following cautious rate cut cycles.



# **CENTRAL BANK OF THE REPUBLIC OF TURKEY**

**Durmuş YILMAZ**  
Governor

**October 1, 2007**