



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

**PRESENTATION BEFORE THE COUNCIL OF  
MINISTERS, AND**

**THE PLANNING AND BUDGET COMMISSION OF  
THE GREAT NATIONAL ASSEMBLY OF TURKEY**

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Governor**

**May 2008**



# Presentation Plan

- I. International Developments
- II. Effects of International Developments on the Turkish Economy
- III. Financial Stability in Turkey
- IV. Inflation Developments, Forecasts and Risks
- V. Monetary Policy Stance
- VI. Markets
- VII. Economic Outlook

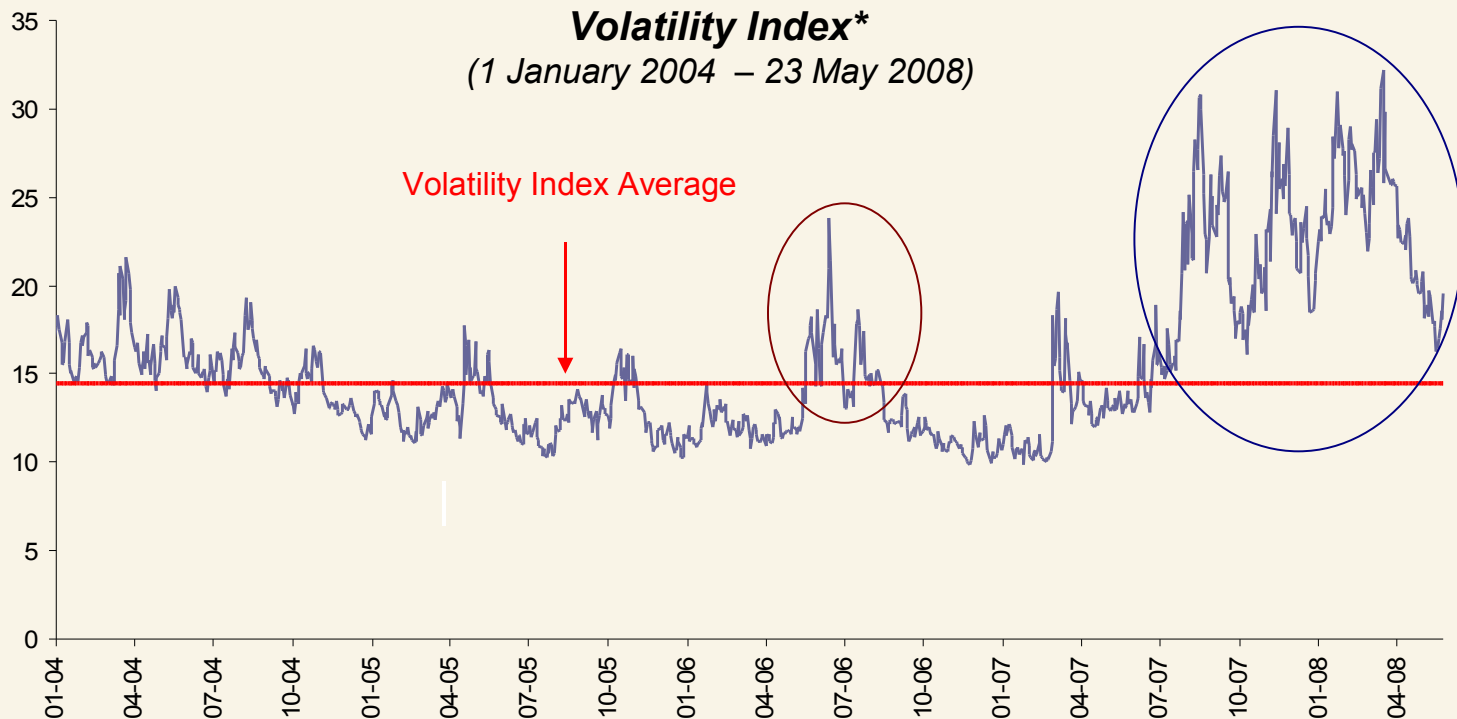


# I. International Developments



# International Developments

- ✓ The financial turbulence in global money and capital markets, which started in August 2007, has not abated yet. The magnitude of the turbulence is larger than that experienced in 2006. The full scale of damage that it might cause in economic activities is still uncertain.



\* VIX measures the implicit volatility of the options prices of the S&P 500 stock index.  
Source: Bloomberg

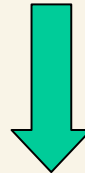


# Reasons for the Turbulence

How did we end up here?



**1st APPROACH: GLOBAL LIQUIDITY  
CONDITIONS**



Abundant credit facilities  
supported by accommodative  
monetary policies

Surge in leveraged  
transactions

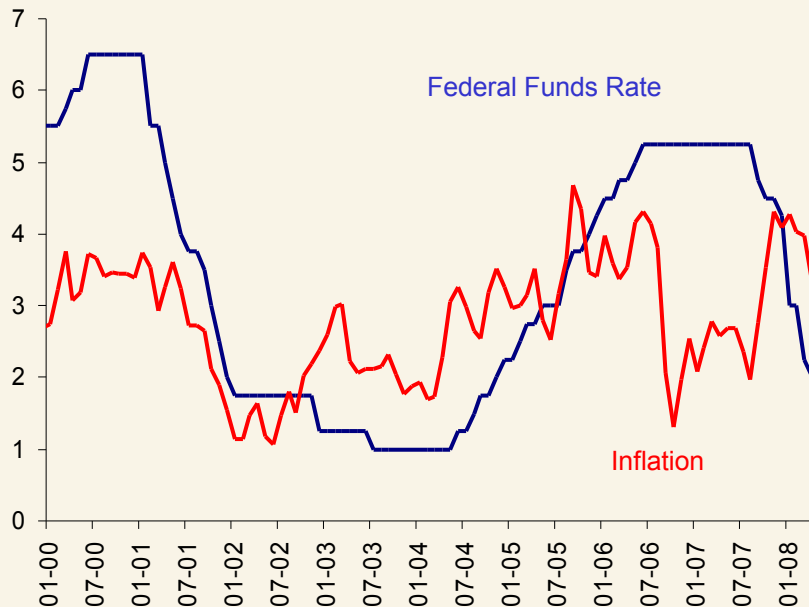
Excessive risk appetite  
and search for high yields



# Reasons for the Turbulence

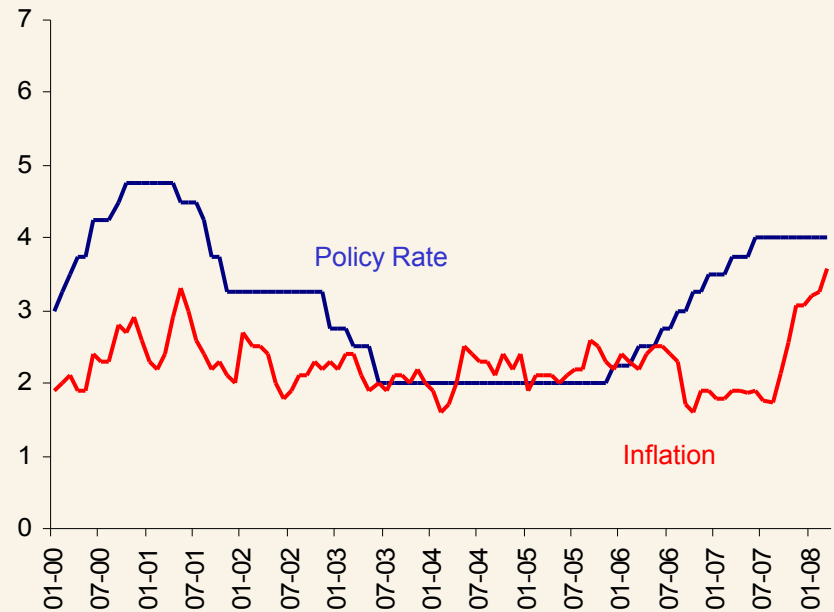
- ✓ In response to deceleration in economic activities, the Federal Reserve Bank, European Central Bank and Bank of Japan loosened their monetary policies considerably and cut benchmark interest rates.

**Inflation and Federal Funds Rates in the USA**  
(January 2000 – April 2008, percent)



Source: Federal Reserve

**Inflation and Policy Rates in the Eurozone**  
(January 2000 – April 2008, percent)



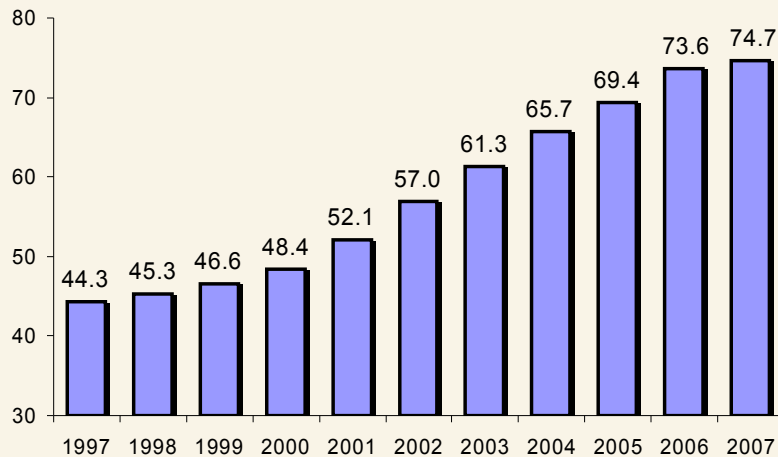
Source: European Central Bank, Eurostat



# Reasons for the Turbulence

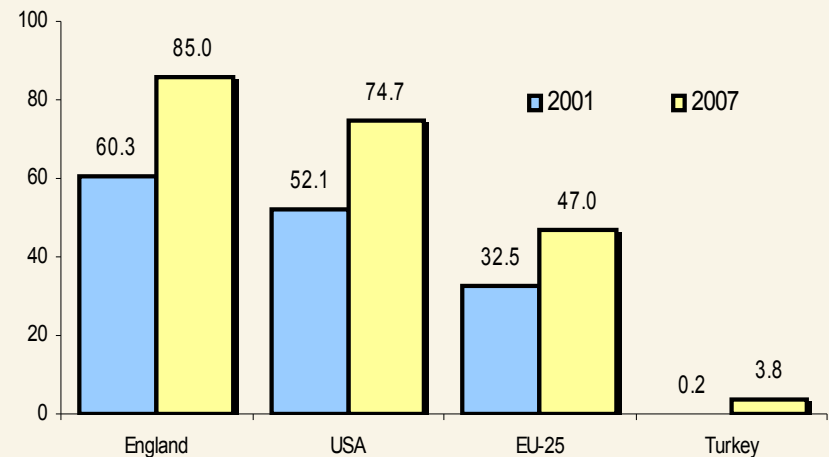
- ✓ The accommodative monetary policies led to a rise in asset prices. They also encouraged banks to borrow at low interest rates for short maturities and extend loans with longer maturities.
- ✓ With the aim of increasing the demand for loans, banks started to offer diversified loan alternatives and flexible loan conditions, which in return led to a rapid rise in credit utilization of especially subprime borrowers.

**Total Housing Loans in the USA**  
(1997-2007, as % of GDP)



Source: Federal Reserve

**Total Housing Loans**  
(2001 and 2007, as % of GDP)



Source: Federal Reserve, IMF, ECB, CBT



# Reasons for the Turbulence

- ✓ After a three-year period, the Federal Reserve resumed hikes in the federal funds rate as of the second quarter of 2004 to alleviate inflationary pressures.
- ✓ Problems arose in the repayments of loans, especially of flexible rate subprime mortgage loans,.
- ✓ In mid-2005 demand for houses slowed down and house prices started to decline.
- ✓ The reversal of the upward trend in house prices restricted customers' chances of selling their properties to pay off their debt.



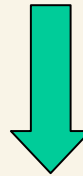


# Reasons for the Turbulence

How did we end up here?



**2nd APPROACH : NON-TRANSPARENT  
OPERATIONS**



Complex instruments  
due to increased  
financial engineering  
practices

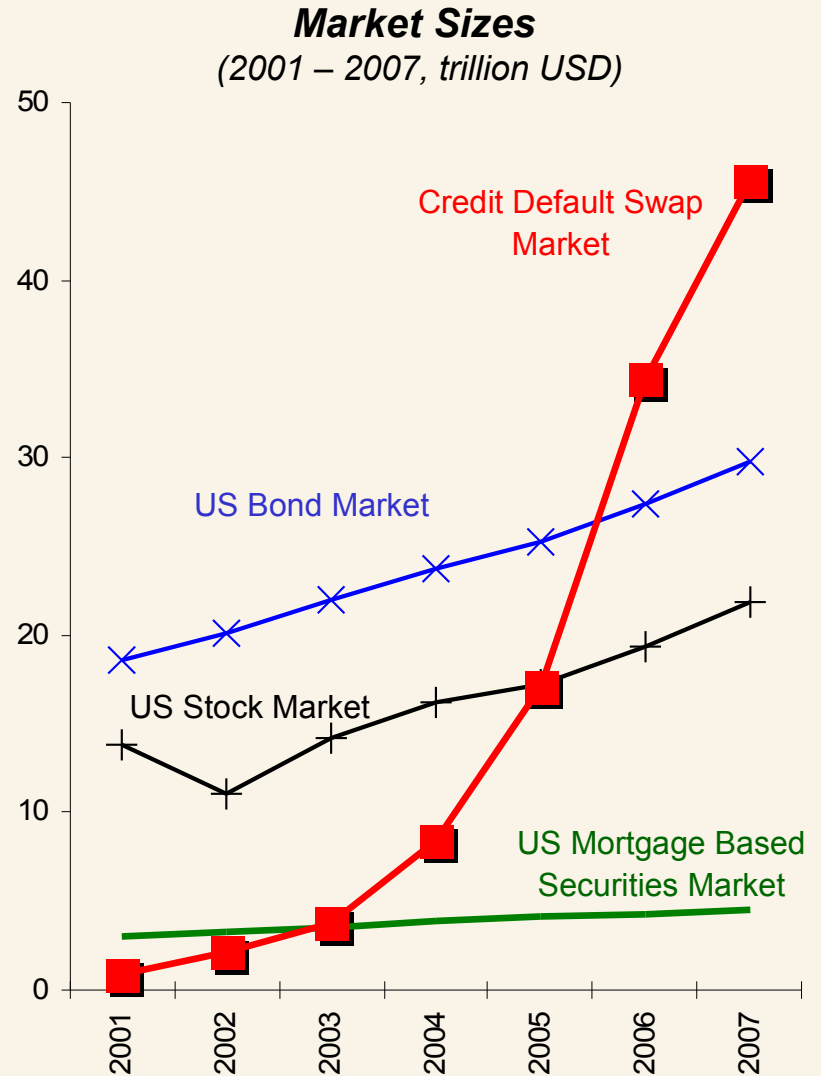
Business model  
based on originate-  
and-distribute

Arbitrage opportunities  
arising from the lack of  
regulations  
and supervision



# Reasons for the Turbulence

- ✓ The low levels of long-term interest rates as a result of expanding global liquidity supply led to excessive risk appetite in search of high yields.
- ✓ One of such risk-bearing assets was sub-prime mortgage loans. These assets were converted to securities and re-marketed. In this way, they started to be transacted widely in the global financial system.
- ✓ Volume of derivatives transaction increased rapidly and reached astronomical levels.
- ✓ However, lack of liquidity in secondary markets, as well as problems in supervision of such securities hindered the accurate pricing of risks.



Source: ISDA, WFE, SIFMA



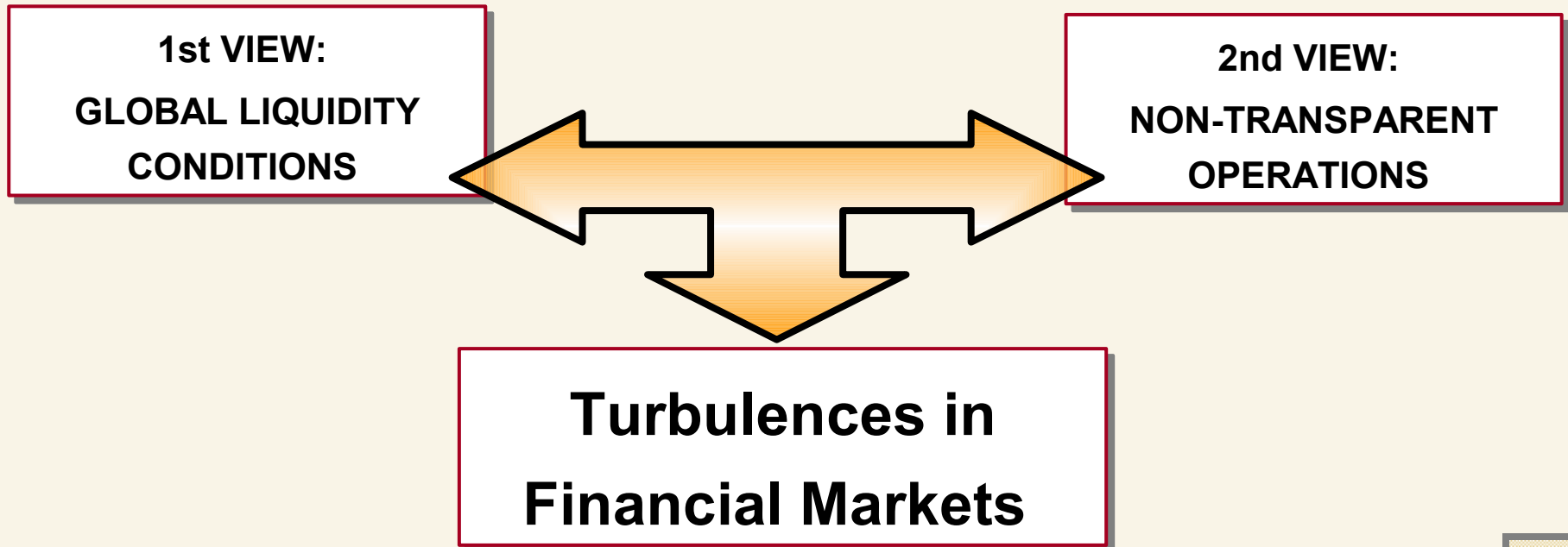
# Reasons for the Turbulence

- ✓ Supervision, regulation and information facilities in the finance sector and risk management of the private sector lagged behind the rapid transformation in the business world, which paved the way for problems such as excessive risk appetite, maturity mismatches and inflation in asset prices.
- ✓ Problems observed since 2006 in the repayment of housing loans have led to difficulties in pricing securities that are linked to credit repayments. Investor demand for asset-based securities and commercial papers declined due to loss of credibility, whereas the demand for risk-free government papers increased.
- ✓ Financial institutions started to face difficulties in using their asset-based securities as collateral in order to meet their short-term liquidity requirements.
- ✓ The financial turbulence that appeared as a liquidity squeeze in the markets at first, later turned into solvency problems as financial institutions reported high losses on their balance sheets, which brought them to the edge of bankruptcy.



# Reasons for the Turbulence

- ✓ Both of these views on the underlying causes of the financial turbulence should not be perceived as alternatives of each other.
- ✓ They are in fact complementary and explain different aspects of the financial turbulence.





# Recent Developments

## Measures Taken



- ✓ In the face of a credit crunch, the Federal Reserve Bank started to cut the federal funds rate from September 2007 onwards. The federal funds rate was reduced from 5.25% to 2% by April 2008.
- ✓ At the beginning of the crisis, a strong demand emerged for central bank liquidity, which was met by central banks of developed countries.
- ✓ However, due to the growing need for liquidity, the Federal Reserve, the European Central Bank and the Bank of England intervened in a coordinated manner.
- ✓ The scope of collateral defined for liquidity operations was widened, maturities were extended and new liquidity tools were formed in addition to the discount window.
- ✓ With the aim of underpinning economic growth in the United States, an economic package including extensive fiscal policies was put into force. For the first time since 1970, a bank that had liquidity problems and faced bankruptcy was bailed out in the United Kingdom through expropriation.



# Recent Developments

## Current Situation and Outlook

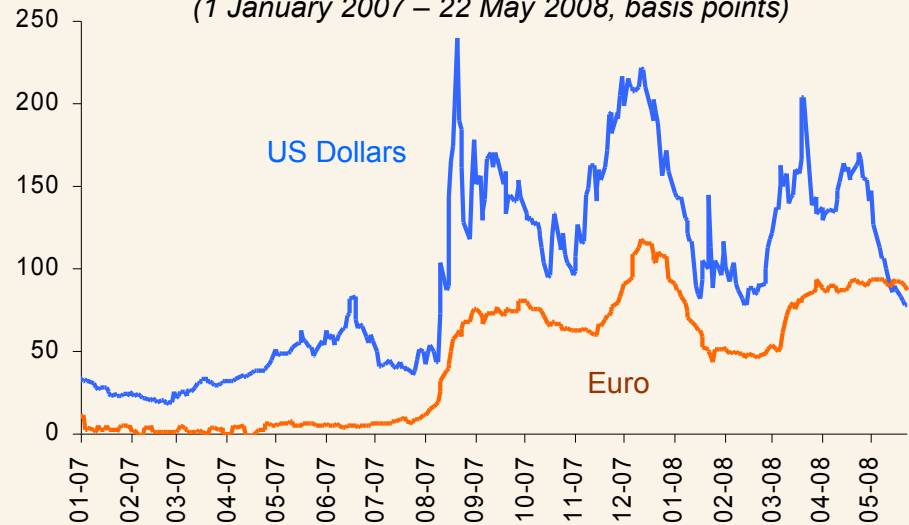


- ✓ There is a credit crunch in the United States and the European Union.
- ✓ Due to the setbacks observed in the money markets of developed countries, interest rates increased remarkably in these markets in the second half of 2007.

- ✓ The issuance of complex securities declined significantly, while the risk premium in the private sector bond market increased to high levels.

### The Difference Between Interbank Interest Rates and 3 Month Treasury Bills in US Dollars and Euro

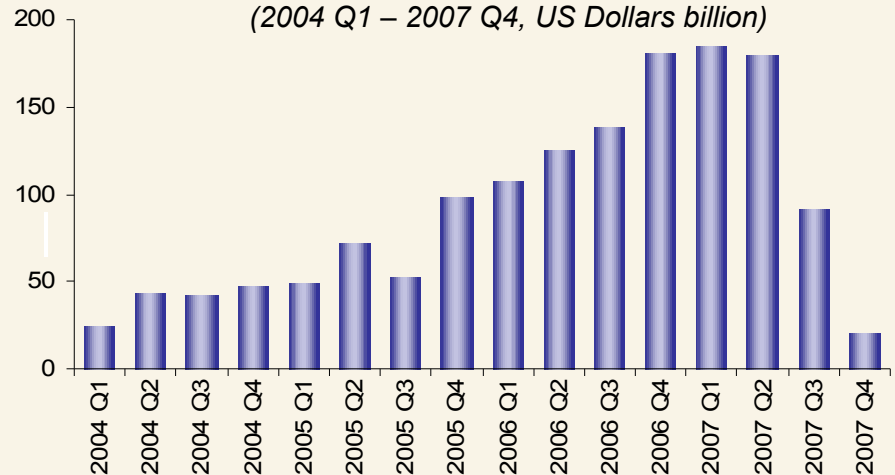
(1 January 2007 – 22 May 2008, basis points)



Source: Bloomberg

### Collateralized Debt Obligations Issuance

(2004 Q1 – 2007 Q4, US Dollars billion)



Source: SIFMA



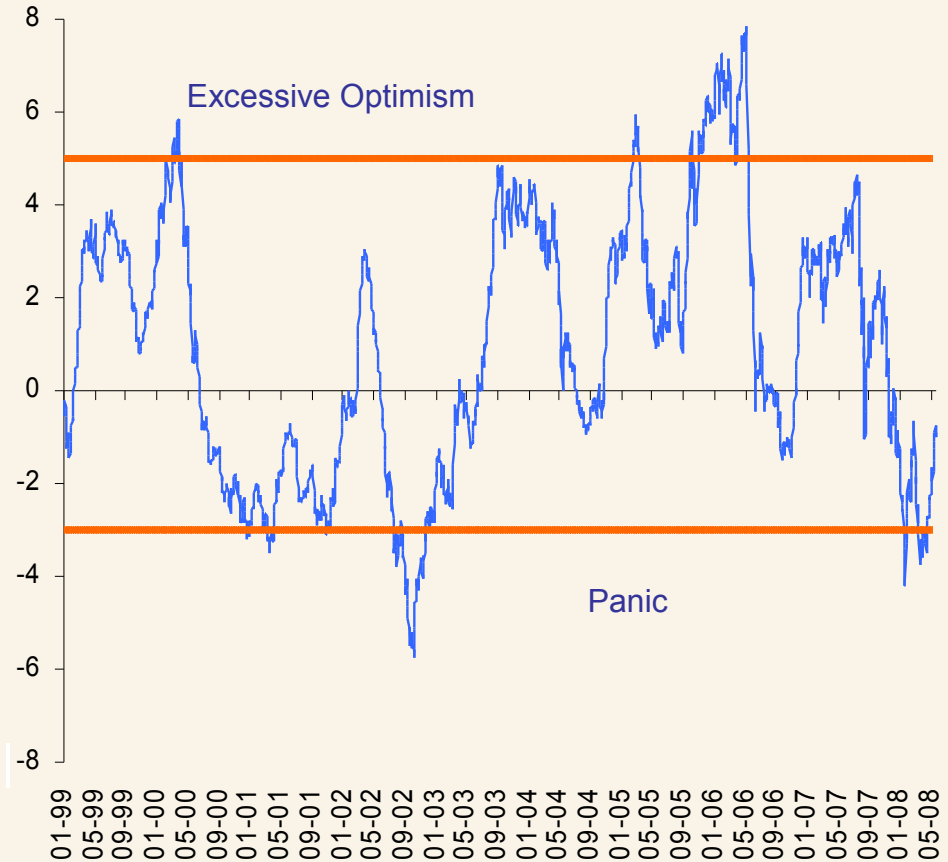
# Recent Developments

✓ The Global Risk Appetite Index indicates that the deterioration trend in risk perceptions that became apparent mid-October intensified in early 2008 and reached “panic” level as investors continued to prefer low-risk instruments.

✓ The improvement seen in the index in late January did not last long and the index once more approached to the “panic” level.

✓ The negative outlook in the risk perceptions still continues.

**Global Risk Appetite Index**  
(1 January 1999 – 22 May 2008)



Source: Credit Suisse



# Recent Developments

- ✓ The problems in the sub-prime mortgage markets gradually have spreaded to other parts of the housing loan market and other financial markets.
- ✓ The April 2008 Global Financial Stability Report of the International Monetary Fund (IMF) estimated that the total loss to be incurred would be about USD **945 billion**. The October 2007 Report by the same institution had forecasted the total loss to be USD 240 billion.





# Recent Developments

- ✓ While the developments in the last nine months showed the fragility of the global financial system, they have also led to the questioning of the effectiveness of the measures taken.
- ✓ Currently, central banks have succeeded in solving the liquidity problem. Yet, central banks can only provide liquidity, they cannot solve the entire credit problems. Moreover, it should be kept in mind that the measures taken might lead to the moral hazard problem in the financial markets in the future.
- ✓ Policy makers should carefully analyze the factors causing the developments experienced since mid-2007 and encourage the private sector to use effective risk management techniques and to increase transparency. To minimize possible similar fragilities in the upcoming period, regulation and supervision functions should be reviewed.
- ✓ Considering the moral hazard problem, it is crucial that the measures taken should be selective, clearly defined, and temporary.



# Global Economic Growth

- ✓ It is inevitable that the current financial turbulence will have affects on growth and employment performance.
- ✓ In fact the data for the United States and European economies in the last quarter of 2007 and early-2008 have signaled that the turmoil in financial markets have started to spread to the real sector.
- ✓ The financial turbulence is expected to significantly drop growth rates throughout the world, and mainly in the USA.

## *Growth Expectations Worldwide (percent)*

Regions	2007	2008 (7/07 forecasts)	2008 (10/07 forecasts)	2008 (1/08 forecasts)	2008 (4/08 forecasts)
World	4.9	4.8	4.4	4.1	3.7
USA	2.2	2.8	1.9	1.5	0.5
EU	2.6	2.5	2.1	1.6	1.4
Russia-Central Asia	8.5	7.1	7.0	7.0	7.0
Central and Eastern Europe	5.8	5.4	4.9	4.6	4.4
Middle East	5.8	5.5	6.0	5.9	6.1

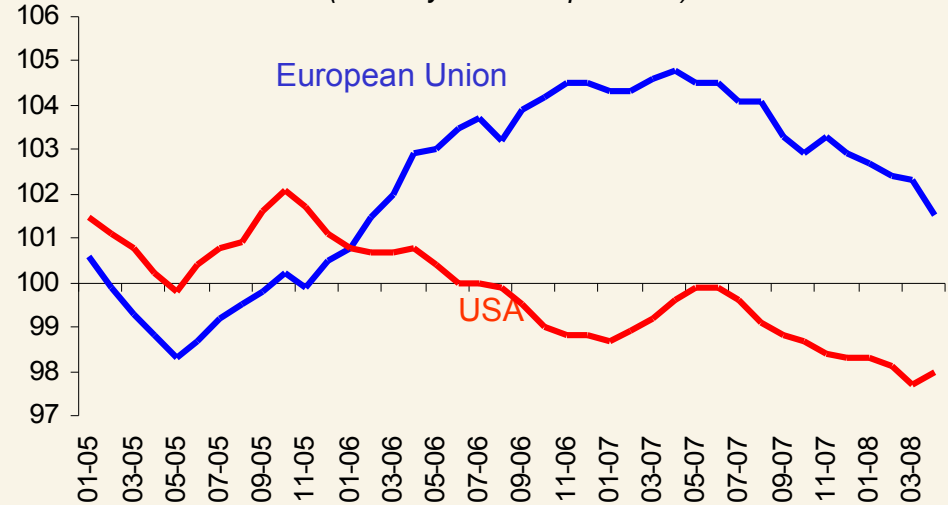


# Global Economic Growth

- ✓ The real sector confidence index in the USA, which had been falling since mid-2007, dropped to its lowest level since 2001.
- ✓ Although the real sector confidence in the EU index has been declining, it is still higher than that of the USA.

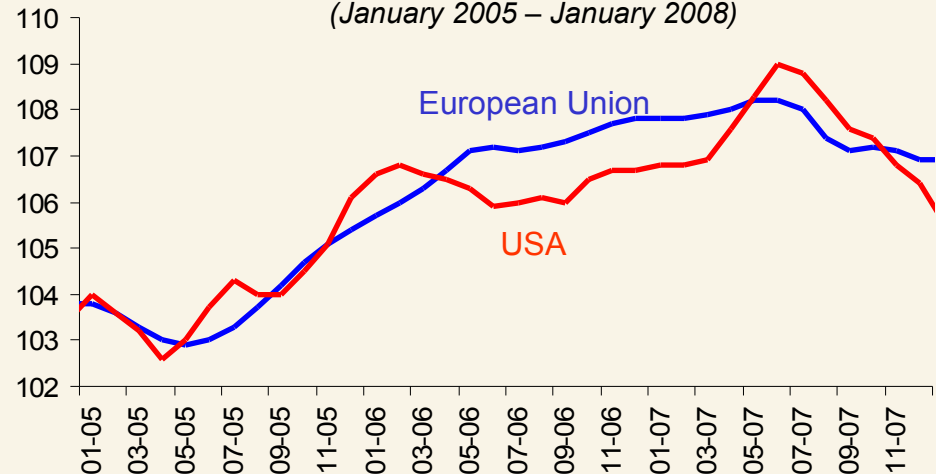
- ✓ The leading indicators show that the slowdown in the USA economy is more severe than that in the EU.
- ✓ The International Monetary Fund is expecting a recession in the USA economy in 2008.

**Real Sector Confidence Index in the US and the EU**  
(January 2005 – April 2008)



Source: OECD

**Leading Indicators in the US and the EU Economies**  
(January 2005 – January 2008)



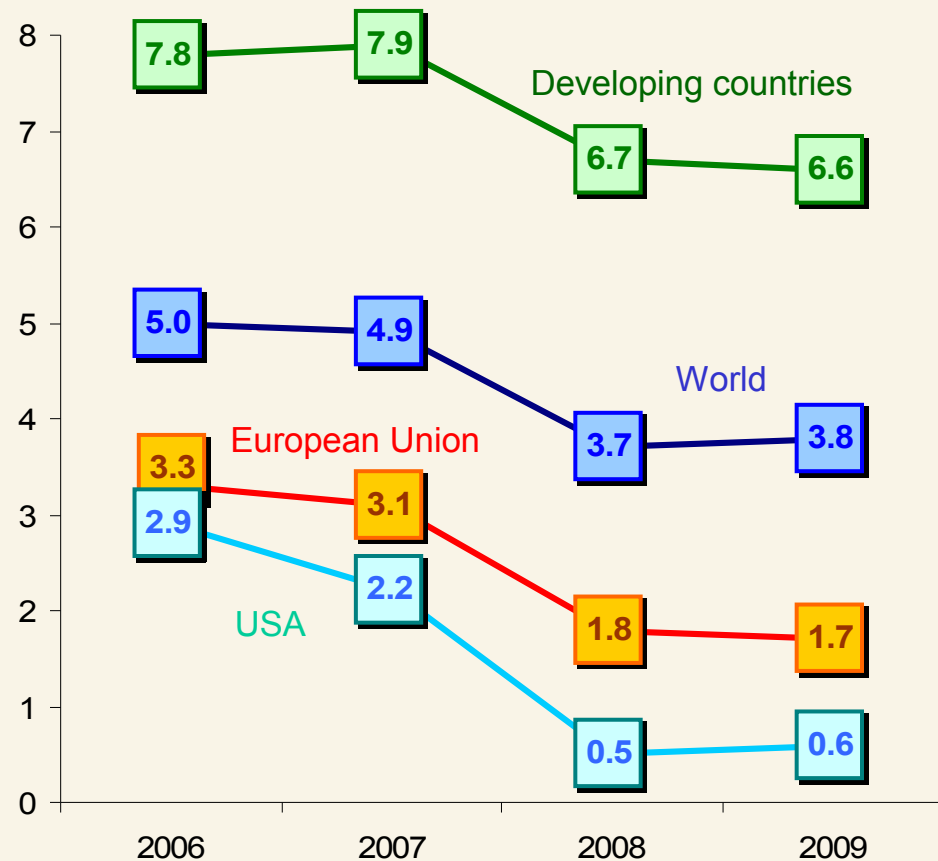
Source: OECD



# Expectations and Risks

- ✓ Recent forecasts suggest that the impact of the current financial turmoil on developing countries will be less severe compared to earlier periods.
- ✓ The progress made in recent years towards macroeconomic stability in developing countries reinforces this view.
- ✓ Other supporting factors are the reforms adopted in the corporate structure, the adoption of good governance principles and the expanded volume of trade between developing countries.

**World Growth Figures and Expectations**  
(2006-2009, percent)



Source: IMF



# Expectations and Risks

- ✓ The prevailing turmoil is not simply a liquidity squeeze. It is expected to have more widespread, deeper and more complicated impacts on the world economy.
- ✓ Four major risks for the upcoming period are:
  1. Recession in the US economy and a severer-than-expected slowdown in the global economy,
  2. Wide fluctuations in commodity and housing prices,
  3. Fragilities arising from weakened capital structures of financial institutions,
  4. Problems in accessibility to the credit.
- ✓ The International Monetary Fund anticipates that with 25% probability, global growth will be below 3%, which would imply a global recession.



## **II. Effects of International Developments on the Turkish Economy**

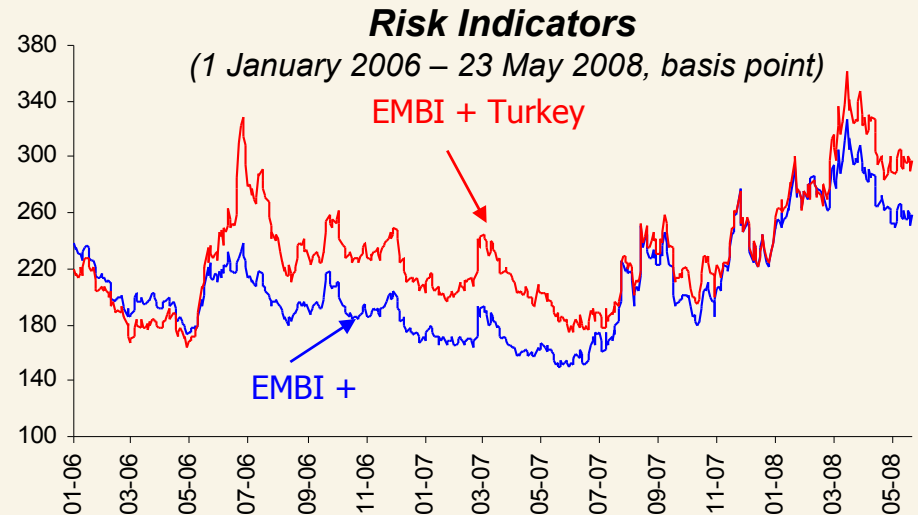


# Effects on the Turkish Economy

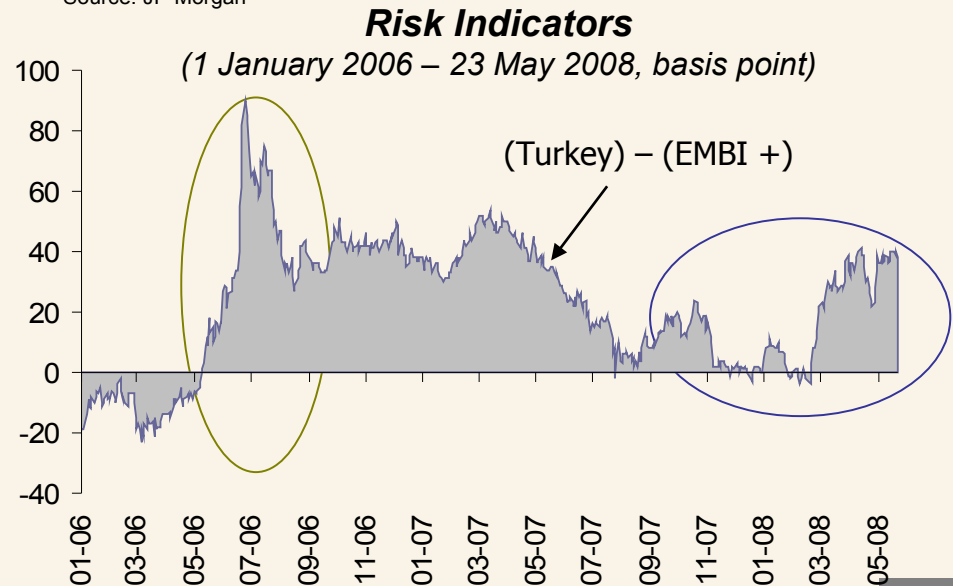
✓ Big losses incurred by international financial institutions coupled with concerns over recession in the USA economy have led to significant deterioration in risk perceptions and increased the risk premium of developing countries.

✓ Risk indicators for the Turkish economy increased in the period between August 2007 and February 2008, parallel to the increase in other developing countries.

✓ There has been a deterioration in relative risk premium of Turkey since the start of March.



Source: JP Morgan



Source: JP Morgan



# Effects on the Turkish Economy

Slowdown in the global economy



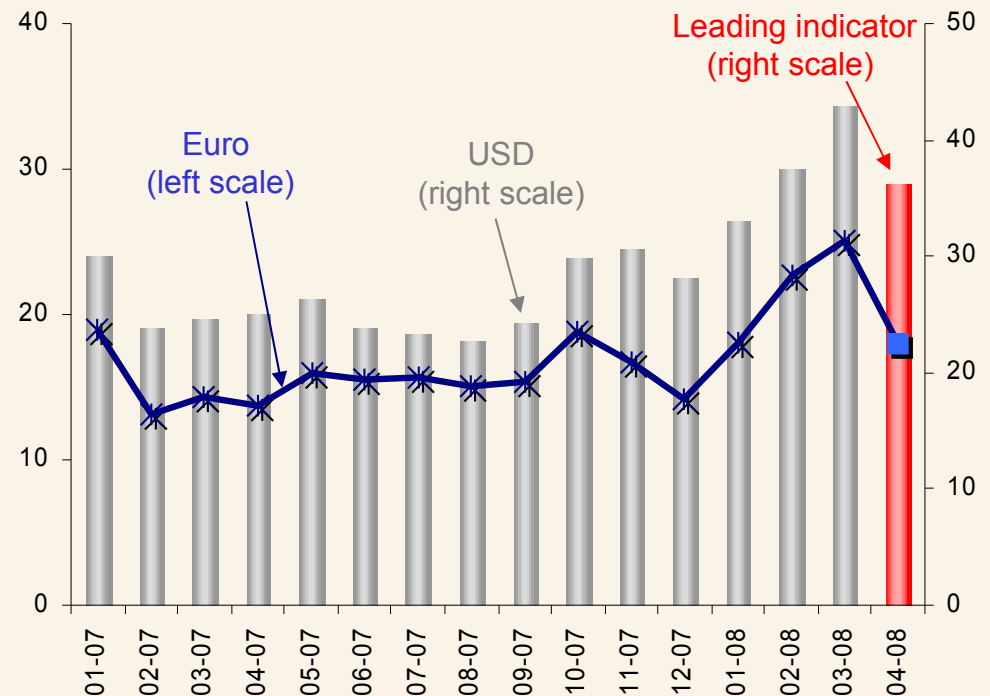
Likely to strain growth in external demand

✓ The economic data for 2008 Q1 suggest that the financial fluctuations have not yet had a significant decelerating effect on external demand.

✓ Data for Q1 and leading indicators for April suggest that the rapid growth of exports continues.

## Exports

(January 2007 – April 2008, year-on-year change, 3-month moving average, percent)



Source: TURKSTAT, UFT, TEA (TIM)





# Effects on the Turkish Economy

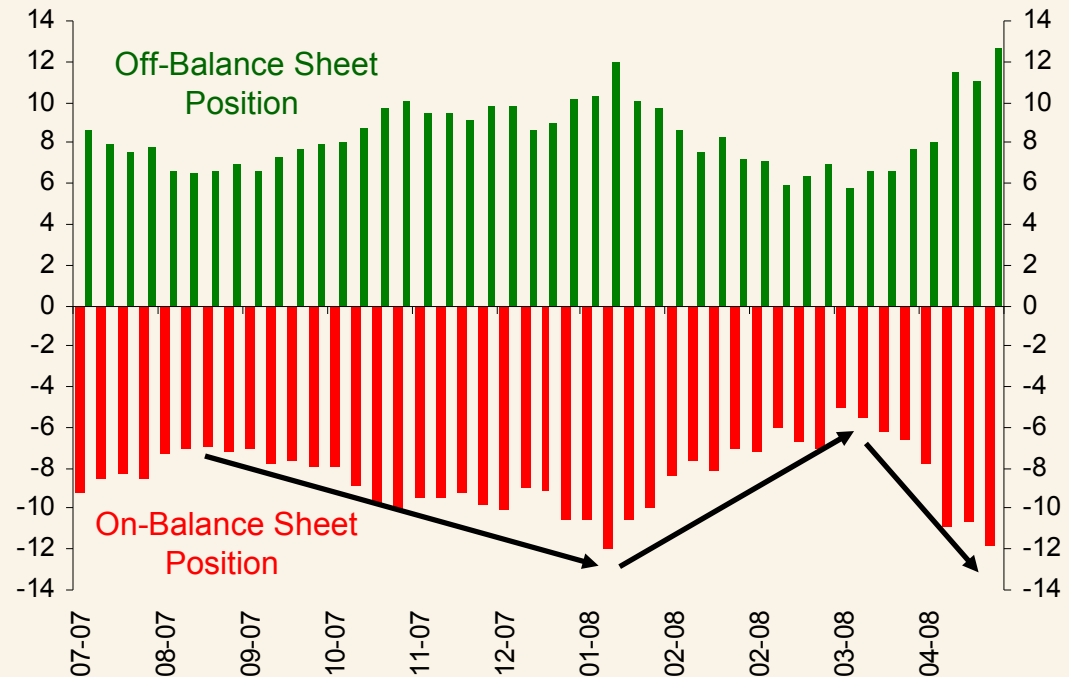
**Problems in external credit markets**



**Likely to limit domestic demand by increasing the cost of credits extended by domestic banks**

- ✓ The recent deterioration in risk perceptions is likely to decrease in the Turkish banks' tendency to borrow from abroad and lend domestically in YTL.
- ✓ It is estimated that tightened credit conditions will continue to strain credit expansion and domestic demand in the upcoming period.

**FX Position of the Banking Sector**  
(9 July 2007 – 16 May 2008, billion USD)



Source: BRSA



# A Shock-Resistant Economy

- ✓ Effects of fluctuations in financial markets are felt in all economies of the world. However, the extent and the duration of these effects will vary in each country and will depend on the economic policies followed in this period.
- ✓ Global economic outlook for 2008 and 2009 underlines the significance of adhering to good governance principles and the decisive implementation of reforms to support growth, for Turkey as well as for other countries.
- ✓ As long as the economic program is implemented decisively and no concessions are made from policies of sustainable growth, the Turkish economy will be more resistant and less vulnerable to shocks.



# A Shock-Resistant Economy

- ✓ Tight fiscal policy along with budget management compatible with the principles of transparency, unity, generality and accountability has made significant contribution to the progress made since 2002 in reaching sustainable growth as well as in reducing inflation (Public Fiscal Management and Control Law No: 5018).
- ✓ It should be kept in mind that in the recent period when external risks became more pronounced, should notions indicating a possible diversion from fiscal discipline occur, there might be a deterioration in the risk perceptions regarding the Turkish economy.
- ✓ In order to enhance the resistance of the Turkish economy against exogenous shocks, maintaining and improving the gains in public finance, as well as the reforms made in institutional infrastructure are essential.



# A Shock-Resistant Economy

## Accordingly:

- ✓ Instead of policies that will increase the rate of growth artificially in the short run, a reform agenda should be created with a long-term perspective; reforms that would be implemented as a part of this agenda should be listed in a transparent manner and shared with the public. These steps will provide an anchor and affect expectations on the Turkish economy favorably.
- ✓ Preparing a road map for the implementation of the reform agenda that includes time and performance criteria for the implementation schedule is essential.
- ✓ If the targets cannot be achieved in due time, causes and measures to be taken should be shared with the public, as stipulated by the principle of accountability. Mechanisms to be created for this end will enhance the credibility of the economic program.



# A Shock-Resistant Economy

- ✓ Turkey has made significant progress towards macroeconomic stability in recent years, compared to previous periods.
- ✓ Yet, it is crucial that the efforts to reach price stability and to sustain high growth rates continue.
- ✓ In this framework, the European Union accession process and the implementation of structural reforms envisaged in the economic program remain crucial.

## III. Financial Stability in Turkey

<b>Banking Sector</b>	<b>Corporate Sector</b>
<b>Households</b>	<b>Public Sector</b>



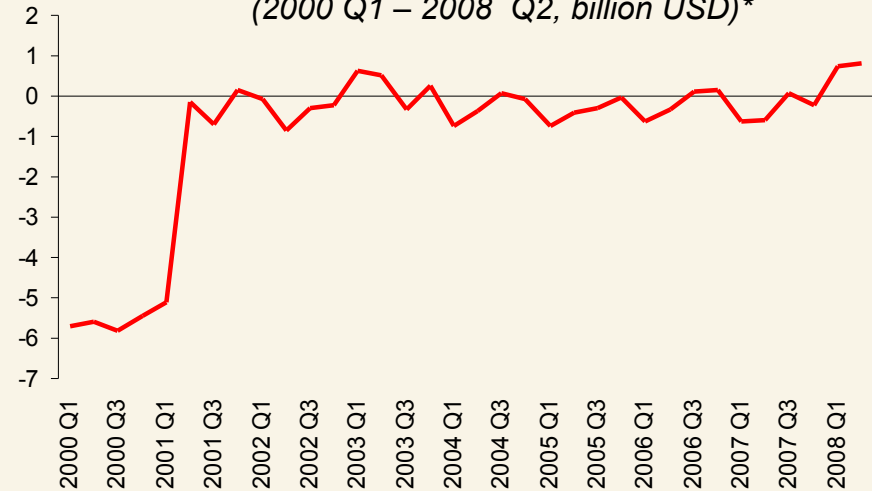
# Banking Sector

✓ The sector does not hold a noteworthy FX short position. Net FX positions of the banks are at a low level compared to their equity capital.

✓ The capital adequacy ratio is well above the legal limit and the EU average of 12.1%.

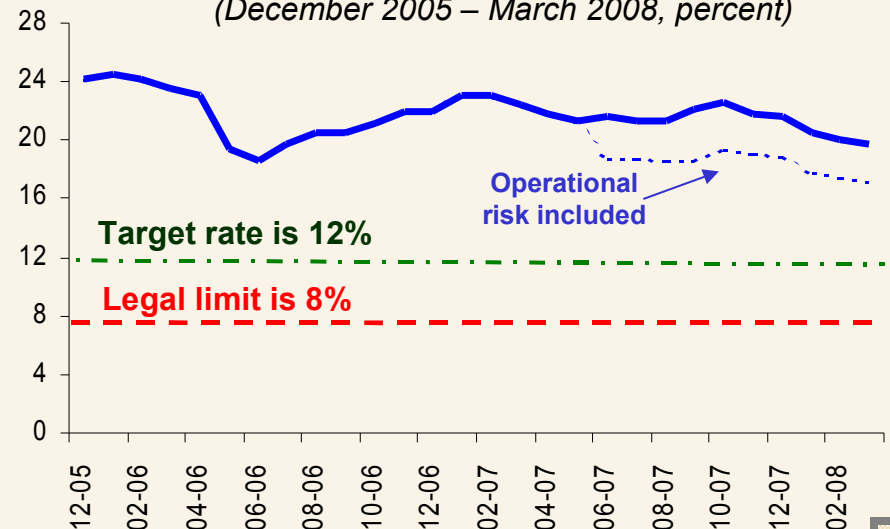
✓ Still, it should be kept in mind that the FX short position of the real sector poses an indirect credit risk on the banking sector.

**Net FX Position of the Banking Sector**  
(2000 Q1 – 2008 Q2, billion USD)\*



\* As of 16 May 2008

**Capital Adequacy Ratio**  
(December 2005 – March 2008, percent)



Source: CBT - BRSA



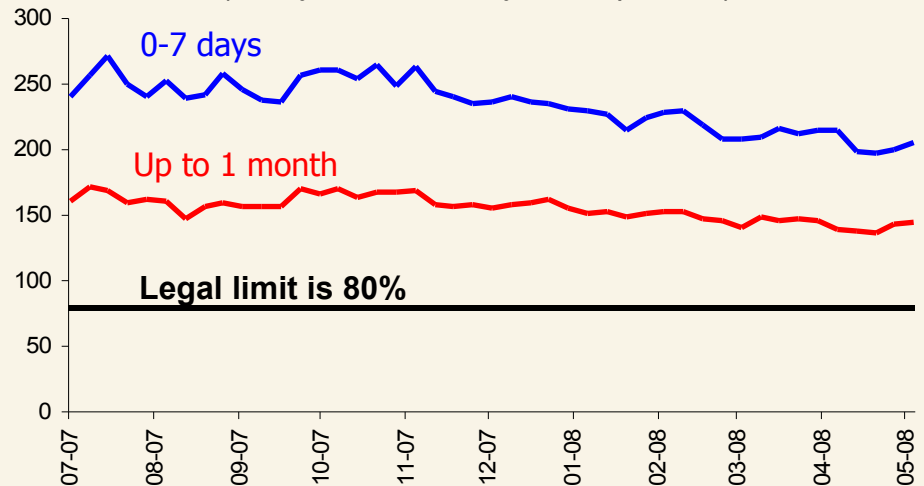
# Banking Sector

✓ Banks' short-term FX liquidity adequacy ratios are well above the legal limit of 80%.

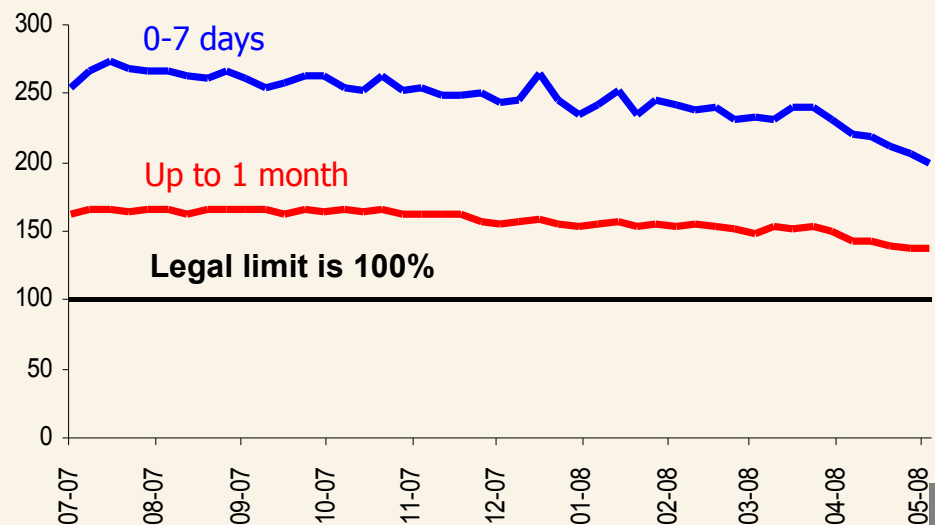
✓ Total short-term liquidity adequacy ratios remain at high levels, as well.

✓ Recent fluctuations in global financial markets once again highlighted the importance of liquidity risk management. In this juncture, it is important for banks to be cautious in liquidity management.

**Short-Term FX Liquidity Adequacy Ratio**  
(6 July 2007 – 9 May 2008, percent)



**Total Short-Term Liquidity Adequacy Ratio**  
(6 July 2007 – 9 May 2008, percent)



Source: CBT – BRSA

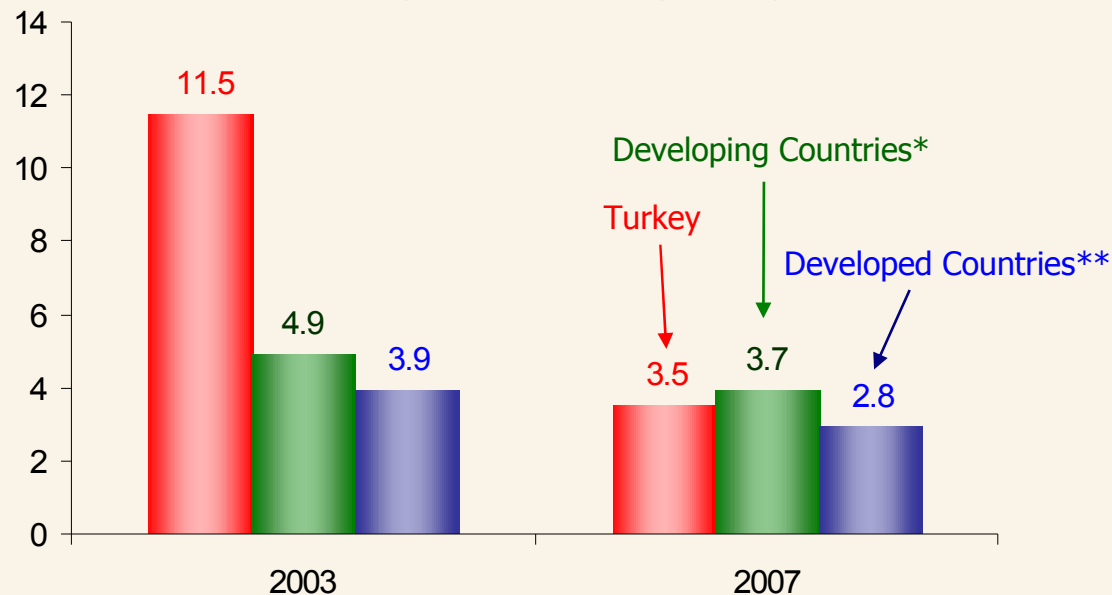




# Banking Sector

✓ The ratio of non-performing loans to total loans dropped by 8 points to 3.5% in the 2003-2007 period. The current level of the ratio is below the average of other developing countries.

**Ratio of Non-Performing Loans to Total Loans**  
(2003 and 2007, percent)



\* Developing countries: Argentina, Brazil, Bulgaria, Czech Republic, Croatia, Hungary, Latvia, Lithuania, Poland, Romania, Russia, Slovakia, Ukraine

\*\* Developed countries: France, Germany, Italy, United Kingdom, USA

Source: IMF



# Corporate Sector

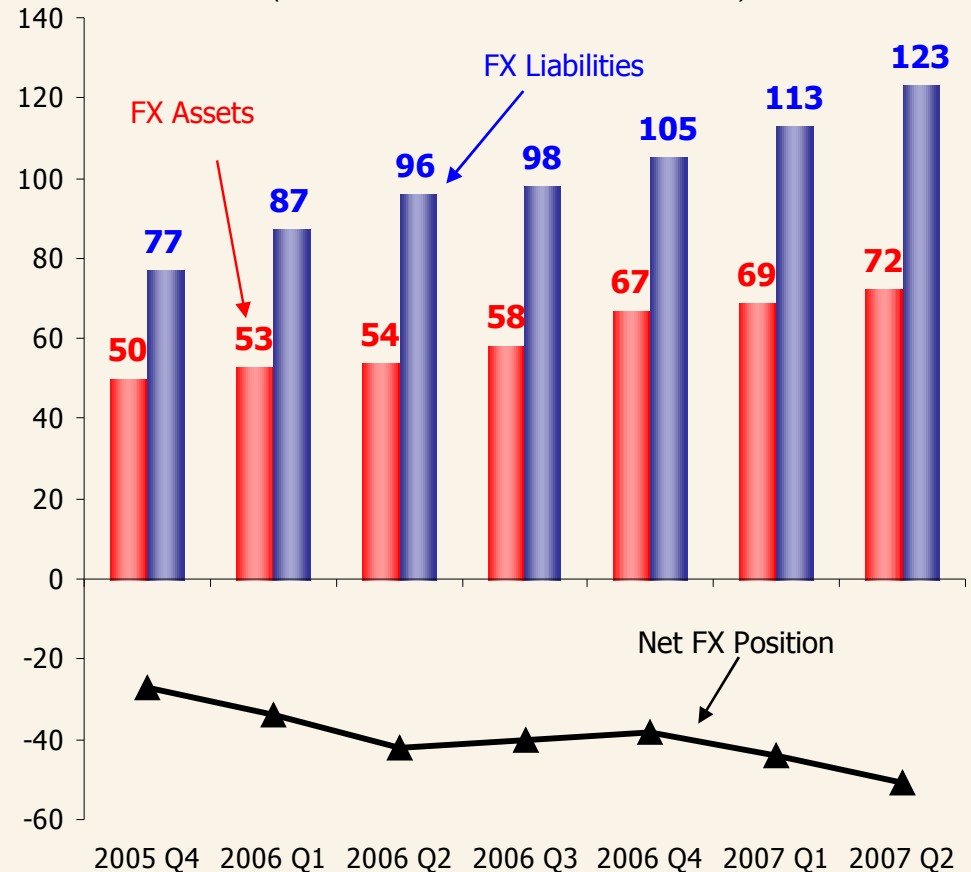
## Corporate Sector's Resistance to Exogenous Shocks



✓ The FX short position of the non-banking sector was USD 51 billion as of the second quarter of 2007.

✓ Exchange rate risk exists in both directions. It is crucial that companies hedge themselves against exchange rate risk.

**FX Position of the Non-Banking Sector**  
(2005 Q4 – 2007 Q2, billion USD)



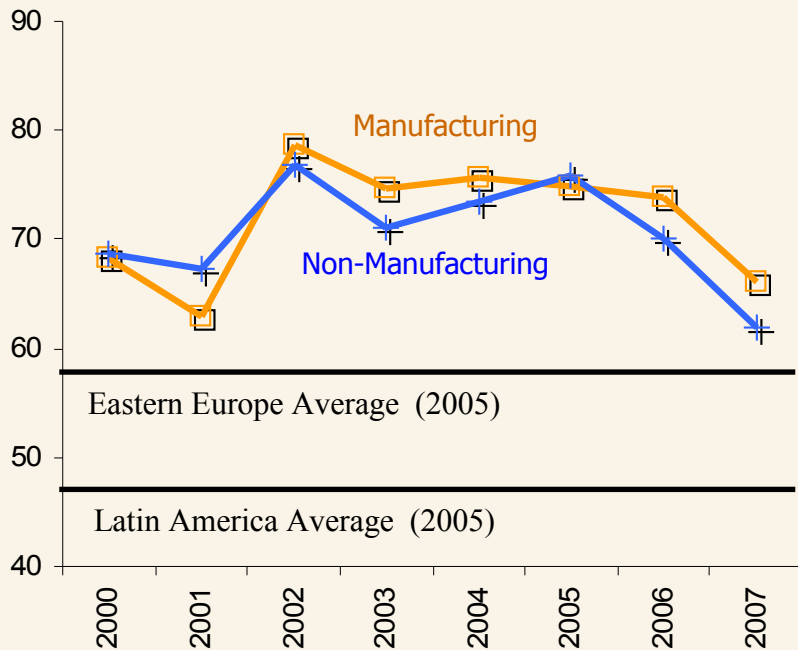
Source: CBT



# Corporate Sector

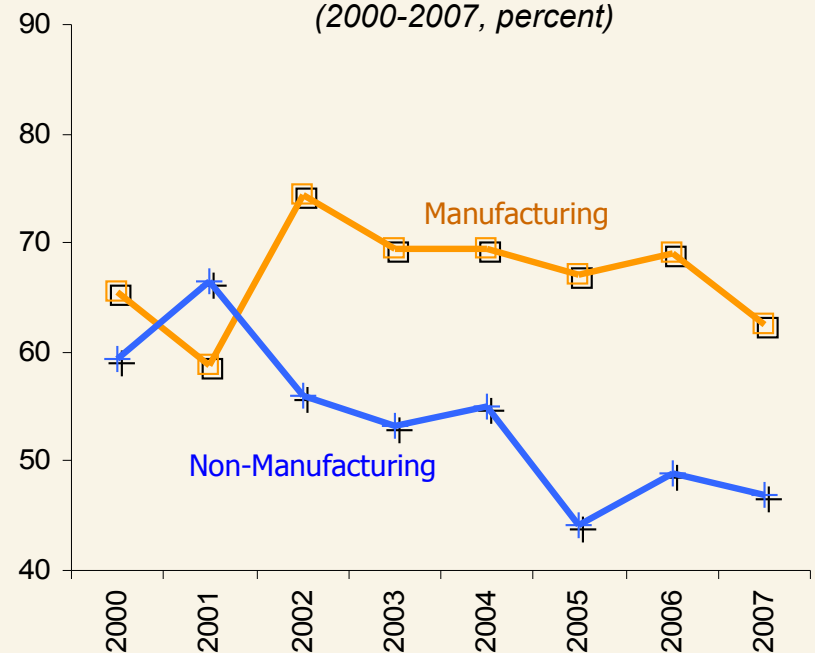
- ✓ In Turkey, the ratio of short-term debt to total debt of the real sector is higher than that of other developing countries. Yet, the borrowing maturity has improved in recent years.
- ✓ The share of real sector's short-term FX-denominated debt continues to decline.

**Ratio of Short-Term Debt of the Real Sector to Total Debt \*** (2000-2007, percent)



\* According to days to maturity  
Source: CBT

**Ratio of Short-Term FX-Denominated Debt of the Real Sector to Total FX-Denominated Debt \*** (2000-2007, percent)



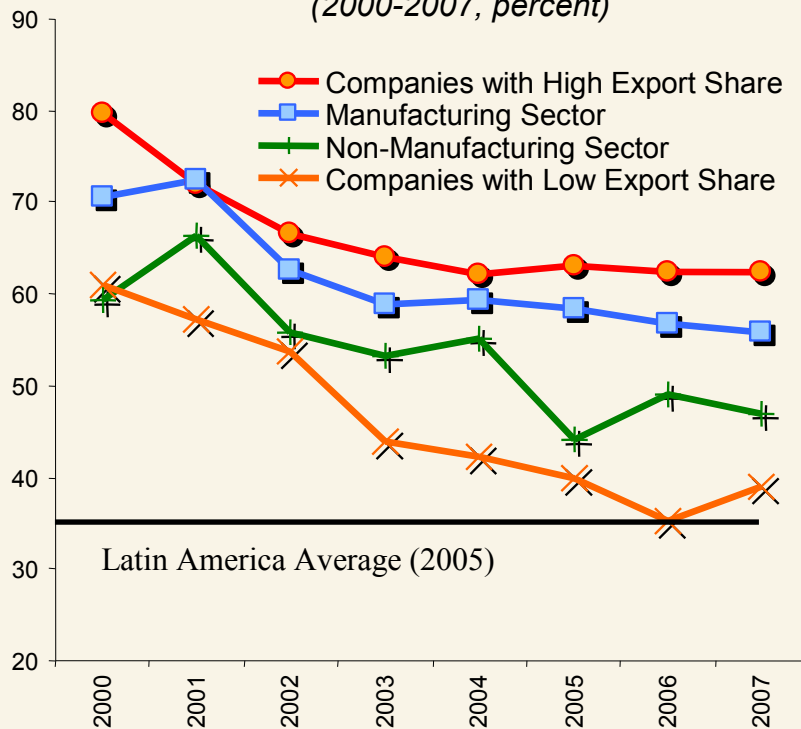
\* According to days to maturity  
Source: CBT



# Corporate Sector

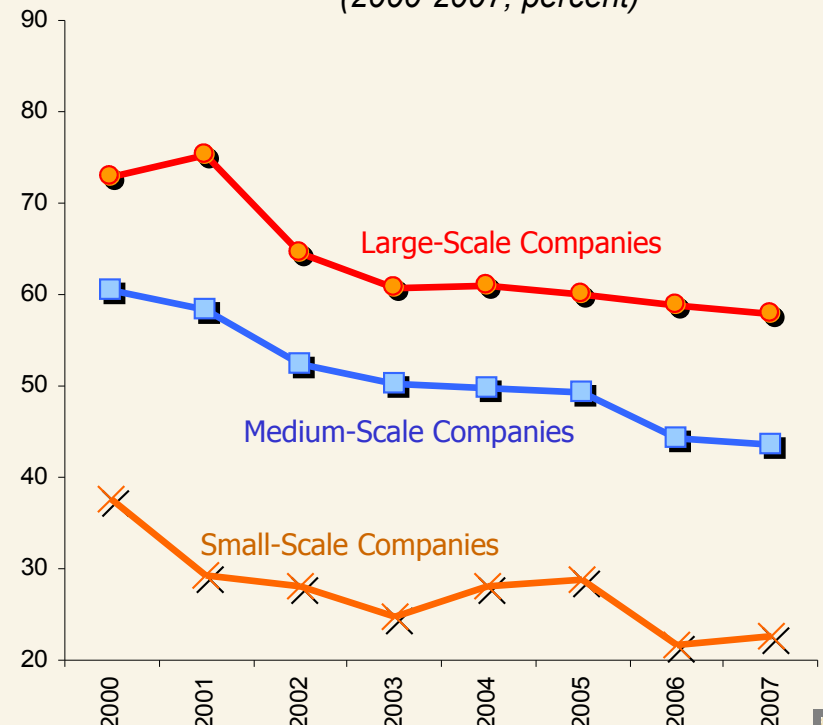
- ✓ Similarly, although the dollarization of the real sector's debt (i.e. the ratio of FX-denominated loans to total loans) is relatively high in Turkey, it has followed a downward trend in the recent period.
- ✓ Debt dollarization is higher for export-oriented companies and large-scale companies, whereas it is lower for companies manufacturing for domestic markets and small-scale companies.

**Debt Dollarization of the Real Sector**  
(2000-2007, percent)



Source: CBT

**Debt Dollarization of the Manufacturing Sector**  
(2000-2007, percent)



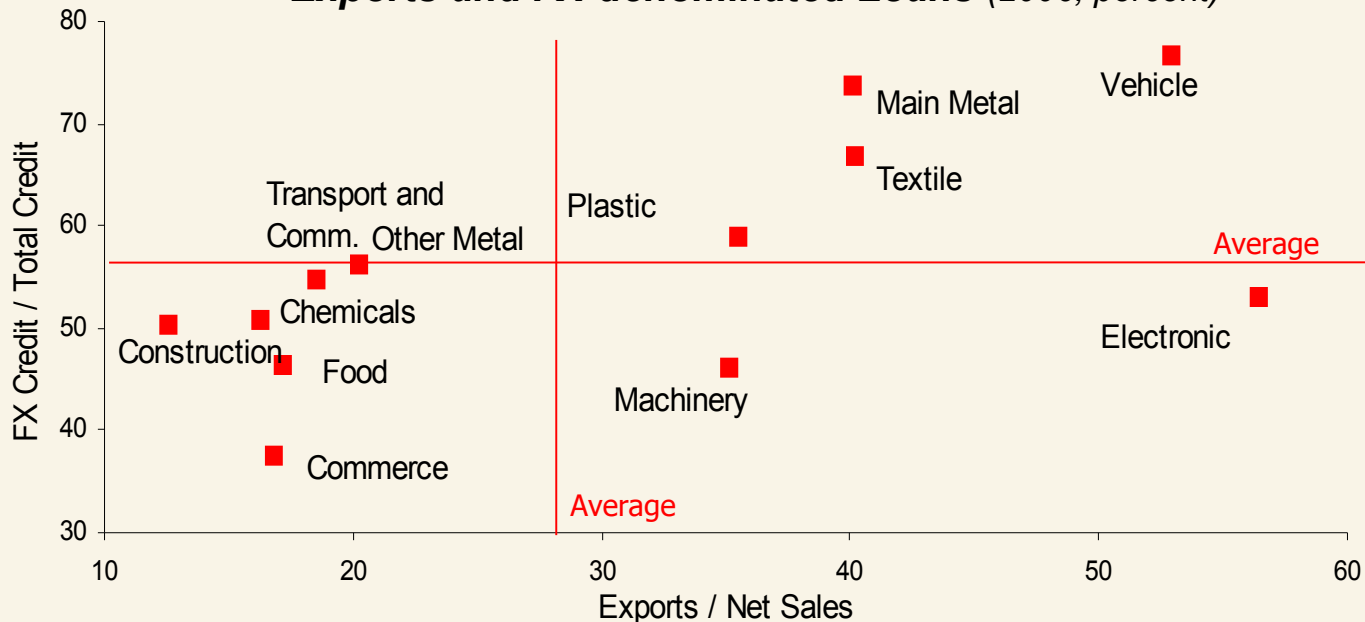
Source: CBT



# Corporate Sector

- ✓ It may be assumed that the companies with FX-denominated income (exports, tourism, etc.) have a natural hedge against exchange rate risk. In addition to this natural hedge, exchange rate risk can also be contained via forward and derivative transactions.
- ✓ The sectors where FX loan utilization is high also have large shares of sales to foreign markets, whereas FX loan utilization is below the sector average in the sectors that generally have sales to the domestic market.
- ✓ The companies with YTL-denominated income should manage exchange rate risk with caution.

**Exports and FX-denominated Loans (2006, percent)**



Source: CBT Company Accounts

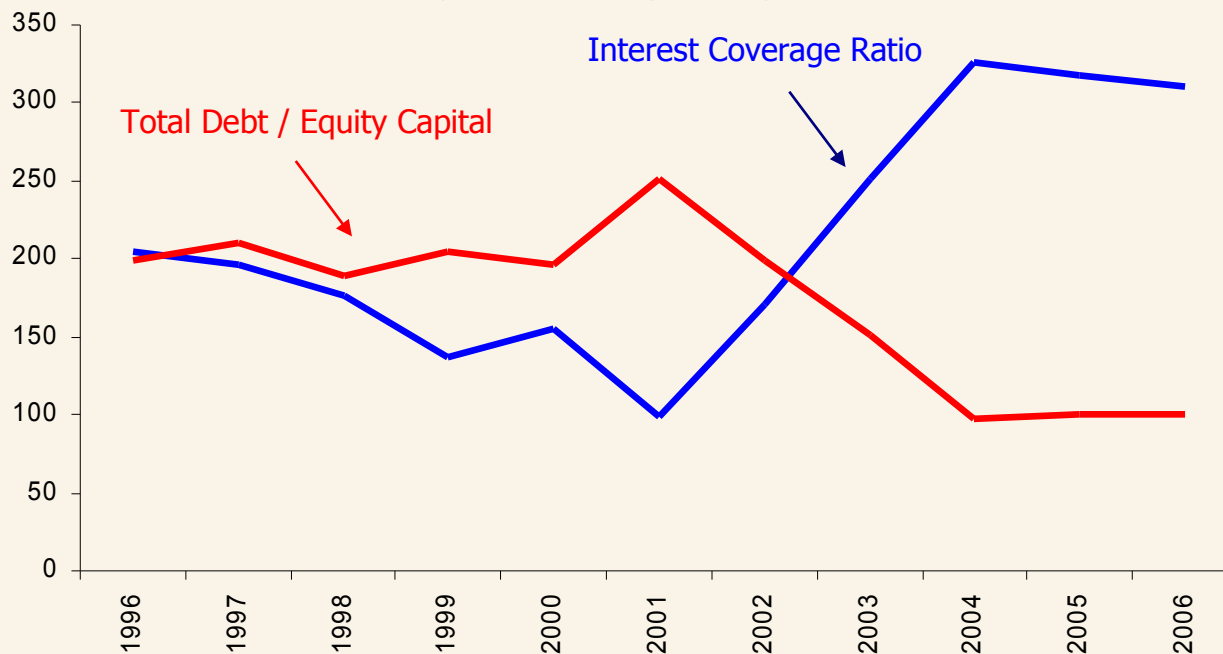


# Corporate Sector

✓ **The financial structure ratios of the corporate sector** show that the ratio of total debt to equity declined in the 1996-2006 period, whereas there was a recovery in the interest coverage ratio. This situation ensures a considerable degree of safety for creditors.

**Ratio of Companies' Total Debt to Equity and Interest Coverage Ratio (Operating Profit /Interest Payments)**

(1996 - 2006, percent)





# Households

## Exchange Rate and Interest Rate Risk of Households

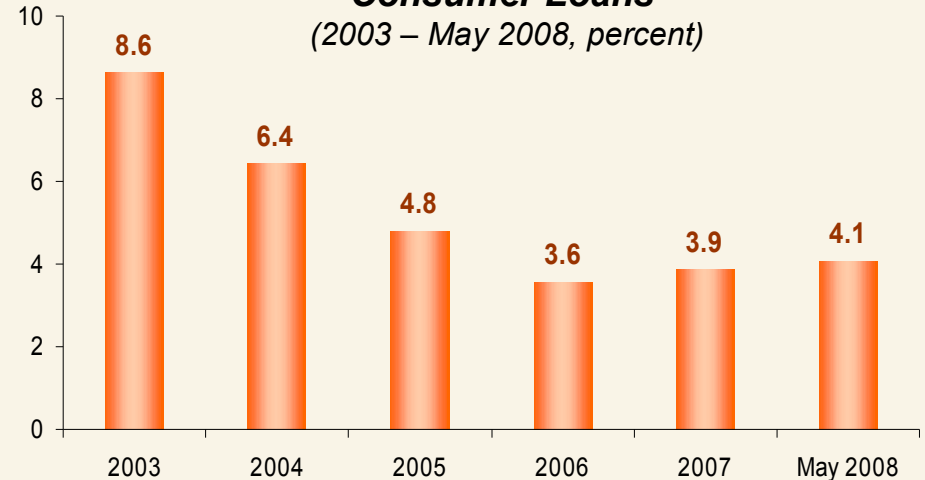


- ✓ In Turkey, the practice of variable interest rate for consumer loans is limited.
- ✓ FX denominated loans are not extended to consumers and companies with no FX income.
- ✓ FX-indexed consumer loans make up only 4.1% of total amount of consumer loans.

- ✓ The ratio of non-performing loans to consumer loans is 1.57%, by May 2008.
- ✓ Household indebtedness is at a low level compared to European Union and Eastern Europe countries.

## Ratio of FX-indexed Consumer Loans to Total Consumer Loans

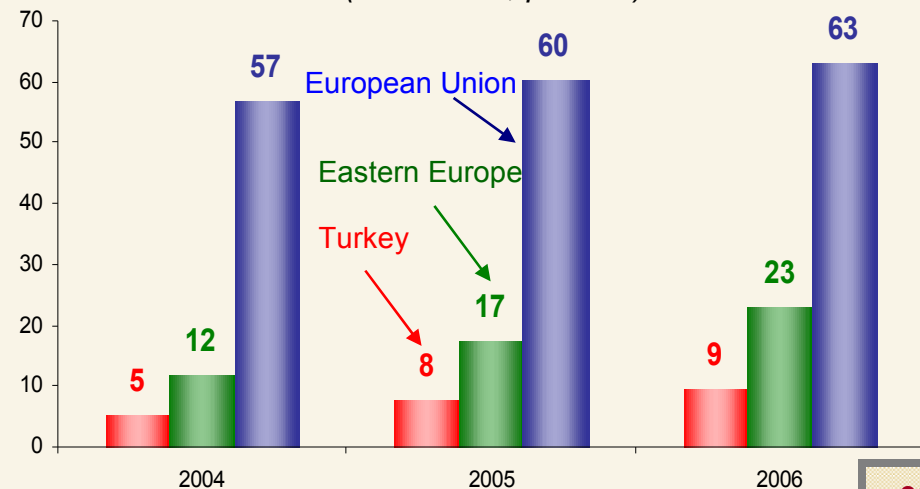
(2003 – May 2008, percent)



Source: CBT

## Ratio of Household Liabilities to GDP

(2004-2006, percent)



Source: ECB, CBT



# Public Sector

## Public Finance



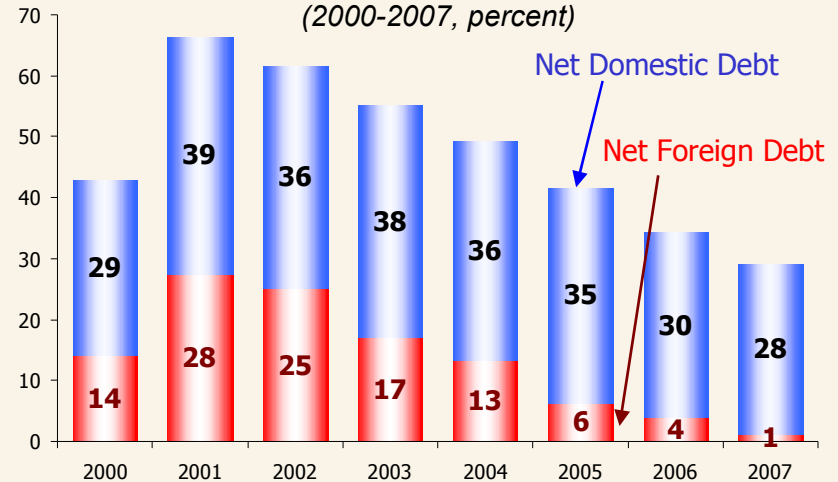
✓ Thanks to fiscal policies implemented since 2001, public sector has become more resilient to external shocks.

✓ The ratio of FX-debt within the total central government debt stock is 32% as of April 2008. Ratio of net foreign debt stock to GDP declined to 1% by end-2007.

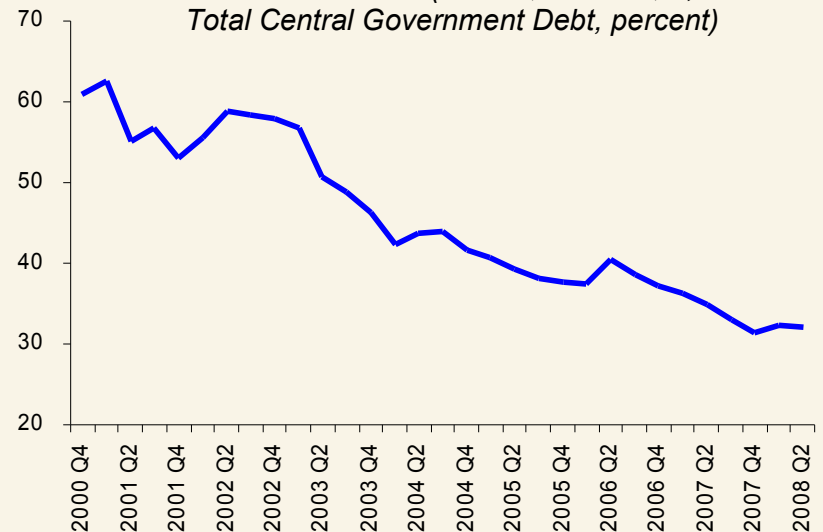
✓ The Treasury maintains a high level of FX reserves with the aim of minimizing any liquidity risk that might arise in cash and debt management.

### Public Sector Net Debt Stock / GDP

(2000-2007, percent)



### Central Government FX-denominated and FX-indexed Debt Stock (2004 Q4-2008 Q2\*, Ratio to Total Central Government Debt, percent)



\* As of April 2008  
Source: Treasury, CBT

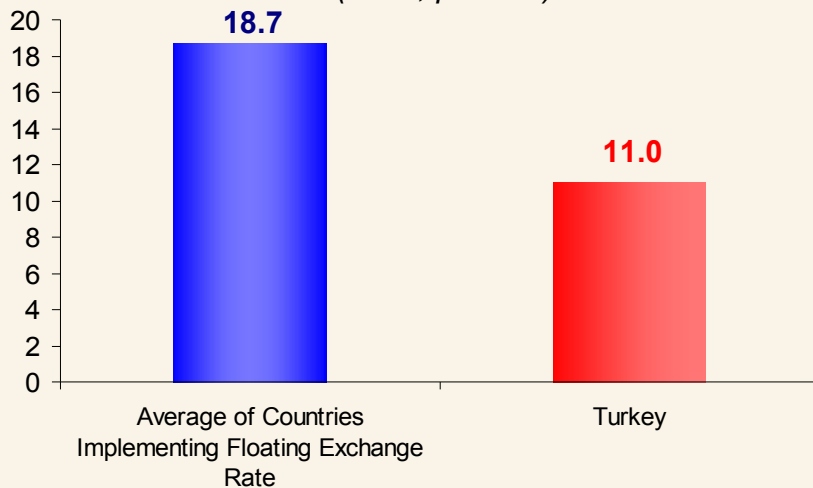




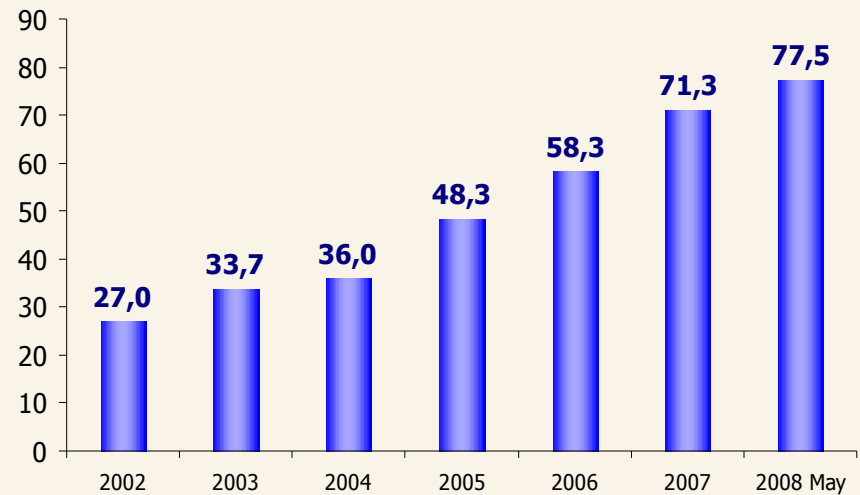
# Central Bank Foreign Exchange Reserves

- ✓ Even in floating exchange rate regime, keeping a strong foreign exchange reserve position is very important for the economies of developing countries like Turkey in order to eliminate the unfavorable effects of potential shocks and to boost confidence in the country's economy.
- ✓ Foreign exchange reserves of the Central Bank amounts to USD 77.5 billion as of May 2008.

**Ratio of FX Reserves to GDP in 2007 in the Countries Implementing Floating Exchange Rate Regime\***  
(2007, percent)



**Central Bank FX Reserves**  
(2002- May 2008, billion USD)



Source: CBT

\* Countries used in the calculation: Argentina, Brazil, Chili, Colombia, Croatia, Czech Republic, India, Indonesia, Kazakhstan, Mexico, Paraguay, Peru, the Philippines, Poland, Romania, Russia, South Africa, South Korea, Thailand, Uruguay

Source: IMF, CBT



# Overall Assessment

- ✓ Evidently, in the floating exchange rate regime, the Central Bank can implement a more flexible liquidity policy in comparison to fixed or managed exchange rate regime. It can also respond to liquidity requirements of the banking system in a more flexible and prompt manner, and prevent any excessive volatility in money market interest rates.
- ✓ However, it is imperative that the banking sector and the real sector should not slacken risk management principles by relying on the more flexible and effective Turkish lira liquidity management and the foreign exchange liquidity facility of the Central Bank.
- ✓ Considering the fact that they operate in an environment where the exchange rate risk is in the market, they should establish mechanisms that will ensure the effective management of this risk.



# Overall Assessment

- ✓ All in all, current indicators show that endurance of the Turkish economy in the face of fluctuations in global markets has relatively increased compared to the previous years.
- ✓ Having said that, the decline in fragilities in comparison to the previous periods should not be interpreted as the absence of risks.



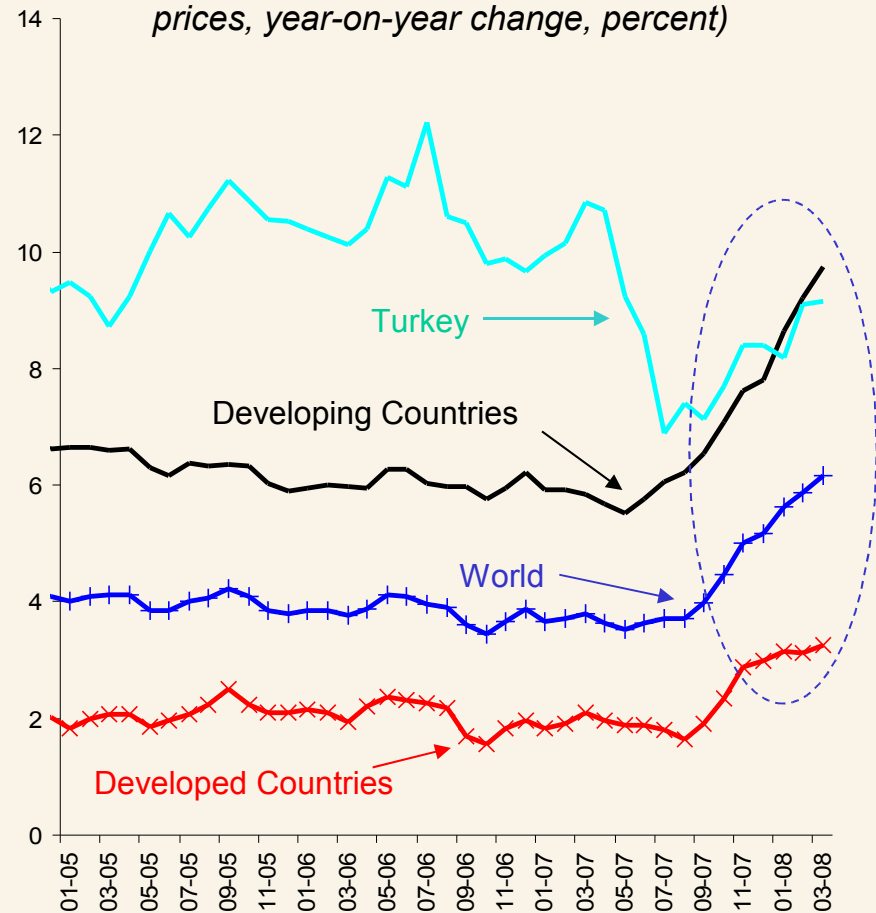
# **IV. Inflation Developments, Outlook and Risks**



# Global Inflation Developments

- ✓ Since 2007, there is an apparent upward acceleration in consumer prices inflation all over the world.
- ✓ The rate of increase in developed countries' annual inflation is at its highest level of the last 16 years.

**Global Inflation Developments**  
(January 2005 - March 2008, consumer prices, year-on-year change, percent)



Source: IFS, Central Banks, CBT



# World Commodity Prices

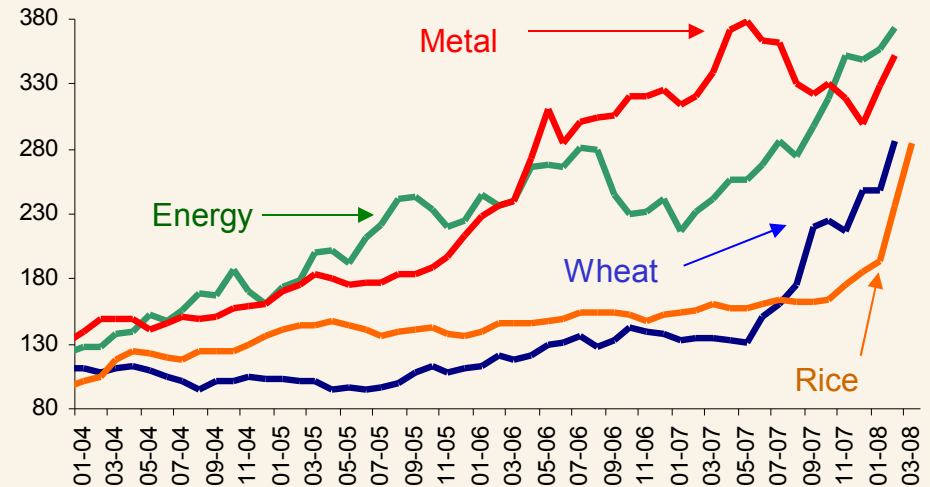
✓ Hikes in the prices of especially food, metal, and energy are among the main factors leading to global inflation risk.

✓ Recovery in the general prosperity of developing countries, mainly China and India, has created a demand-driven pressure on commodity prices.

✓ Moreover, the utilization of food stuff such as corn, wheat, and sugar beet in producing biofuels accompanied with unfavorable weather conditions are factors leading to an increase in the commodity prices.

## International Price Indices of Selected Products

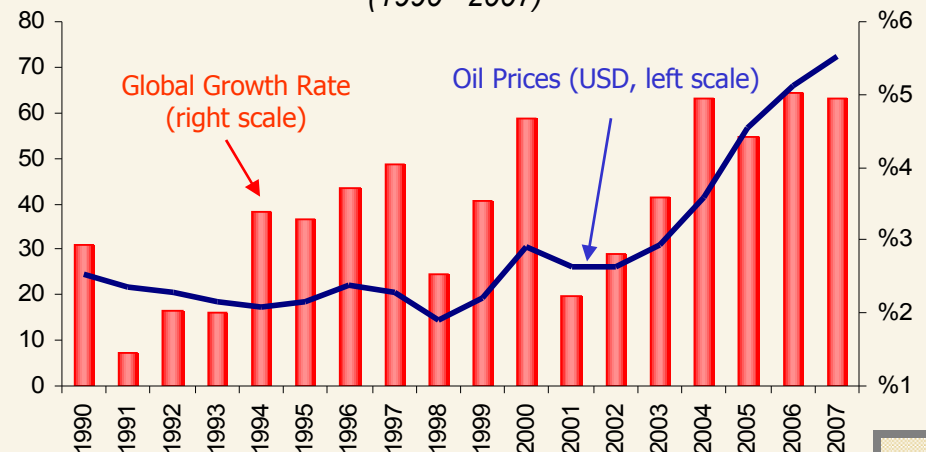
(January 2004 – March 2008, 2002=100)



Source: IMF

## Crude Oil Prices and Global Growth Rate

(1990 – 2007)



Source: IMF



# World Commodity Prices

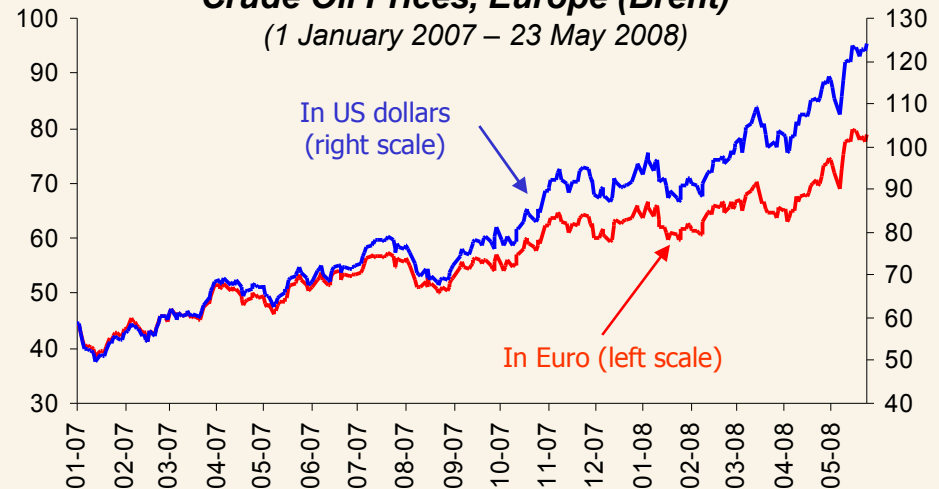
✓ Although economic slowdown is expected in the developed countries, the upsurge in commodity prices has continued in 2008 due to high growth expectations in the developing countries.

✓ In May 2008, crude oil prices surpassed their highest level experienced in 1979 in real terms.

✓ In the first quarter of 2008, consecutive peaks were observed in gold prices.

## Crude Oil Prices, Europe (Brent)

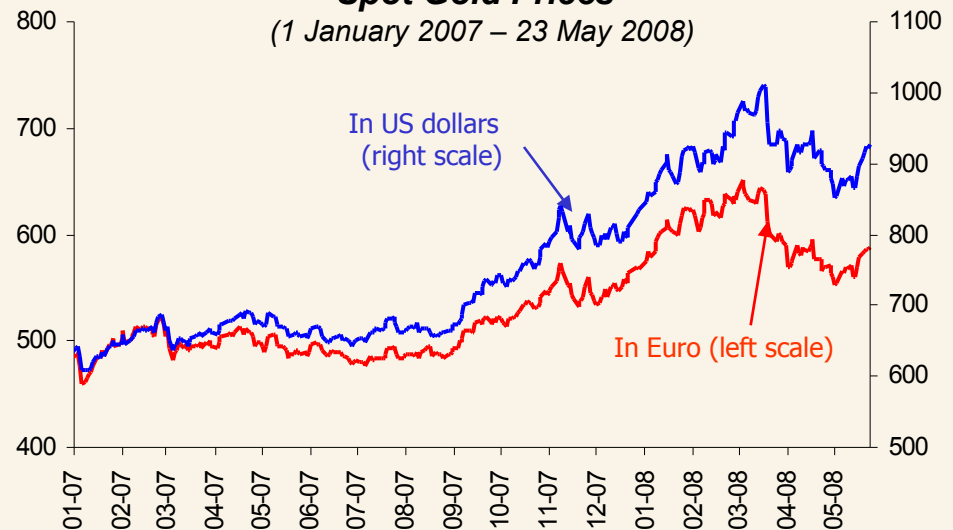
(1 January 2007 – 23 May 2008)



Source: Bloomberg

## Spot Gold Prices\*

(1 January 2007 – 23 May 2008)



\* Price of one ounce of gold quoted on the London gold market  
Source: World Gold Council



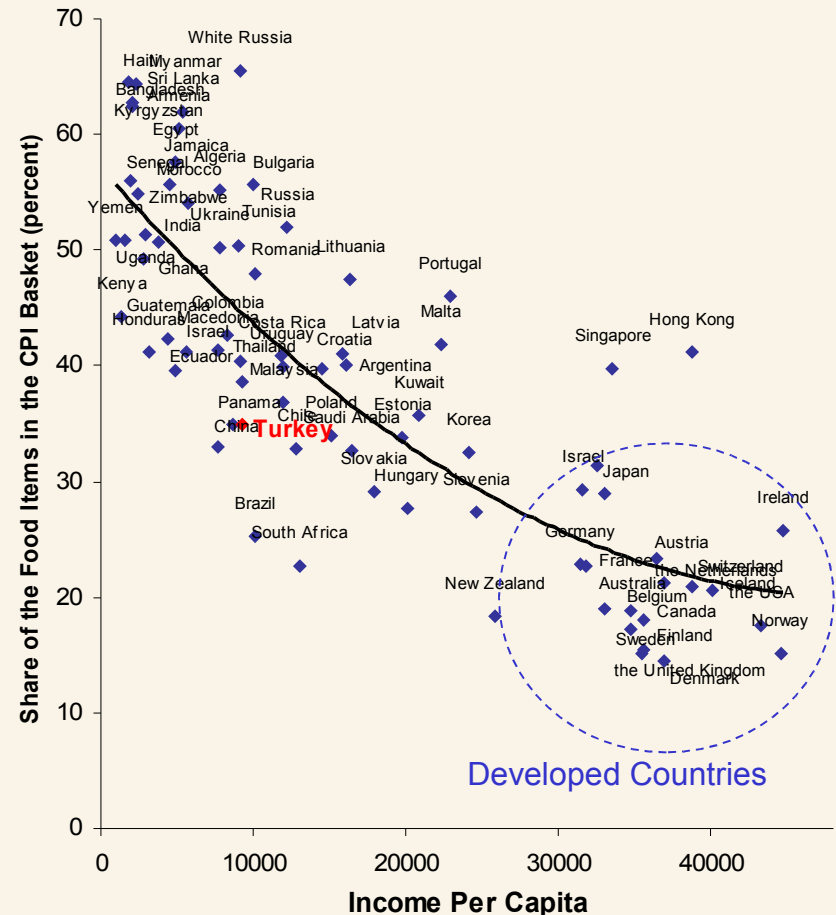
# Inflation Differentiation Among Country Groups

✓ Inflation rates of both developed and developing countries has accelerated recently, but there also appears to be a differentiation in underlying inflation dynamics between these two groups.

✓ The most important reason for the differentiation is significant differences between the consumer prices baskets used in inflation calculation.

- Food products have a substantial weight in the inflation basket of developing economies.
- Technological products, prices of which have downward tendency, have significant weight in the inflation basket of the developed countries.

**Share of the Food Items in the CPI Basket**  
(2006, percent) **Income Per Capita** (Purchasing Power Parity, 2006, USD)



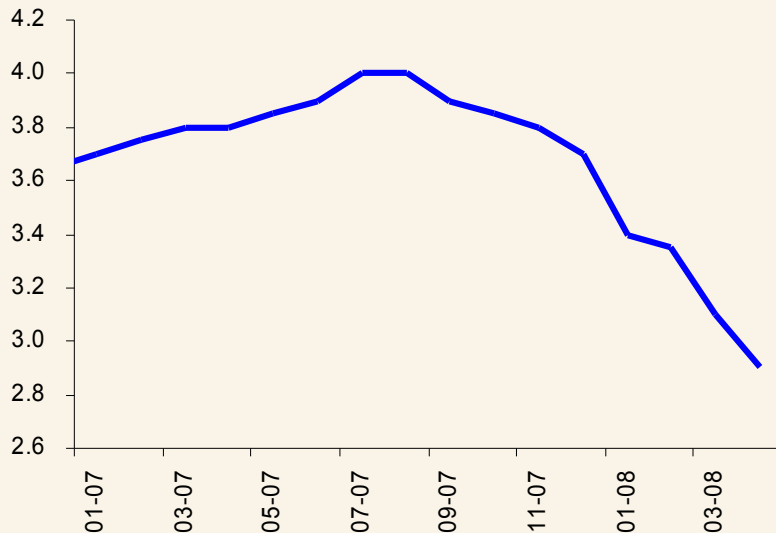




# Differentiation in Monetary Policies

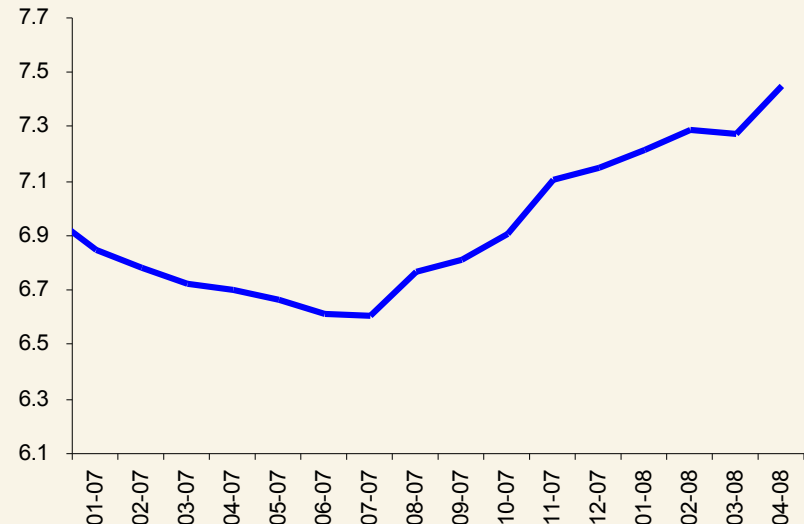
- ✓ Food prices have caused upward inflationist pressures in all country groups. This pressure is more evident in the developing countries.
- ✓ Due to problems in financial markets, the central banks of the developed countries have given more priority to financial stability and growth, whereas the central banks of the developing countries focus on price stability.
- ✓ Consequently, a tighter monetary policy stance is observed in the developing countries.

**Policy Rates in Developed Countries\***  
(January 2007 – April 2008, percent)



\* USA, Eurozone, UK, Japan, Canada  
Source: Central banks

**Policy Rates in Developing Countries\***  
(January 2007 – April 2008, percent)



\* Brazil, Czech Republic, China, South Africa, S. Korea, Hungary, Malaysia, Mexico, Poland, Romania, Russia, Chile, Thailand, Taiwan, Ukraine  
Source: Central banks



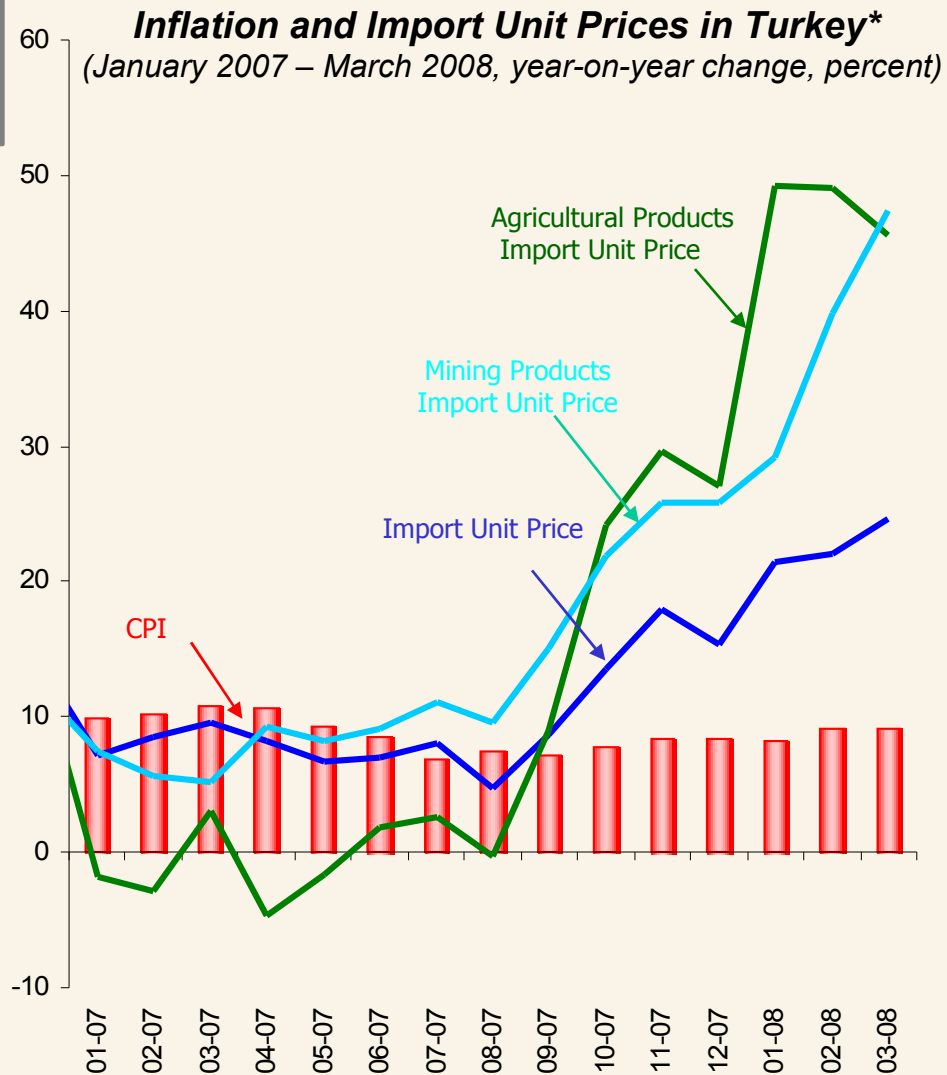
# Effects on the Turkish Economy

## Effects of global inflation developments on the Turkish economy



✓ High increases especially in the prices of agricultural products have caused a significant burden for developing countries like Turkey where the share of food expenditures within total consumer expenditures is high.

✓ As Turkey is a net commodity importing country, hikes in the prices of energy and metals have also unfavorable impacts on both inflation and the foreign trade balance.



\* In US dollars  
Source: TURKSTAT, CBT

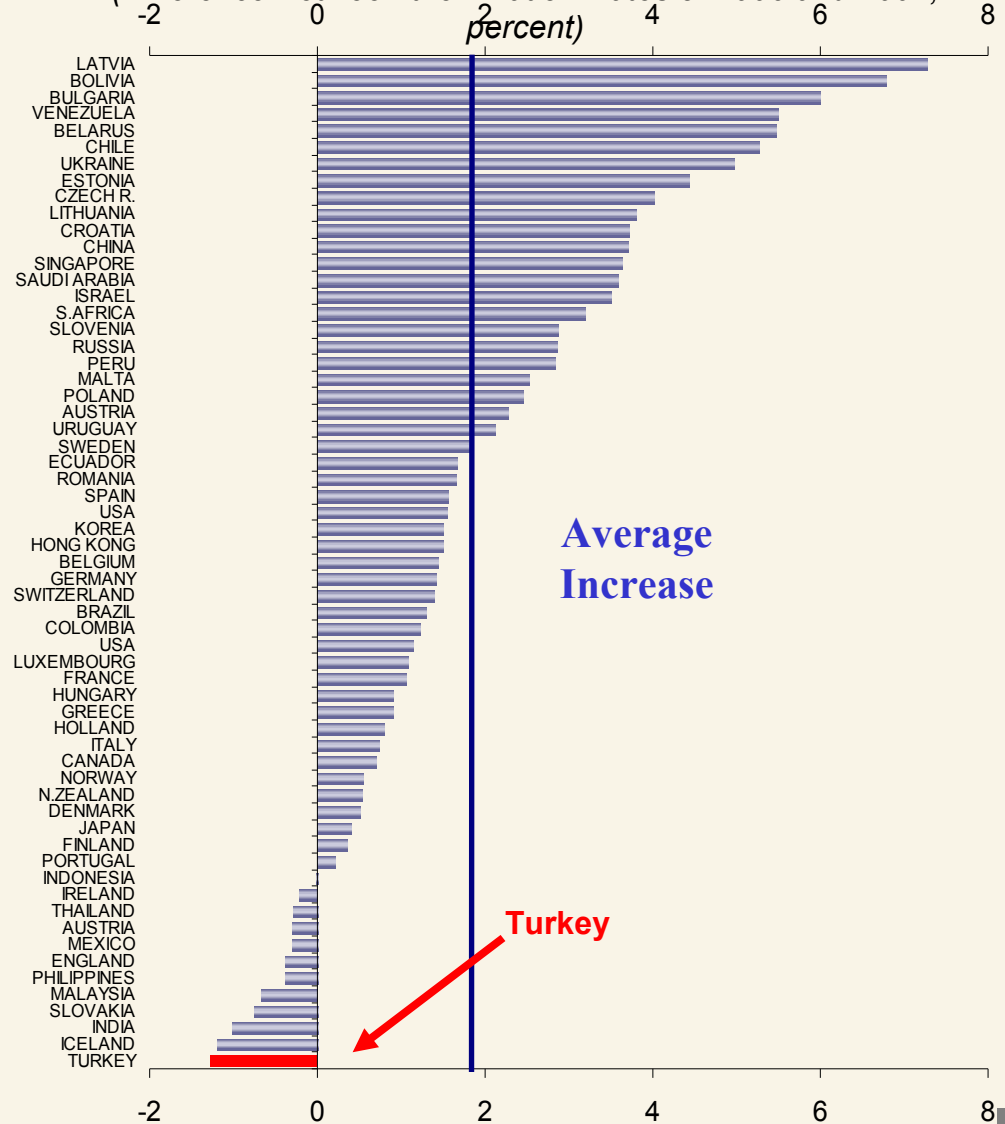


# Comparative Inflation Developments

- ✓ Despite unfavorable exogenous shocks, Turkey is among the few countries that lowered inflation in 2007.
- ✓ In this period, the inflation rate increased by approximately 2 percentage points on average among 60 countries, while the said rate decreased by 1.3 percentage points in Turkey.

## Inflation Developments in Turkey and the World

(Difference Between the Inflation Rates of 2006 and 2007, percent)

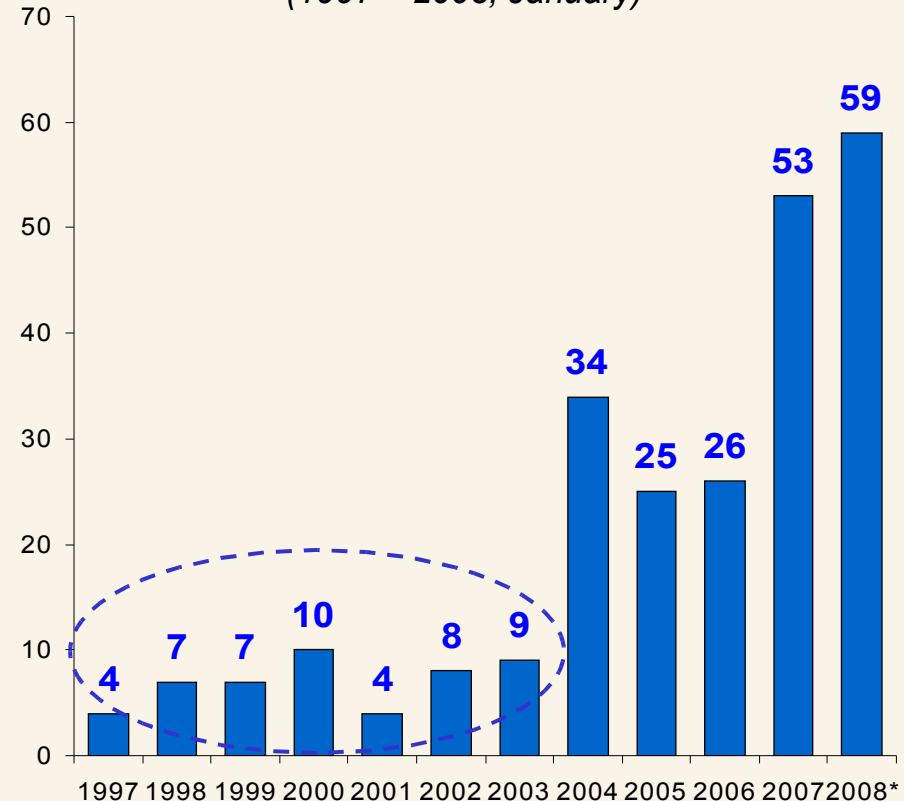




# Comparative Inflation Developments

- ✓ Turkey's ranking in inflation has improved in recent years.
- ✓ Between 1997 and 2003 Turkey was among the 10 countries that had the highest inflation.
- ✓ Despite the exogenous shocks in 2007, Turkey moved down to the 59th place as of January 2008.

**Turkey in the Global Inflation Ranking**  
(1997 – 2008, January)



\* Most recent data announced in January 2008  
The total number of countries is 155.  
The ranking is in descending order.  
Source: IMF, TURKSTAT, CBT

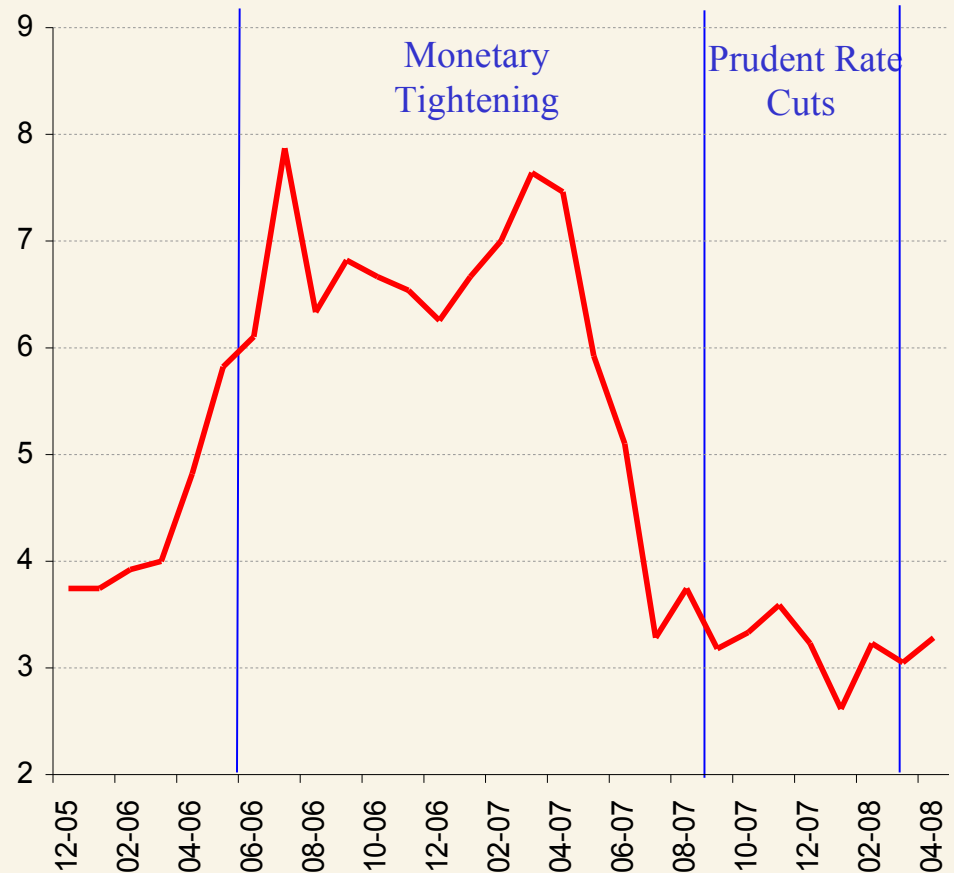


# Comparative Inflation Developments

✓ In the third quarter of 2006, the inflation in Turkey was 8 percentage points higher compared to the inflation figures in other developing countries that implement inflation targeting.

✓ The said difference began to narrow due to the monetary tightening exercised from mid-2006 onwards and decreased to 3 percentage points by early-2008.

***Inflation Differential Between the Countries Implementing Inflation Targeting\* and Turkey***  
(December 2005 – April 2008, year-on-year change, percent)



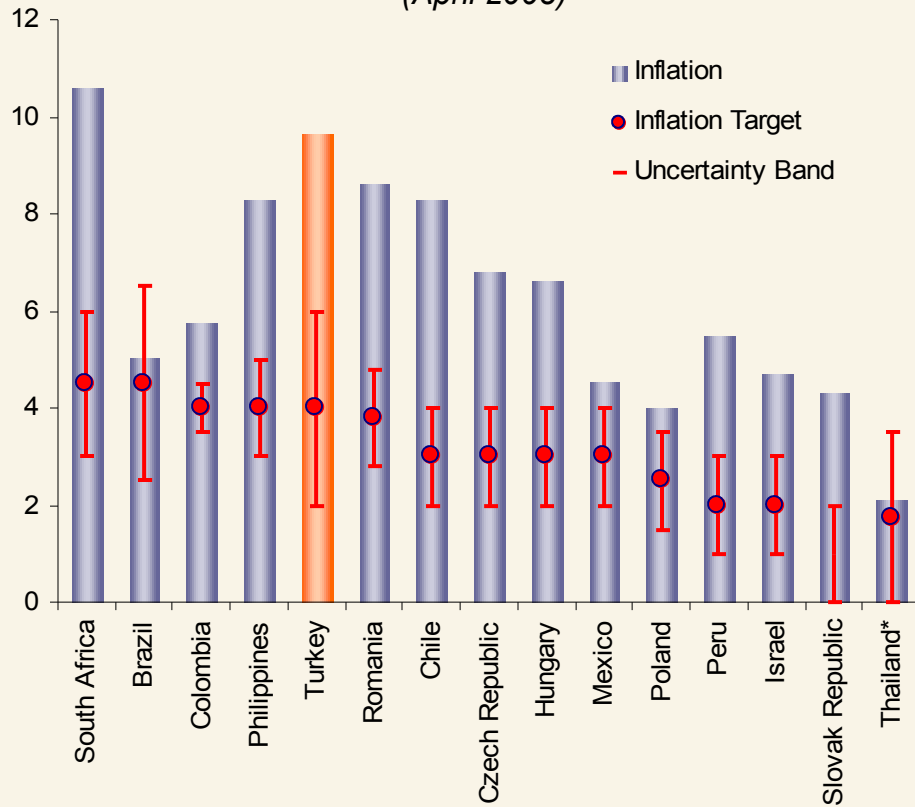
\* **Countries Implementing Inflation Targeting Regime:** Brazil, Czech Rep., Colombia, Philippines, South Africa, Israel, Hungary, Mexico, Peru, Poland, Romania, Chile, Slovakia, Thailand

Source: Central Banks, TURKSTAT, CBT

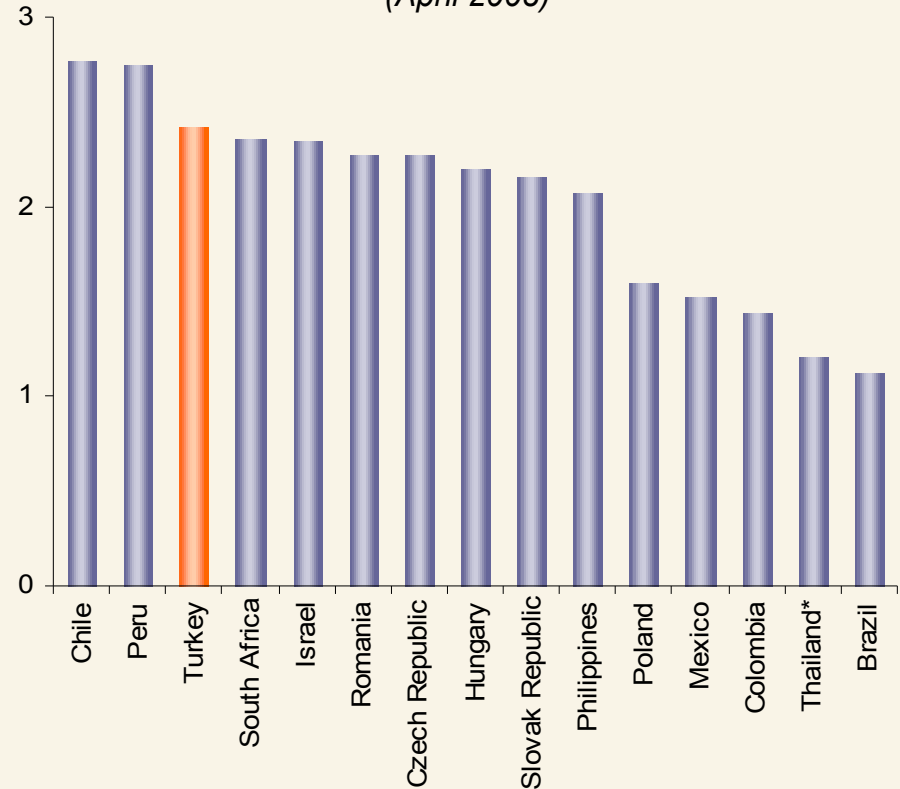


# Comparative Inflation Developments

**Inflation Targets, Uncertainty Band and Inflation in Countries Implementing Inflation Targeting Regime**  
(April 2008)



**Ratio of Inflation to Inflation Target in Economies Countries Inflation Targeting Regime**  
(April 2008)



\* In Thailand inflation targets are determined according to core inflation. Therefore, calculations were made utilizing the core inflation rate instead of consumer prices.  
Source: Central Banks, TURKSTAT, CBT

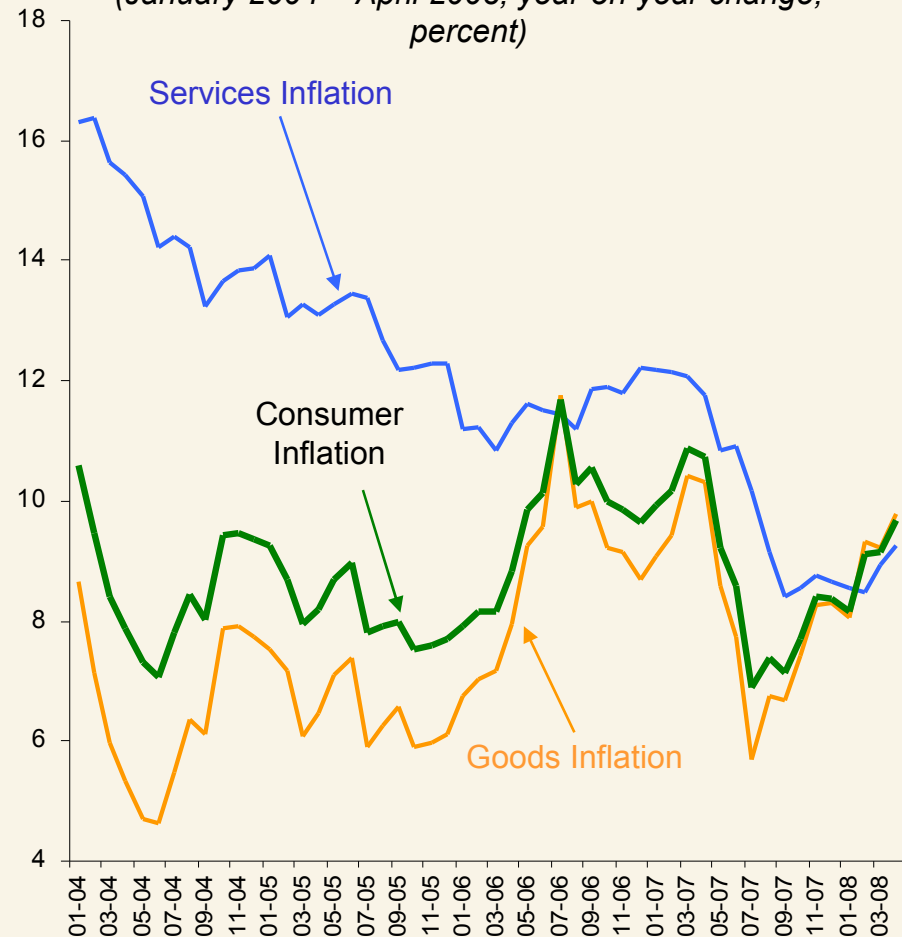
\* In Thailand inflation targets are determined according to core inflation. Therefore, calculations were made utilizing the core inflation rate instead of consumer prices.  
Source: Central Banks, TURKSTAT, CBT



# Inflation Developments in Turkey

- ✓ In the first three quarters of 2007, inflation, as projected, fell gradually and was 7.1% in September 2007.
- ✓ In the last quarter of the year, supply-side shocks such as drought and hikes in energy prices as well as adjustments in administered prices interrupted the downward tendency of inflation.
- ✓ As of April 2008, year-on-year inflation stood at 9.66%.
- ✓ Despite the downward trend apparent in services inflation, goods inflation has followed a more upward course due to external and supply-side factors.

**Consumer, Services and Goods Inflation**  
(January 2004 – April 2008, year-on-year change, percent)



Source: TURKSTAT, CBT

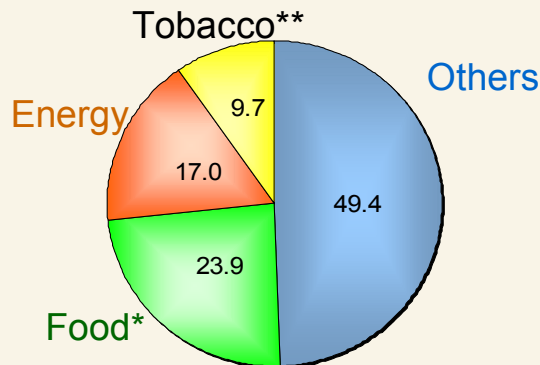


# Inflation Developments in Turkey

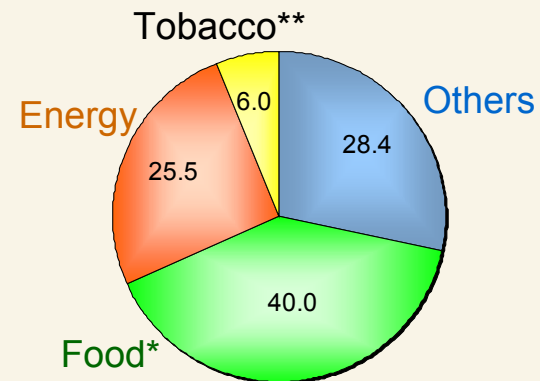
- ✓ Prices of the items outside the control of monetary policy such as food, energy and administered prices contributed to the annual inflation by 51% in 2004-2006 period, whereas this contribution increased to 71% in April 2008.

## Annual Inflation Components (share, percent)

Average of 2004 – 2006



April 2008



\* Food: Food and non-alcoholic beverages  
\*\* Tobacco: Tobacco products and alcoholic beverages  
Source: TURKSTAT, CBT





# Inflation Developments in Turkey

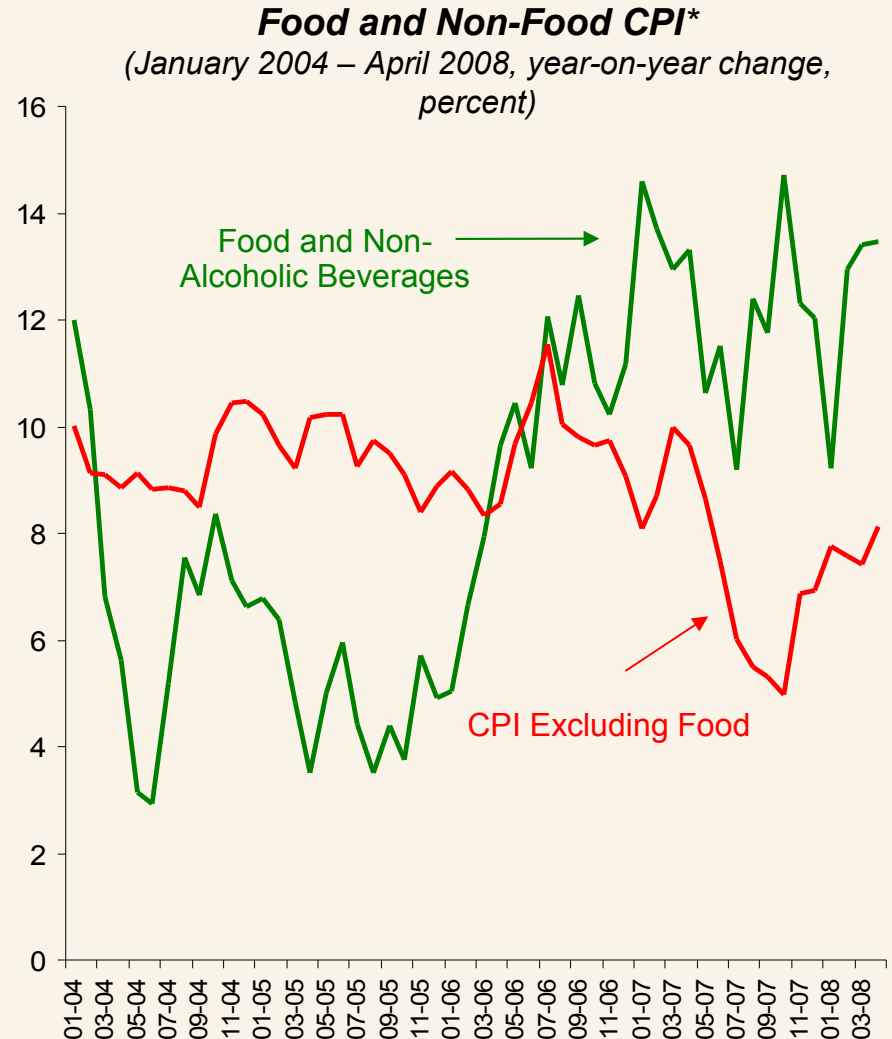
✓ Food prices stand as one of the main factors that have impeded the disinflation process in 2007.

- As of April 2008, food group has added 3.9 percentage points to annual inflation.

✓ Non-food inflation demonstrated a significant slowdown in 2007 compared to 2006.

- Non-food inflation, which was 9.1% in December 2006, declined to 4.98% in October 2007.

- Adjustments to administered prices in November and January halted the deceleration in non-food inflation. As of April 2008, the year-on-year increase in non-food inflation was 8.1%.



\*CPI excluding food and non-alcoholic beverages

Source: TURKSTAT, CBT

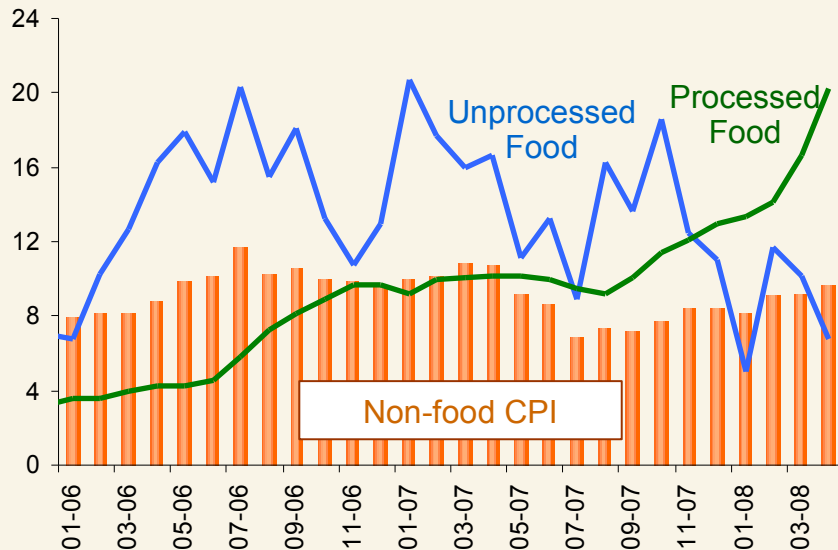


# Inflation Developments in Turkey

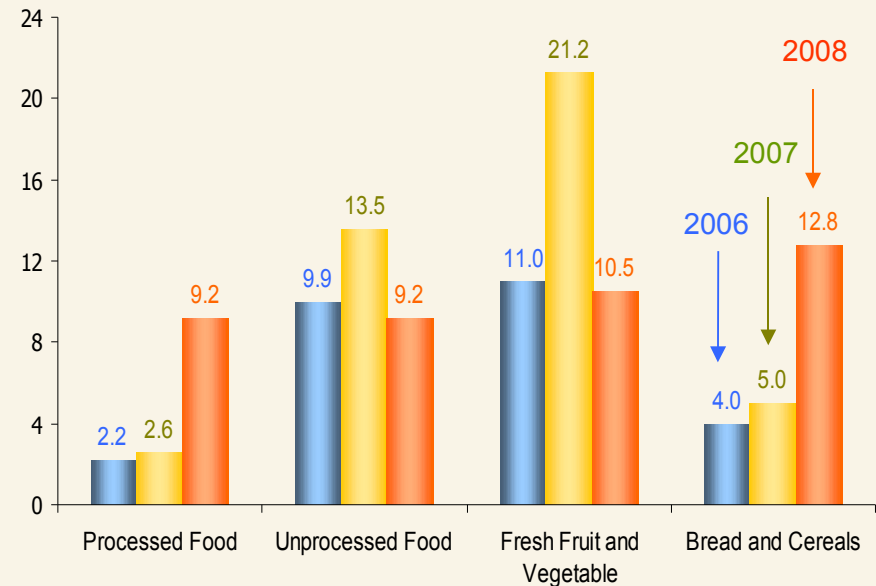
## Food Inflation:

- ✓ Year-on-year increase in unprocessed food inflation declined significantly by 6.7 percent in comparison to April 2007.
- ✓ Year-on-year increase in processed food prices maintained their upward trend and reached 20.2 percent on. Year-to-date inflation in processed food prices stood at 9.2 percent.
- ✓ Bread and cereals prices continue to climb in response to soaring domestic and global wheat prices. The year-to-date increase of the prices in this group is 12.8 percent.

**Unprocessed Food and Processed Food Inflation**  
(January 2006 –April 2008, year-on-year change, percent)



**Food Prices**  
(2006 –2008, year-to-date change, percent)



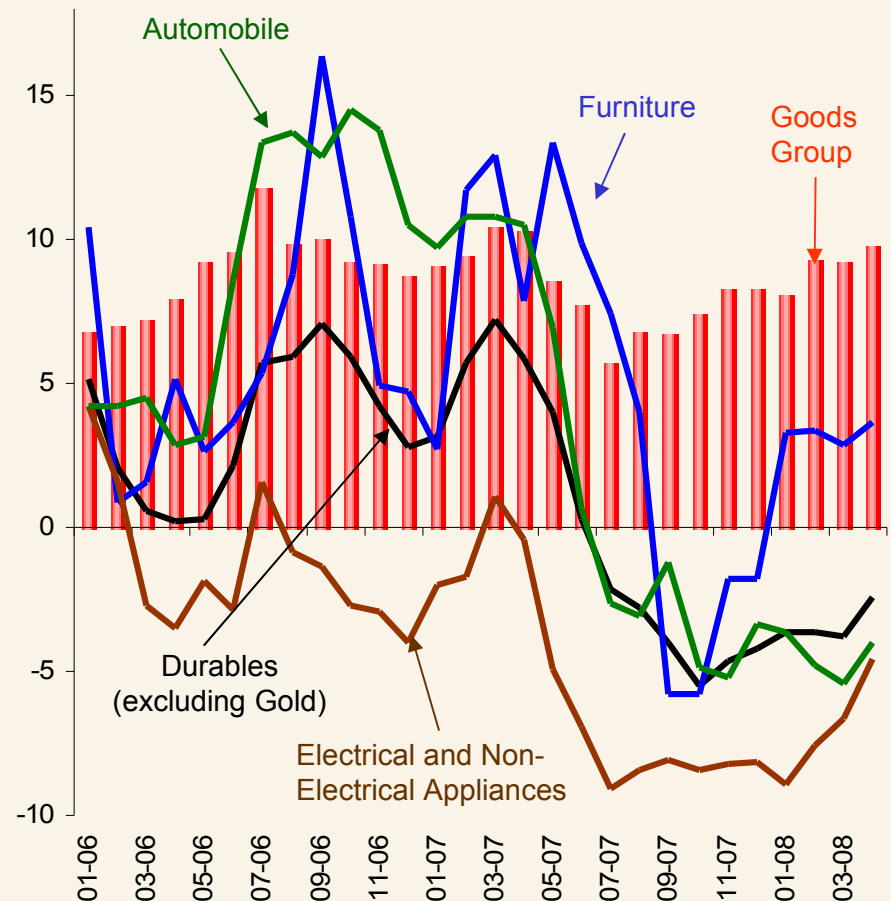


# Inflation Developments in Turkey

## Goods Inflation:

- ✓ Year-on-year goods inflation, which started to decelerate in March 2007, declined to 5.7% in July, but rebounded to 9.8% in April 2008 due to increased food and energy prices along with adjustments to administered prices.
- ✓ Prices of durable goods posted a year-on-year decrease, albeit limited, while the rise in gold prices continued to affect adversely the prices of goods excluding energy and unprocessed food.

**Goods Group Inflation and Selected Sub-items**  
(January 2006 – April 2008, year-on-year change, percent)



Source: TURKSTAT, CBT



# Inflation Developments in Turkey

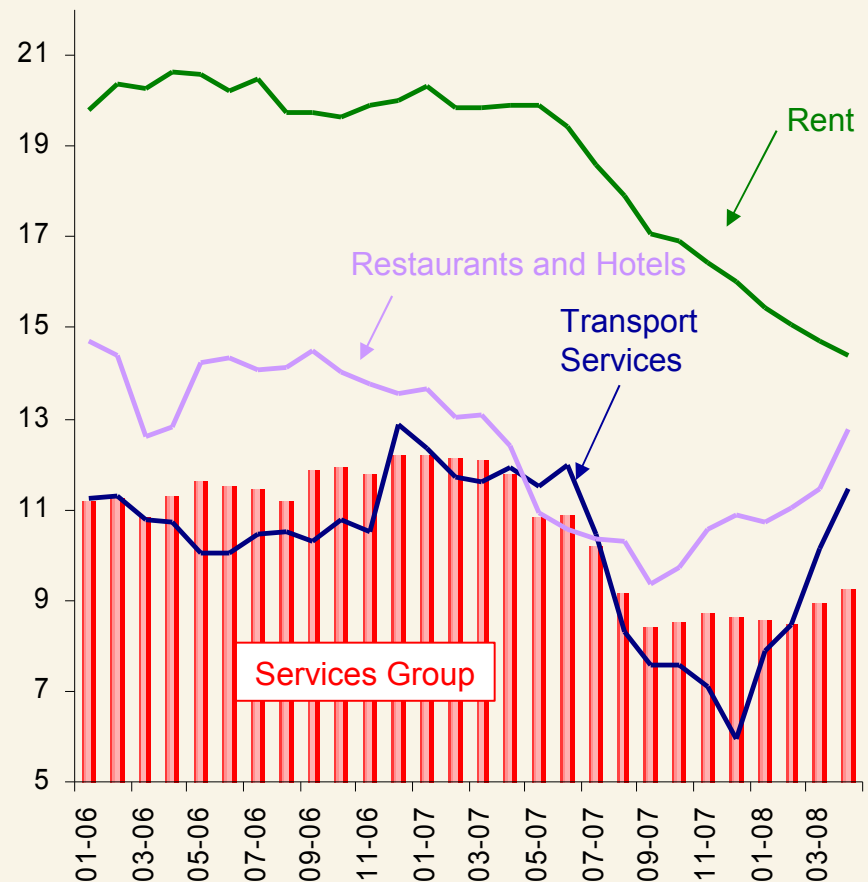
## Services Inflation:

✓ Services inflation stood at 9.2% as of April 2008.

- Price hikes in catering and transport services due to soaring food and energy prices curbed the downtrend in services inflation.

- The deceleration in rent inflation is noteworthy. Year-on-year increase, which was 20% at end-2006, decreased to 14.4% in April 2008.

**Services Inflation and Selected Sub-items**  
(January 2006 – April 2008, year-on-year change, percent)



Source: TURKSTAT, CBT



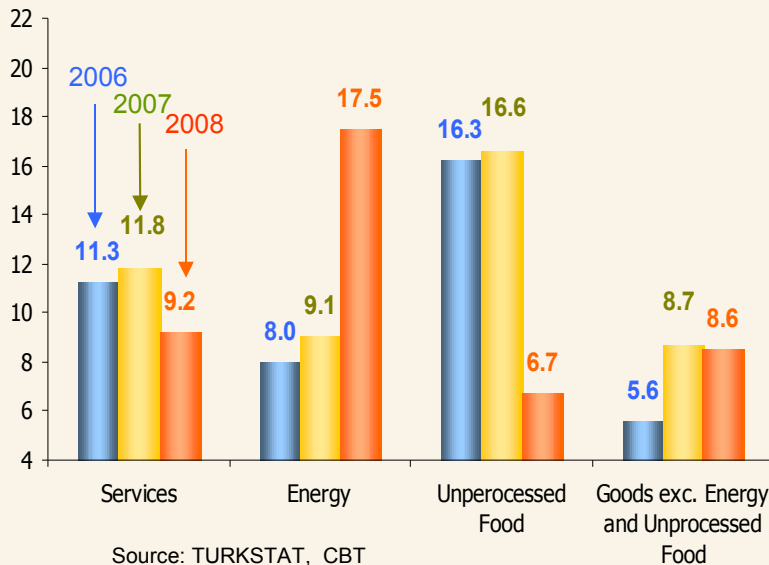
# Inflation Developments in Turkey

## In the last three years as of April;

- ✓ Services inflation has slowed down significantly compared to previous years.
- ✓ Year-on-year inflation in energy prices displays a higher trend compared to that of 2005 and 2006 owing to supply shocks.
- ✓ Year-on-year inflation excluding energy and unprocessed food increased by 8.6% in April 2008. This development was mainly driven by significant price hikes in processed food, tobacco and gold.

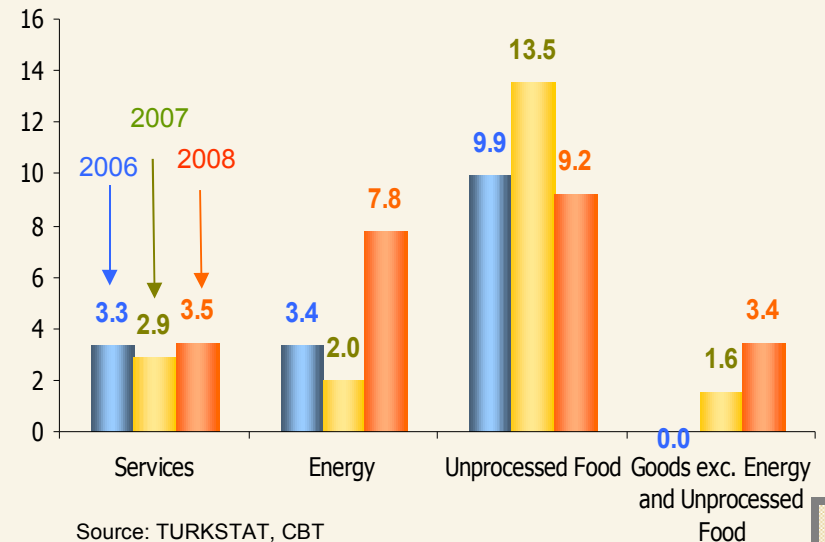
### ***Inflation by Groups***

*(2006-2008, year-on-year change, as of April, percent)*



### ***Inflation by Groups***

*(2006 – 2008, year-to-date change, as of April, percent)*





# Inflation – Expectations

✓ The recent upward movement in expectations has increased the risks to the price setting behavior.

✓ Inflation expectations

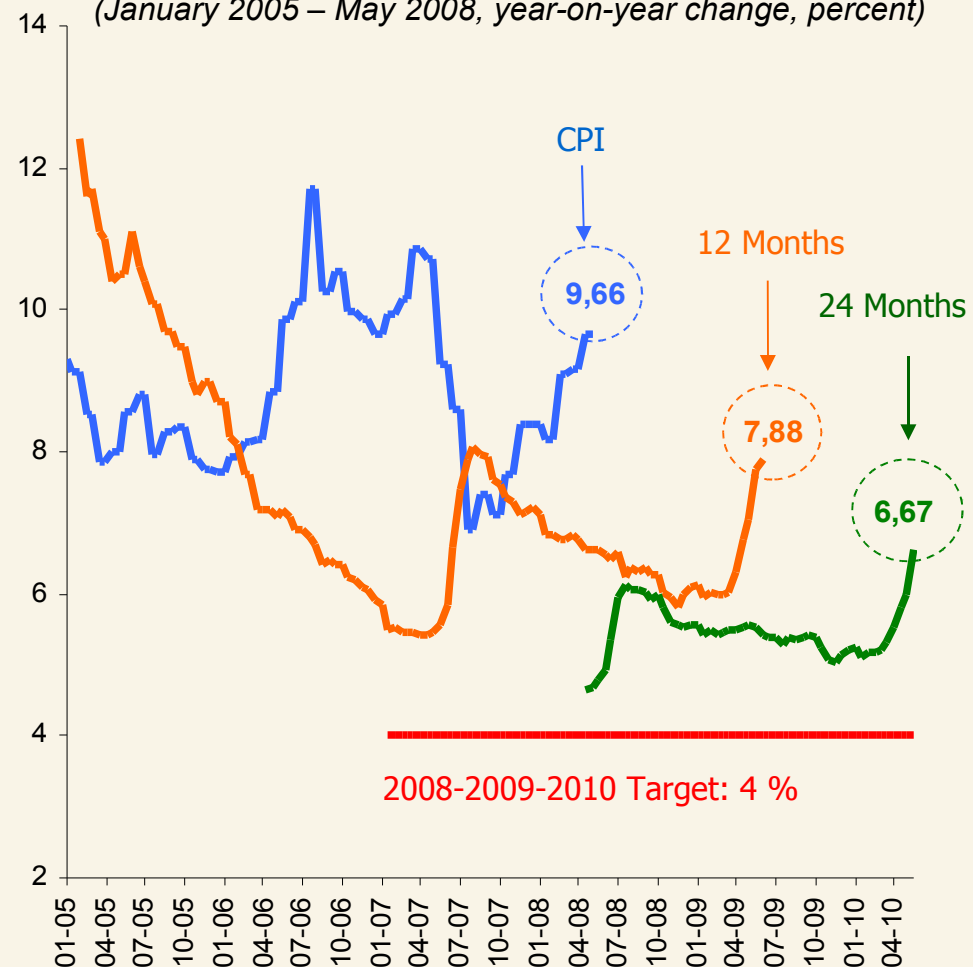
- Year-end: 9.64%
- 12 months ahead: 7.88%
- 24 months ahead: 6.67%

✓ Increases in food and energy prices impede the disinflation process as well as the recovery in expectations.

✓ Moreover, the deterioration in exchange rate movements and risk perception have negative implications on inflation expectations.

## Inflation and Inflation Expectations

(January 2005 – May 2008, year-on-year change, percent)



Source: CBT, TURKSTAT

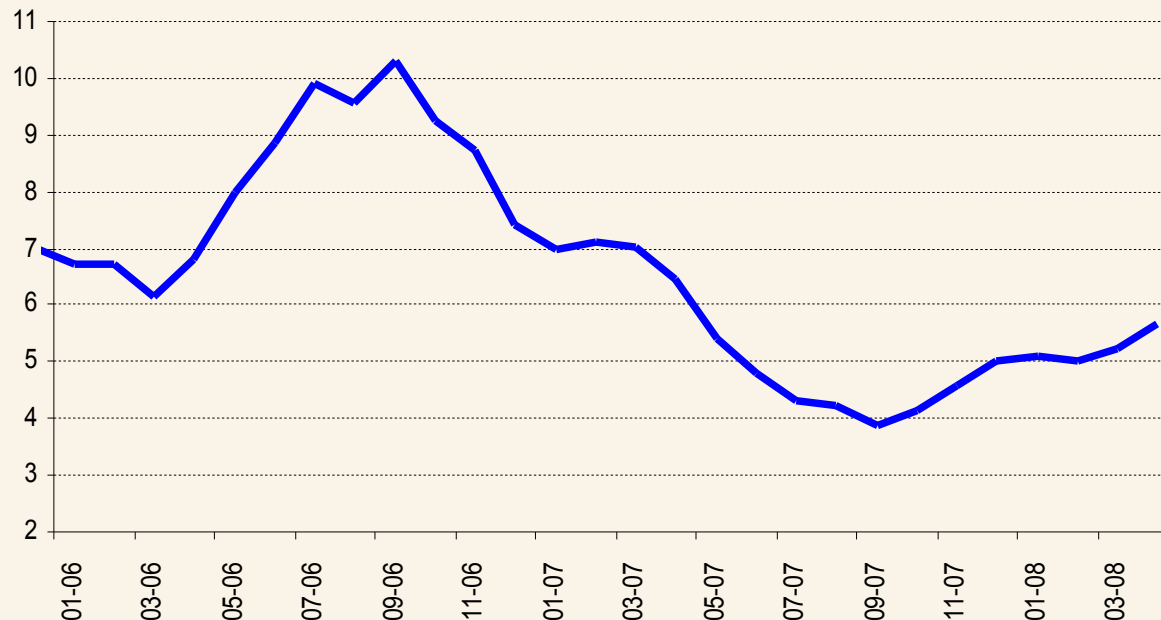


# Inflation – Trend

- ✓ The slowdown in the inflation trend observed throughout the four quarters from September 2006, was interrupted in the last quarter of 2007.
- ✓ Potential second round effects of rising food and energy prices will continue to be monitored closely in the upcoming period.

## ***Inflation Trend***

*(January 2006 – April 2008, year-on-year change, percent)*



\* Annualized monthly change of seasonally adjusted SCA-I index (3-month moving average) .

Source: TURKSTAT, CBT



# Inflation – Forecasts

- ✓ Persistency of supply shocks, ongoing uncertainties in global economy and second round effects have necessitated a significant upward revision in our inflation forecasts.

## *The Sources of Changes in Inflation Forecasts (percentage point)*

	<b>2008</b>	<b>2009</b>
<b>Food Prices</b>	1.2	1.1
<b>Oil Prices</b>	0.9	0.4
<b>Exchange Rate</b>	1.5 – 2.0	1.0
<b>Other</b>	-	0.5
<b>Total</b>	<b>3.8</b>	<b>3.0</b>

Source: CBT





# Inflation – Forecasts

## Baseline scenario assumptions:

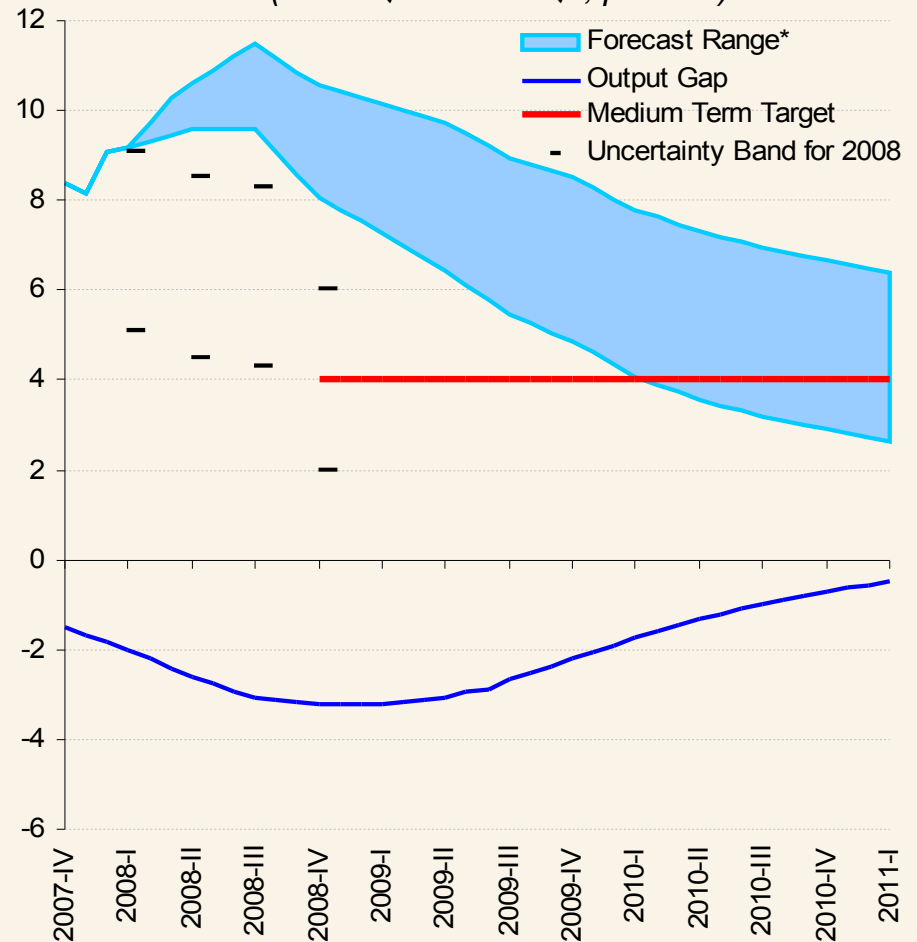
	2008	2009	2010
Oil Prices	<b>\$ 105</b>	<b>\$ 105</b>	<b>\$ 105</b>
Food Prices	<b>13%</b>	<b>8%</b>	<b>7%</b>

✓ Under the assumption that policy rates are increased gradually and cautiously until mid-2008 and then kept flat for the rest of the year...

## Inflation Forecasts:

2008	<b>9.3 %</b>
2009	<b>6.7 %</b>
2010	<b>4.9 %</b>
mid-2011	<b>4.0 %</b>

**Forecasts for Inflation and Output Gap**  
(2007 Q4 – 2011 Q1, percent)



\*The shaded region indicates the 70 percent confidence interval for forecast.  
Source: CBT



# Inflation – Risks

## Pessimistic scenario:

	2008	2009	2010
Oil Prices	<b>\$ 125</b>	<b>\$ 150</b>	<b>\$ 150</b>
Food Prices	<b>17%</b>	<b>11%</b>	<b>10%</b>

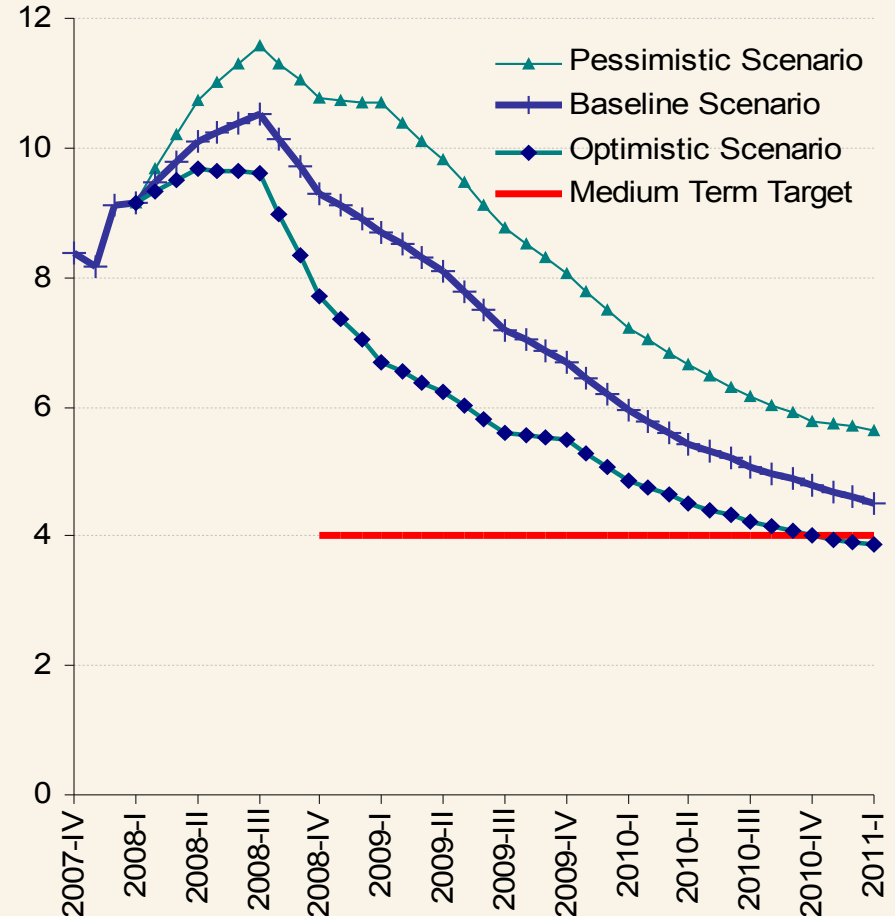
✓ Increasing the policy rates gradually until end-2008.

## Optimistic scenario:

	2008	2009	2010
Petrol Fiyatları	<b>95 \$</b>	<b>85 \$</b>	<b>85 \$</b>
Gıda Fiyatları	<b>9%</b>	<b>5%</b>	<b>% 4</b>

✓ Increasing the policy rates cautiously in the upcoming months, then keeping constant, followed by gradual cuts in the last quarter of 2008.

**Inflation Forecast**  
(2007 Q4 – 2011 Q1, percent)



Source: CBT



# Inflation – Risks

## Risks: Energy and Food Prices

- ✓ A protracted period of rising food and energy prices have led to a significant overshooting of the inflation targets since the adoption of the inflation targeting regime and consequently increased stickiness in inflation expectations, as economic agents have become more backward looking.
- ✓ Risks related to energy and food prices exist in both directions:
  - In case the prices turn out to be worse than expected, the monetary policy stance might get tighter.
  - In case the prices turn out to be better than expected, inflation is expected to reach the level of 4 percent in a shorter period of time.



# Inflation – Risks

## Risks: Expectations and Pricing Behaviors

- ✓ Under normal conditions, supply shocks are expected to affect relative prices temporarily, not the underlying inflation trend.
- ✓ Nevertheless, the fact that several long-lasting shocks appeared concurrently has increased the risks to price setting behavior.
- ✓ In the period ahead, it may be necessary to pursue a tighter monetary policy for a longer duration in comparison to the aforementioned baseline scenario, should the price setting behavior continues to deteriorate and inflation continues to be more rigid than expected.
- ✓ It is assumed that government expenditures will evolve in line with the budget and that there will be no further increases in indirect taxes or administered price adjustments, except those required by the automatic pricing mechanism. Any deviation from this may have an effect on the outlook for inflation and monetary policy.



# Inflation – Risks

## Risks: International Developments

- ✓ Another major risk to the inflation outlook is a sharper than expected slowdown in the global economic activity, which, in turn, could lead to further volatility in financial markets.
- ✓ Movements in exchange rates resulting from global uncertainties carry the risk of impeding the disinflation process.
- ✓ On the other hand, given the weak demand conditions, second round effects of the exchange rate pass-through should be relatively limited at this point.
- ✓ The Central Bank of Turkey will not react to temporary fluctuations in financial markets via policy rates. Yet, we will not hesitate to tighten monetary policy in case of a significant worsening in the general pricing behavior.



# VI. Monetary Policy Stance



# Monetary Policy Decisions

## Monetary Policy Decisions



✓ At its meeting of 13 September 2007, Monetary Policy Committee initiated a cautious rate cut cycle, which continued until 19 March 2008 and involved a total of 225 basis point cut.

✓ The recent rise in food and energy prices, along with the ongoing uncertainties in global economy, has increased the risks regarding the price setting behavior and the degree of inflation persistence.

✓ The MPC decided to raise policy rates by 50 basis points in May 15 meeting to prevent the the potential second-round effects of the adverse developments in food and energy prices.

## *Interest Rate Decisions of the Monetary Policy Committee (January 2007 – May 2008, percent)*

Meeting Date	Policy Rates	Change
16 January 2007	17.50	0
15 February 2007	17.50	0
15 March 2007	17.50	0
18 April 2007	17.50	0
14 May 2007	17.50	0
14 June 2007	17.50	0
12 July 2007	17.50	0
14 August 2007	17.50	0
<b>13 September 2007</b>	<b>17.25</b>	<b>- 0.25</b>
<b>16 October 2007</b>	<b>16.75</b>	<b>- 0.50</b>
<b>14 November 2007</b>	<b>16.25</b>	<b>- 0.50</b>
<b>13 December 2007</b>	<b>15.75</b>	<b>- 0.50</b>
<b>17 January 2008</b>	<b>15.50</b>	<b>- 0.25</b>
<b>14 February 2008</b>	<b>15.25</b>	<b>- 0.25</b>
19 March 2008	15.25	0
17 April 2008	15.25	0
<b>15 May 2008</b>	<b>15.75</b>	<b>+ 0.50</b>

Source:CBT



# Monetary Policy Decisions

- ✓ **2008 January Inflation Report:** “Main message of the forecast is that continuation of the gradual easing cycle that started in 2007 September will remain conditional on favorable data and developments.”
- ✓ **MPC Decision dated 14 February 2008:** “Ongoing uncertainties in the global economy and the risks to the price setting behavior compel the CBT to be cautious with regard to the monetary policy”
- ✓ **MPC Decision dated 19 March 2008:** “The Committee assesses that rising global uncertainty and the adverse developments in food and energy prices may lead to some delay in reaching the inflation target.”
- ✓ **2008 April Inflation Report:** “Supply shocks have turned out to be more persistent than expected, increasing the risks to the second round effects and necessitating a significant upward revision in our inflation forecasts. Accordingly, monetary policy has already assumed a more cautious stance.”
- ✓ **MPC Decision dated 15 May 2008:** “Central Bank will continue to take necessary measures to prevent the potential second round effects of the adverse developments in food and energy prices. Accordingly, the Committee will consider the possibility of a further measured rate hike in the next meeting.”

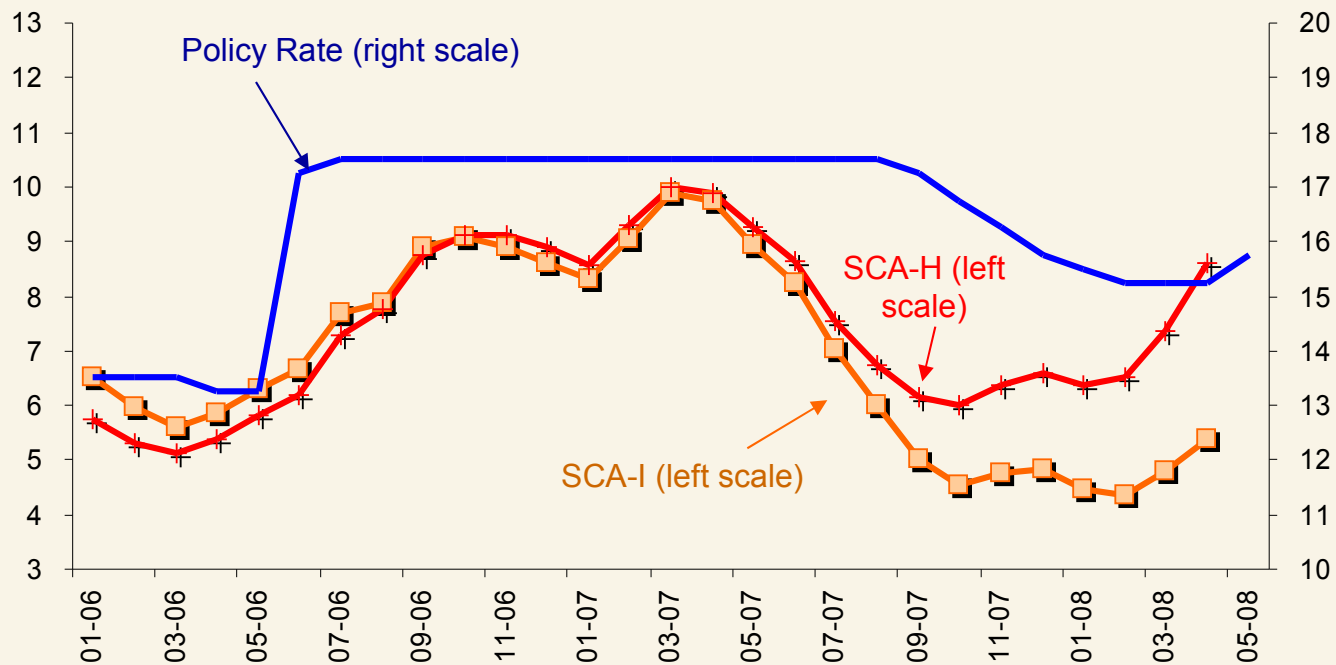




# Monetary Policy Decisions

- ✓ Ensuring a steady decline in inflation will likely require tight monetary policy to be maintained for an extended period.

**Policy Rates (simple interest) and Core Inflation Indicators**  
(January 2006 – May 2008, year-on-year change, percent)



Source: TURKSTAT, CBT



# Monetary Policy Stance

- ✓ The rise of risks related to food and energy prices indicate that reaching the 4 percent inflation target will take longer than estimated.
- ✓ Monetary policy focuses on price stability in the medium term. However, under current circumstances, the CBT will not stick to a tight stance about the duration of reaching the target.
- ✓ In fact, a strong response to the hike in inflation caused by supply shocks may lead to undesired fluctuations in the economic activity and relative prices. Therefore, we envisage a framework, in which inflation will realize above the target at the end of 2009.
- ✓ In this period where uncertainties and risks grow, the CBT will continue to implement the policies focusing on keeping inflation under control, ensuring convergence to the target in the medium term and maintaining the achievements on the way to price stability.



# Monetary Policy Stance

- ✓ The Central Bank will not let the recent deterioration in inflation expectations worsen the overall pricing behavior.
- ✓ In this respect, the CBT will be more responsive against bad news than good news and will consider a measured tightening when needed.
- ✓ In this conjuncture, where economic uncertainties increase throughout the world, the CBT will put effort to keep the monetary policy relatively foreseeable, but resilient to shocks at the same time.



# Monetary Policy Stance

## **Importance of the Coordination Between Monetary and Fiscal Policies:**

- ✓ Prudent monetary policy is a necessary but not a sufficient condition in itself for attaining price stability.
- ✓ The support from fiscal policy and structural reforms are also critical in this respect.
- ✓ Sound fiscal policy has been one of the main factors in driving inflation down to single digits.
- ✓ The role of fiscal policy will continue to be critical on the road to price stability. Preserving the resilience of the economy, especially under current conditions, requires the continuation of fiscal discipline and structural reforms.



# Inflation Target

- ✓ The views on the persistency of the rise in energy and food prices have started to gain more support recently.
- ✓ In case the food and energy-driven inflationary pressures persists, the 4 percent-target may not be attained in the short run.
- ✓ In April, the Committee meeting agenda covered the issue of target\_revision. Committee members indicated that changing the target for end-2008 would not be appropriate, since doing so would be a clear violation of the accountability principle in practice.
- ✓ Regarding targets for 2009 and afterwards, the Committee assessed that, given the uncertainty surrounding the food and energy prices as well as the global economy, it would be wiser to reconsider the issue towards the end of this year in tandem with the budget preparations.
- ✓ We envisage a framework in which the inflation forecasts announced in 30 April 2008 serve as intermediate anchors while the medium term is anchored by the 4 percent target.



# Monetary Policy Stance

- ✓ Current liquidity conditions provide the CBT with a flexible tool to engineer a rapid monetary tightening when needed.
- ✓ The excess liquidity in the money market has been shrinking during the past few months, due to factors such as reduced daily minimum amount in reserve purchase auctions, the Treasury's preference of borrowing in YTL, and rising money demand. This trend is expected to prevail in the forthcoming period, possibly leading to a tightening in monetary conditions.
- ✓ This framework provides the CBT with a flexible and efficient tool, which makes it possible to implement a monetary tightening without conducting a formal MPC meeting.



# Monetary Policy Stance

- ✓ Monetary policy stance is determined in view of inflation targets, available data, future expectations and medium-term inflation expectations.
  - ✓ Any new data related to the medium-term inflation outlook will lead to revision of future stance of monetary policy.
- 
- ✓ **Examples of data dependency in the event of:**
    - **Sharper than expected slowdown in European economies:** External demand would slow down, inflation expectations would drop below the target, the monetary policy would be loosened.
    - **Loosening of fiscal policies:** Inflation forecast would surpass the inflation target, a new monetary policy (monetary tightening) would be implemented to render the inflation expectations consistent with the target.



# Monetary Policy for Price Stability

- ✓ Significant progress has been achieved on the way towards price stability, but we have not reached price stability yet.
- ✓ In this conjuncture, a monetary policy that is consistent with inflation targets and that take domestic demand under control will be pursued in order to reduce inflation and to ensure its convergence to the inflation target.
- ✓ Many developed countries that have achieved price stability were obliged to adopt strong monetary tightening in the past in order to bring inflation under control.



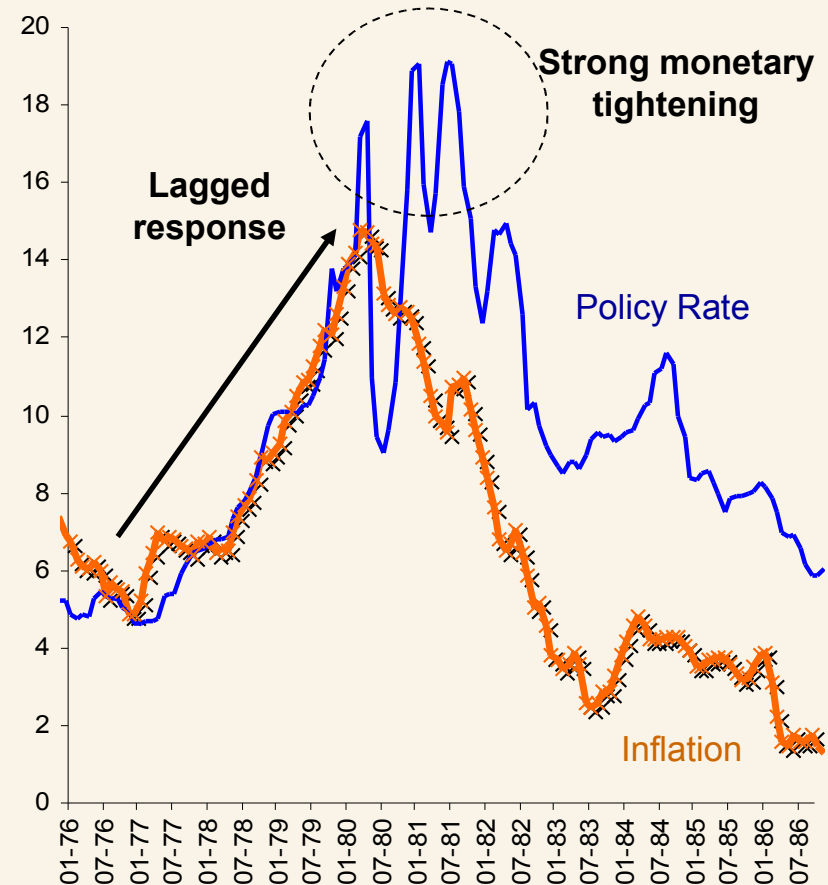


# Monetary Policy for Price Stability

## Example : USA, 1976 – 1982

- ✓ In the early 1980s, the rate of inflation rose to 14% due to the failure of the monetary authority to give a strong response to the inflation that had gained pace in late 1970s.
- ✓ The strong monetary tightening that was put into practice in 1980 was instrumental in taking the inflation - under control and restoring price stability.
- ✓ The main reasons for severe monetary tightening in this period were that a monetary policy, which would bring inflation under control, was not adopted in the 1976-1980 period and that the rises in policy rates lagged inflation developments.
- ✓ Eventually, the cost of reestablishing price stability became much more higher for the US economy.

**Policy Rates** (simple interest)  
**and Inflation in the USA**  
(1976 – 1986, year-on-year change, percent)



Source: FED

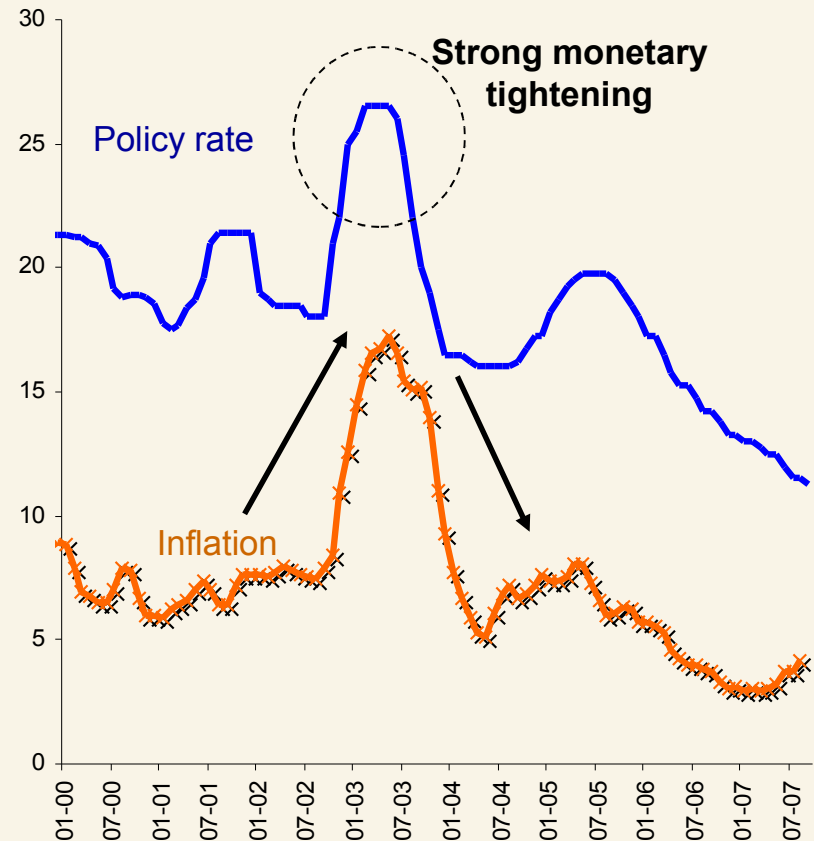


# Monetary Policy for Price Stability

## Example 2: Brazil, 2002 – 2003

- ✓ In the 2001-2003 period, inflation in Brazil overshot the targets due to the sudden stop in capital inflows as well as the depreciation of the Brazilian currency against the US dollar.
- ✓ As a result of strong monetary tightening and disciplined fiscal policy, inflation was taken under control in the following periods and driven back to the target path.

**Policy Rates** (*simple interest*)  
**and Inflation in Brazil**  
(2000 – 2007, year-on-year change, percent)

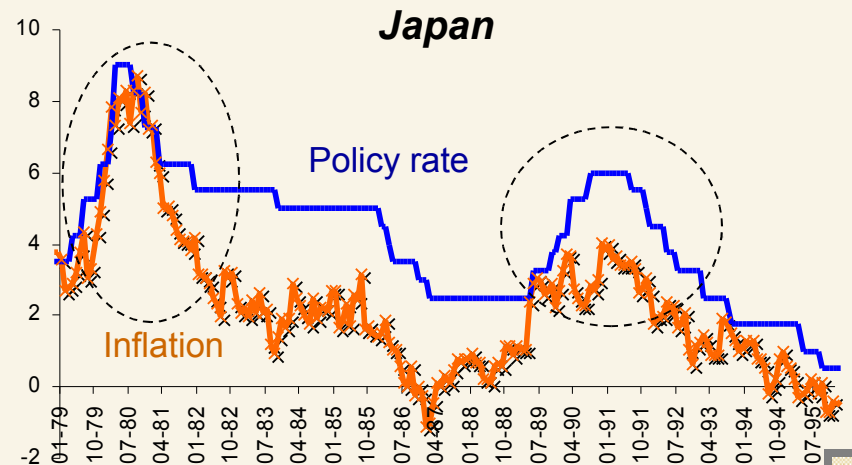
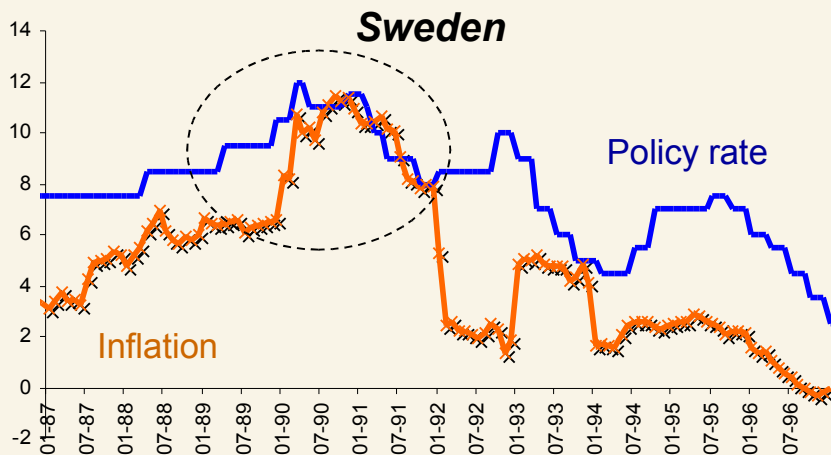
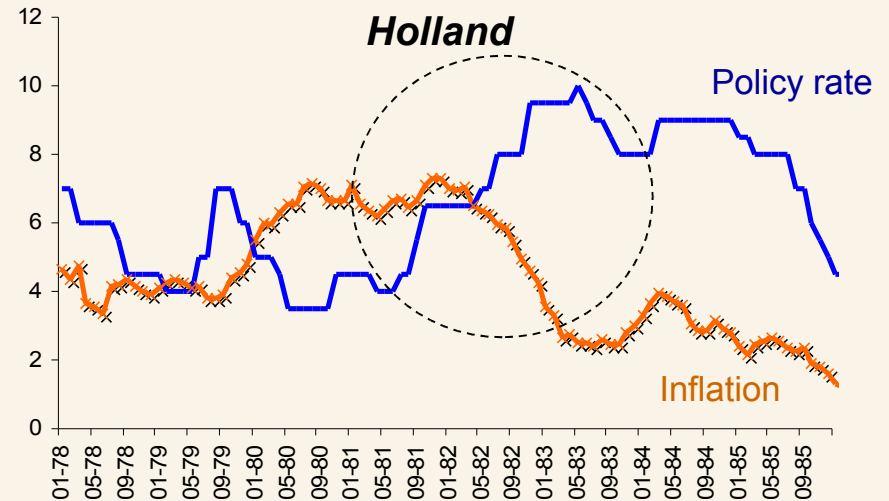
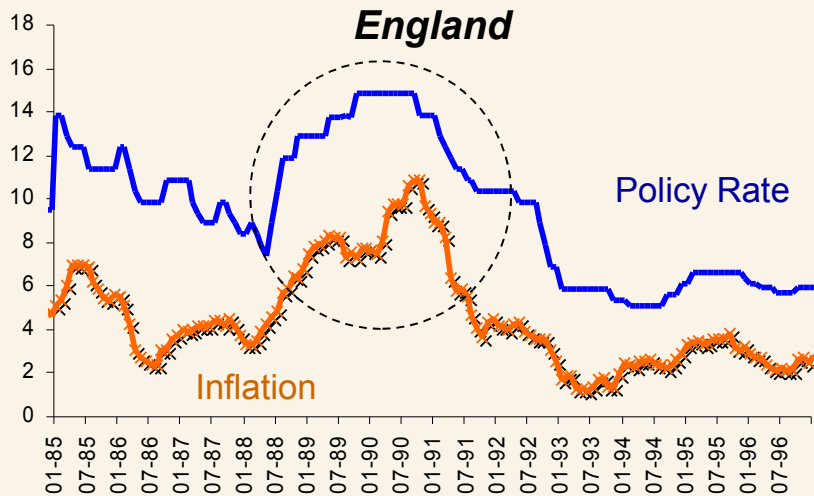


Source: Banco Central do Brasil (BCB)



# Monetary Policy for Price Stability

## Examples of Monetary Tightening Against High Inflation





# VII. Markets

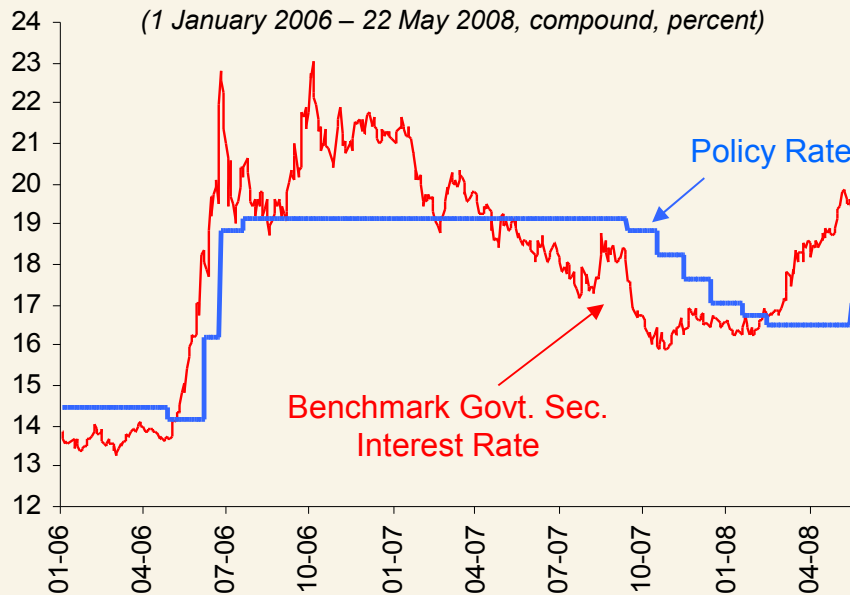


# Interest Rates

- ✓ Recent rise in interest rates in market can mostly be attributed to the reflections of global risks on the domestic environment.
- ✓ In line with deterioration in risk perceptions, interest rates started rising particularly as of end-February and stayed above policy rates.
- ✓ Most recently, the difference between policy rates and the benchmark interest rates has reached to 280 basis points.

**CBT Policy Rates and Benchmark Government Securities Interest Rate**

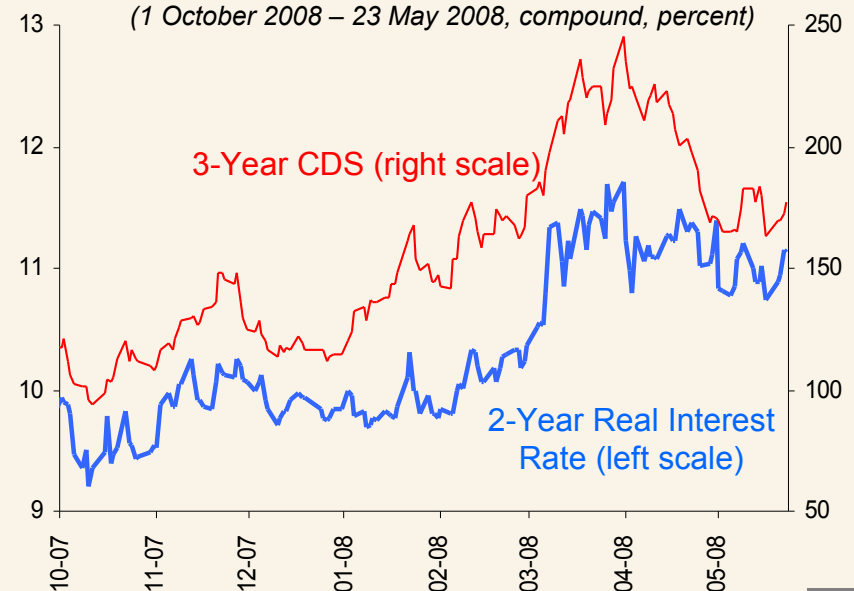
(1 January 2006 – 22 May 2008, compound, percent)



Source: CBT.

**Real Interest Rate of 2-Year Government Bonds and 3-Year CDS Rate**

(1 October 2007 – 23 May 2008, compound, percent)



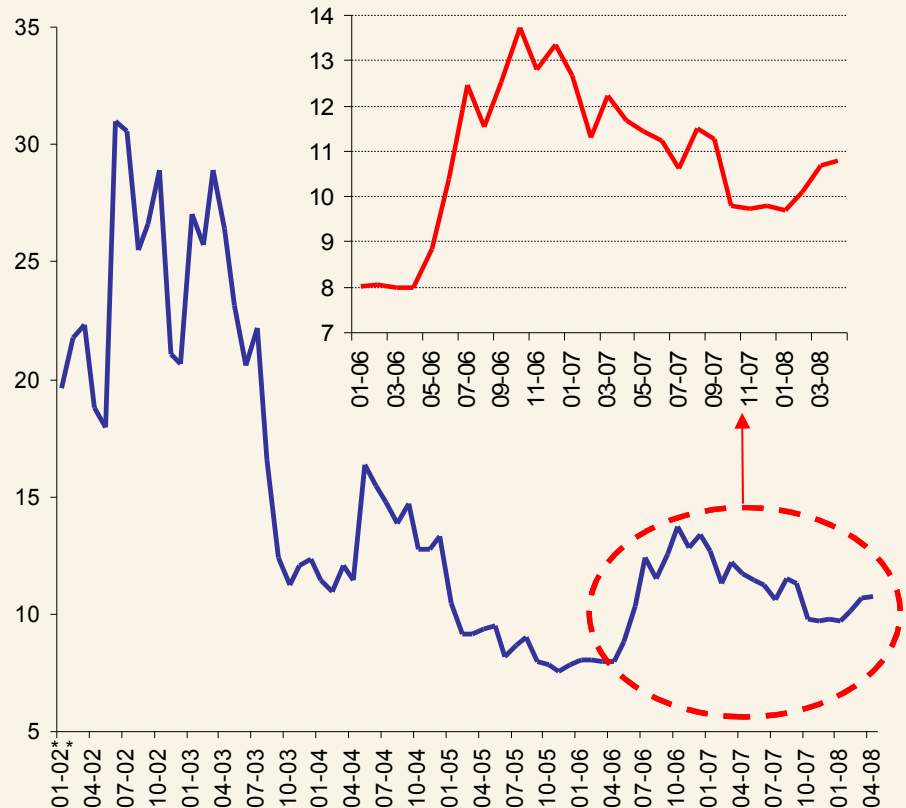
Source: Bloomberg, CBT.



# Interest Rate Developments

- ✓ Thanks to the achievements in macroeconomic stability, nominal interest rates and real interest rates have substantially declined from 2002 onwards.
- ✓ Real interest rates, which fluctuated in the 20-30% interval in early 2002, dropped to 9.8% at the end of 2007.
- ✓ In early 2008, real interest rates rose to 10.8% due to financial turbulences.

**Real Borrowing Interest Rate**  
(January 2002 – April 2008, compound, percent)



\* Based on the interest rates accepted in the Treasury's domestic borrowing auctions and the 12-month inflation forecasts of the Expectations Survey.

Source: Undersecretariat of Treasury and CBT.



# Interest Rate Developments

- ✓ Nominal interest rate is determined by three variables:

$$\text{Nominal Interest Rate} = \text{Real Interest Rate} + \text{Inf. Expectations} + \text{Inf. Risk Premium}$$

- ✓ **Real interest rate** is determined by real variables such as the marginal efficiency of capital and the savings rate.
- ✓ The level of inflation compensation, which is the sum of **inflation expectations** and the **inflation risk premium**, will be lower in an environment where price stability is achieved.
- ✓ A fall in both inflation expectations and the risk premium leads to a decline in nominal interest rates.

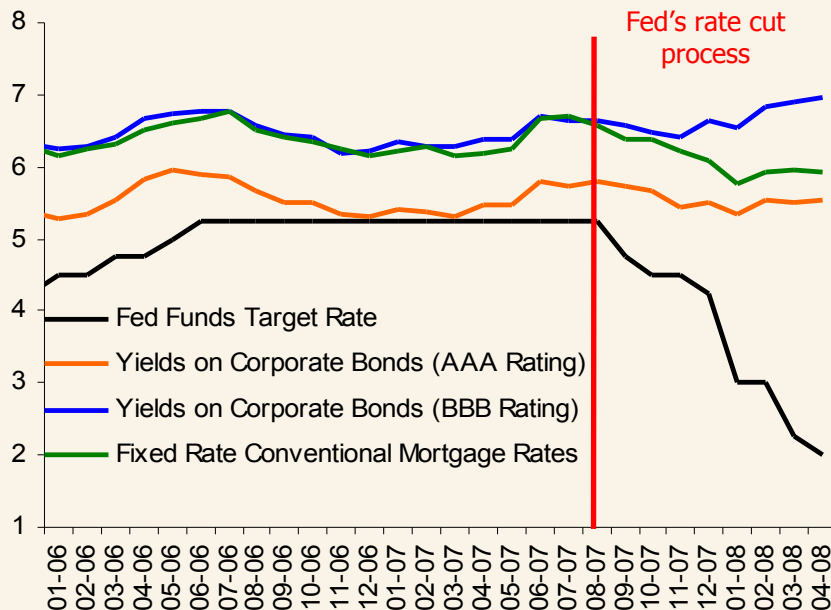
- ✓ It is not possible to bring interest rates down by artificial cuts in policy rates and below the level required to sustain the disinflation process.
- ✓ On the contrary, such a move would lead to higher medium and long-term interest rates since it would deteriorate inflation expectations and risk perceptions.



# Policy Rate - Market Rate Relationship

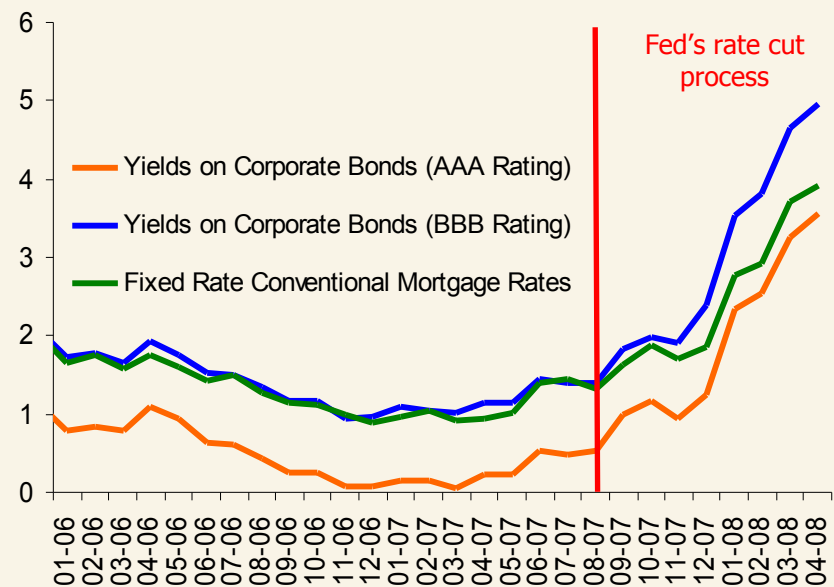
- ✓ Policy rate cuts are not sufficient to reduce the financial costs of commercial enterprises and consumers, which are set in free market environment.
- ✓ For instance, despite the monetary loosening being implemented by the Federal Reserve since September 2007, cost of financing for housing and commercial sector follow an upward trend, contrary to the decline in policy rates, chiefly owing to the deterioration in risk perceptions.

**Interest Rates in the US Economy**  
(January 2006 – April 2008, percent)



Source: FED

**Difference Between the Overall Level of Interest Rates and Policy Rates in the US Economy**  
(April 2006 – April 2008, percent)



Source: FED





# Exchange Rate – Interest Rate Relationship

## Floating Exchange Rate Regime



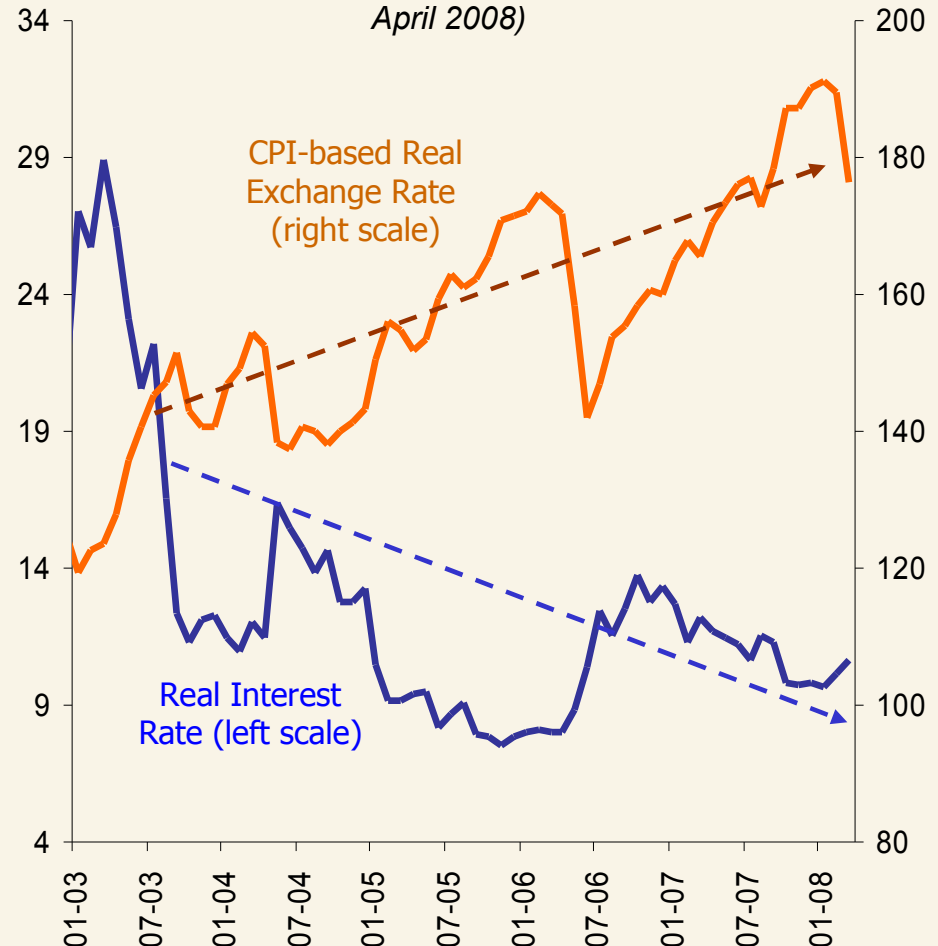
✓ The exchange rates is determined under market conditions and reflects all economic and political policy implementations, macroeconomic variables, as well as expectations.

✓ The Central Bank does not follow a policy of “*high interest rate - low exchange rate*”. The value of the Turkish currency is not an objective, but a consequence.

✓ The post-2001 period shows that real interest rates and the value of the Turkish currency have moved in opposite direction.

✓ The Central Bank’s follows “*the interest rate policy needed for low inflation*”.

**Real Borrowing Interest Rate (percent) and Real Exchange Rate (CPI-based, January 2003 – April 2008)**



\* Based on the interest rates accepted in the Treasury's domestic borrowing auctions and the 12-month inflation forecasts of the Expectations Survey. Source: CBT, Undersecretariat of Treasury.



# Exchange Rate – Interest Rate Relationship

**The relationship between Central Bank policy rates and the exchange rates is complex and multidimensional.**

- ✓ Policy rate cuts would set off two mechanisms that work in opposite directions:
  1. **Primary effect:** The yield of the YTL-denominated assets would decline, demand for foreign exchange would increase, Turkish currency would come under pressure for depreciation.
  2. **Expectation Channel:** A positive signal would be given about the economic outlook, confidence would increase, reverse currency substitution would strengthen, appreciation pressure would mount on Turkish currency.
  
- ✓ In addition, exchange rate may move independently from economic fundamentals and policy rates due to liquidity conditions, investor sentiment and changes in expectations.
  
- ✓ The immediate market conditions would determine which of these channels will prevail to what extent.



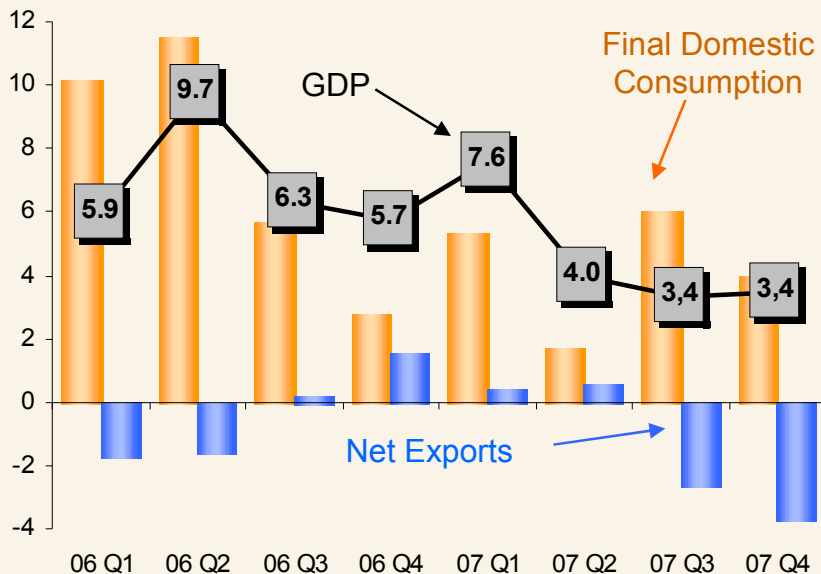
# VIII. Economic Outlook

# Economic Growth

- ✓ The contribution of domestic demand to economic growth increased in the second half of 2007 due to the pick-up in private consumption demand, while that of the net external demand stayed negative.
- ✓ Effects of the supply-side shock originating from the agricultural sector and the unfavourable developments in the global credit markets were the leading factors to decelerate economic growth in the second half of 2007.

**Growth Components**

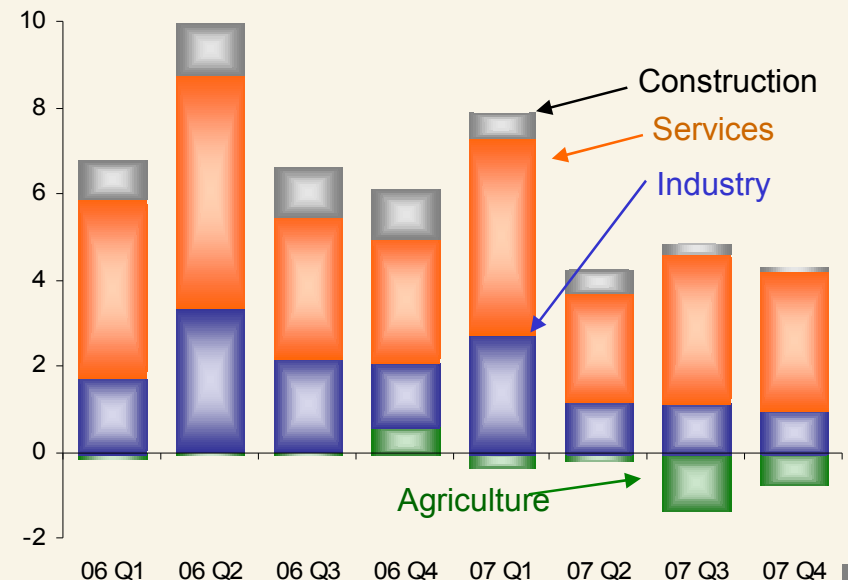
(2006 Q1 – 2007 Q4, year-on-year contribution, percent)



Source: TURKSTAT

**Growth Components**

(2006 Q1 – 2007 Q4, year-on-year contribution, percent)



Source: TURKSTAT

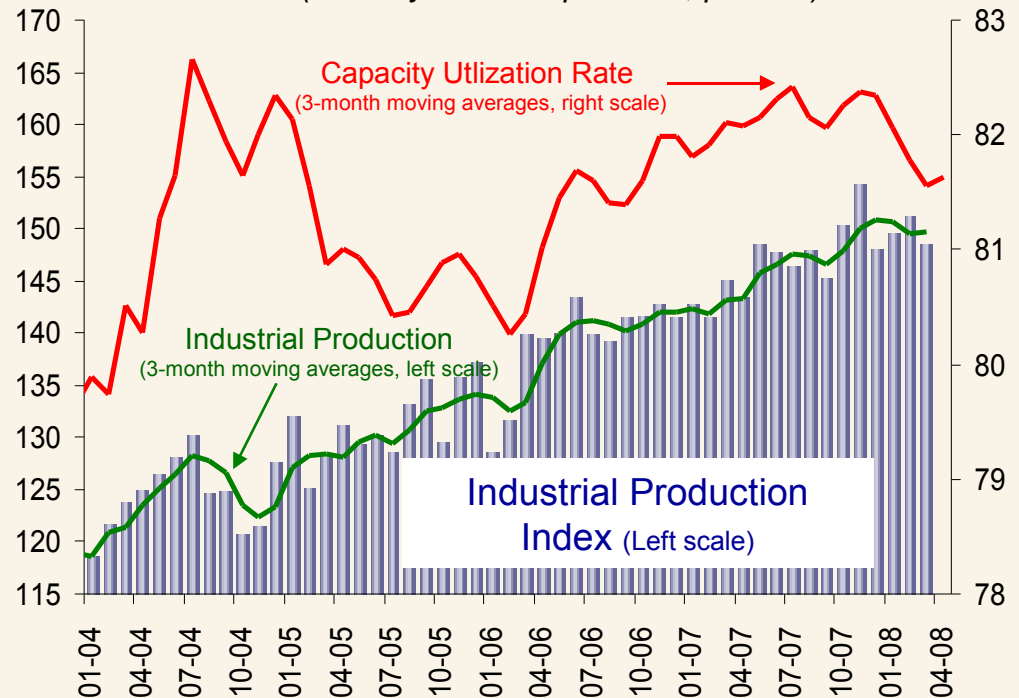


# Production

- ✓ Data pertaining to the first months of 2008 indicate the moderate growth in economy continues, albeit with slight slowdown.
- ✓ Accumulation of problems in the international credit markets has increased the downside risks in economic activities in the upcoming period.

- ✓ Seasonally adjusted industrial production index displayed a flat course in the first quarter of 2008.
- ✓ Capacity utilization rate maintains its high level despite recently decreasing figures.

**Industrial Production Index\* and Capacity Utilization Rate\*** (January 2006 – April 2008, percent)



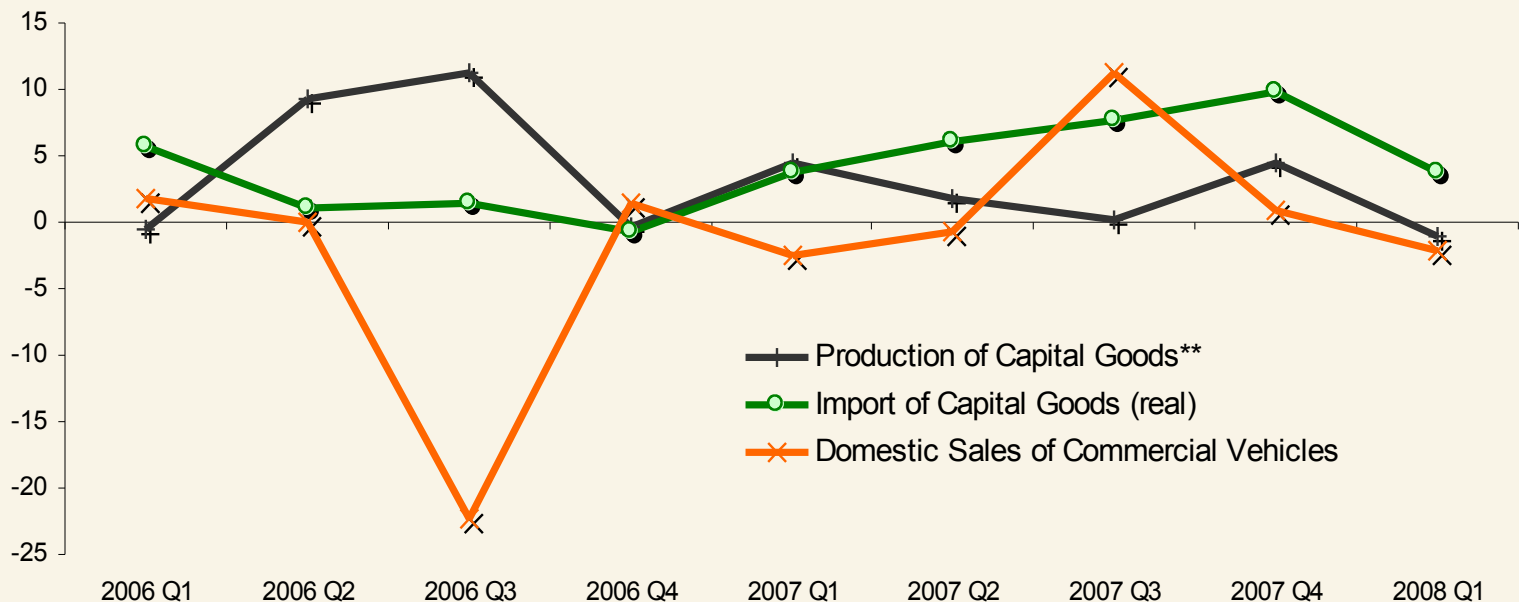
\* Seasonally adjusted  
Source: TURKSTAT, CBT



# Investment Demand

- ✓ Indicators of investment demand, such as production and import of investment goods, sales of commercial vehicles do not point to an increase in investments in the first quarter of 2008.

**Investment Demand Indicators\***  
(2006 Q1 – 2008 Q1 year-on-year change, percent)



\* Seasonally adjusted

\*\* Average of the production indices of Machinery-Equipment and Electrical Machinery and Appliances

Source: TURKSTAT, AMA, CBT

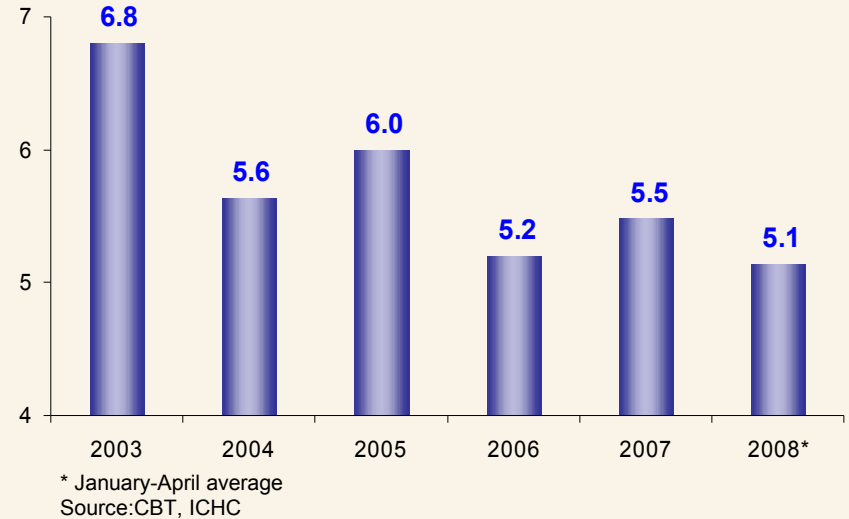


# Commercial Activities

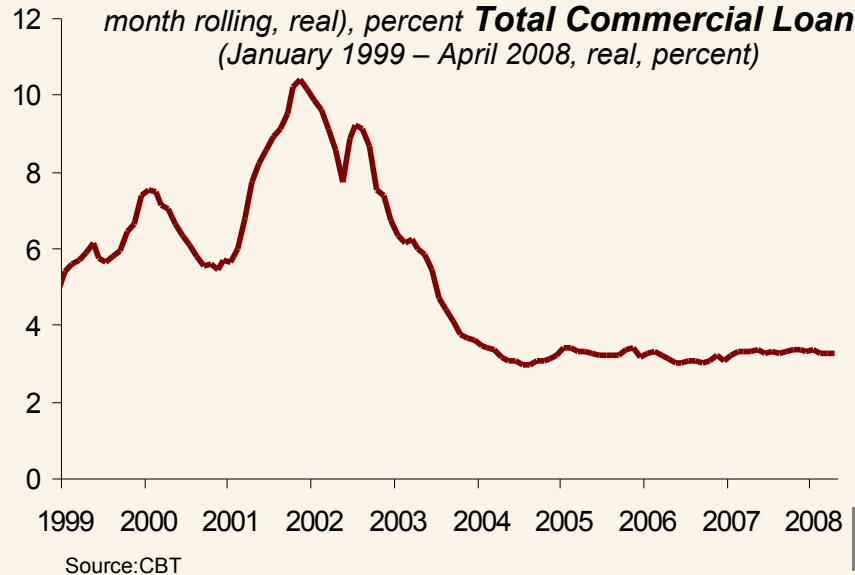
- ✓ Parallel to the economic activities that gained pace between 2002 and 2007, the number of bad checks increased in line with the number of bank checks used.
- ✓ The ratio of the amount of bad checks to the total checks submitted to the clearing house, which was 6.8% in 2003, declined to 5.5% in 2007. This ratio stood at 5.1% in the first 4 months of 2008.

- ✓ Likewise, the ratio of protested bills to commercial loans (an indicator of commercial activities) declined to 3.3% in April 2008 after reaching 11% in 2002.

**Ratio of Bad Checks to the Total Amount of Checks Submitted to the Clearing House (2003-2008\*, percent)**



**Ratio of the amount of Protested Bills to (12-month rolling, real), percent Total Commercial Loans (January 1999 – April 2008, real, percent)**

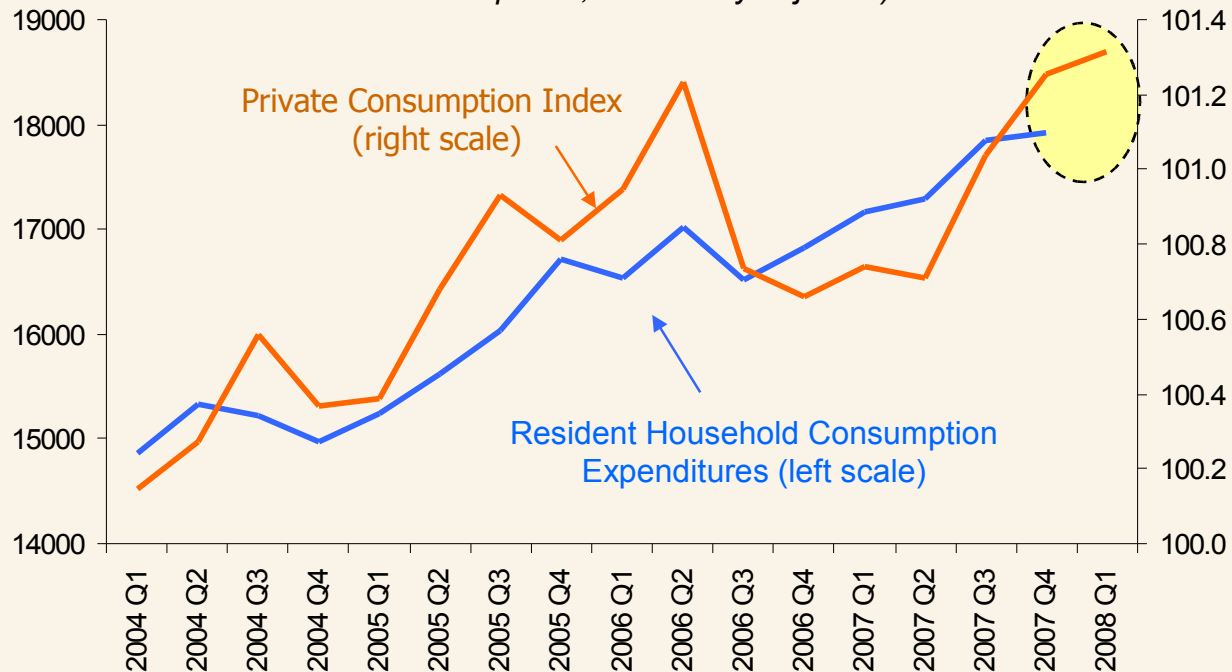




# Private Consumption

- ✓ There are signs of moderate recovery in consumption expenditures since the last quarter of 2006.
- ✓ The CBT Private Consumption Index points to a moderate pick-up in private final consumption expenditures in the first quarter of 2008.

**Private Consumption Index (2004 Q1 – 2008 Q1) and Resident Household Consumption Expenditures (2004 Q1 – 2007 Q4)**  
*constant prices, seasonally adjusted*



Series making up Private Consumption Index: Seasonally adjusted imports of consumption goods, seasonally adjusted real domestic taxes on goods and services, seasonally adjusted total domestic sales of white goods, seasonally adjusted domestic sales of automobiles.

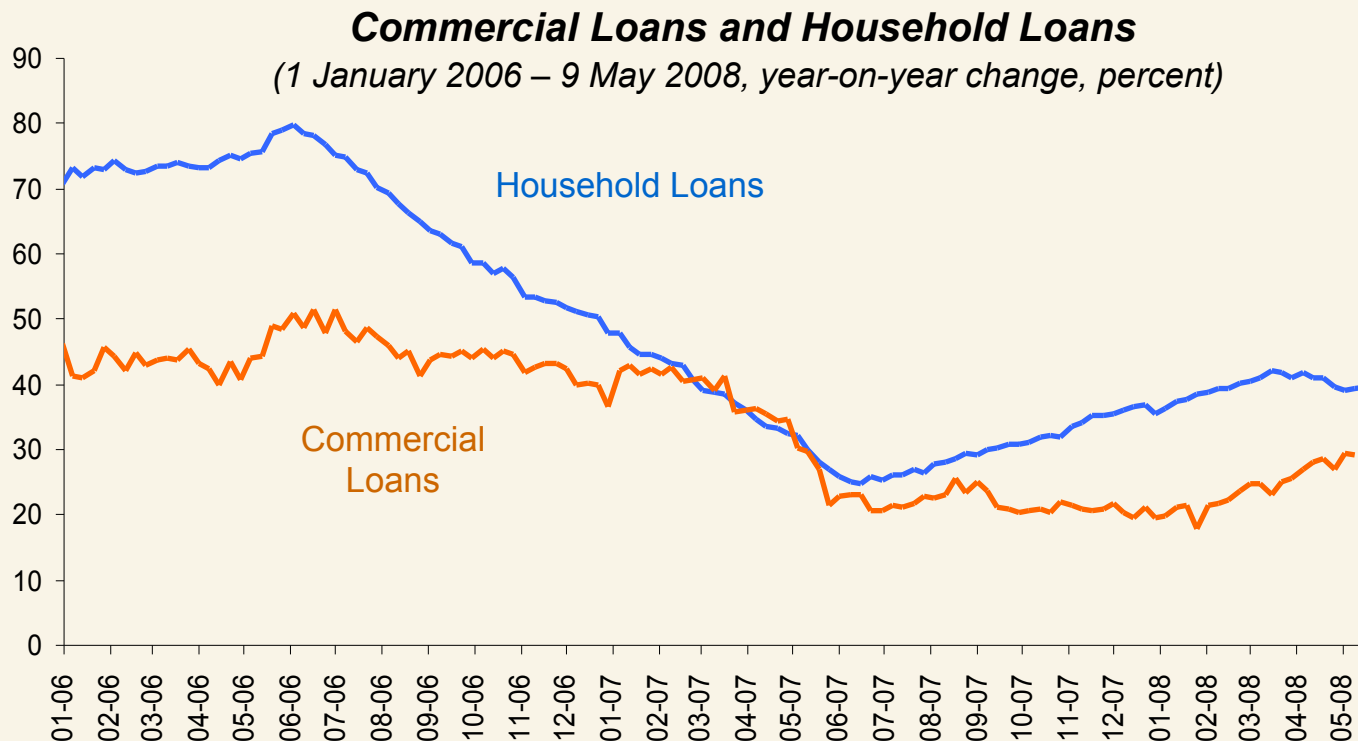
Source: TURKSTAT, CBT





# Bank Credits

- ✓ Although both commercial and consumer loans have continued to rise, a slowdown is expected in the lending tendency of the banks in the upcoming period due to the deterioration in the international liquidity conditions and global risk appetite.



Source: CBT

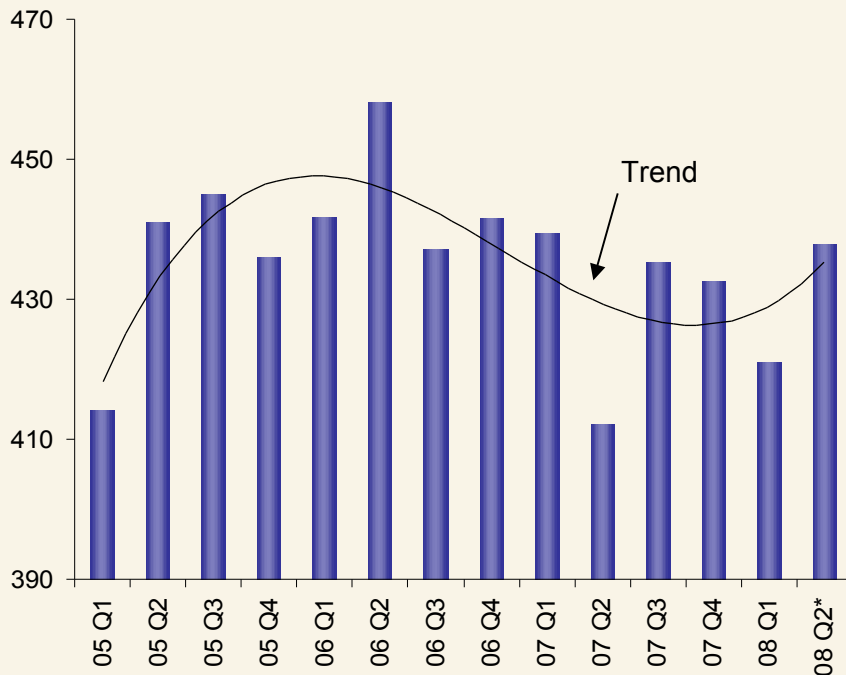


# Domestic Demand

- ✓ Sales of white goods and automobiles, indicators of the economic activities in the domestic market, maintained their current levels.

## Domestic White Goods Sales

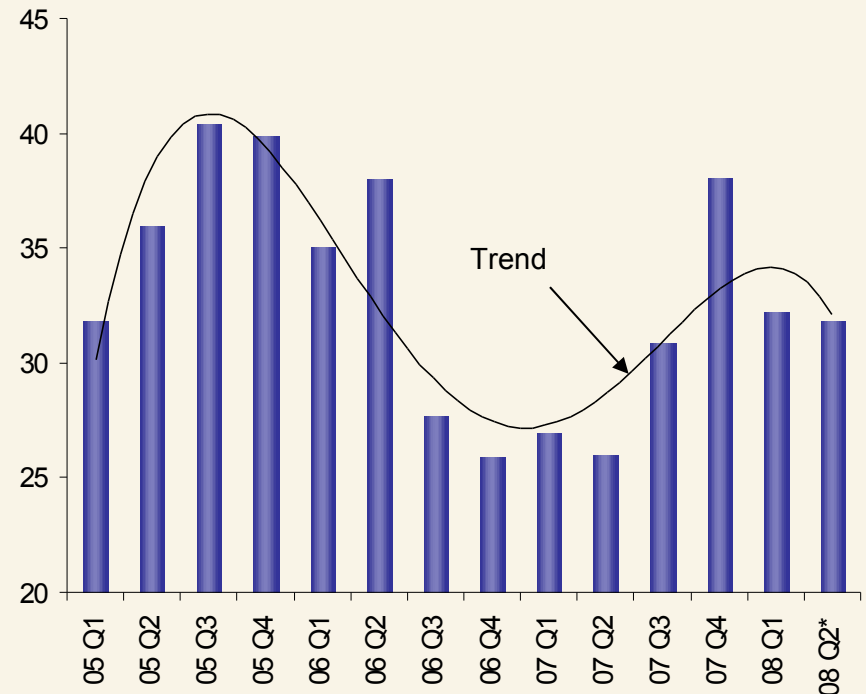
(2005 Q1 – 2008 Q2\*, seasonally adjusted, monthly averages, in thousands)



\* April 2008  
Source: AMA,CBT

## Domestic Auto Sales

(2005 Q1 – 2008 Q2\*, seasonally adjusted, monthly averages, in thousands)



\* April 2008  
Source: AMA,CBT

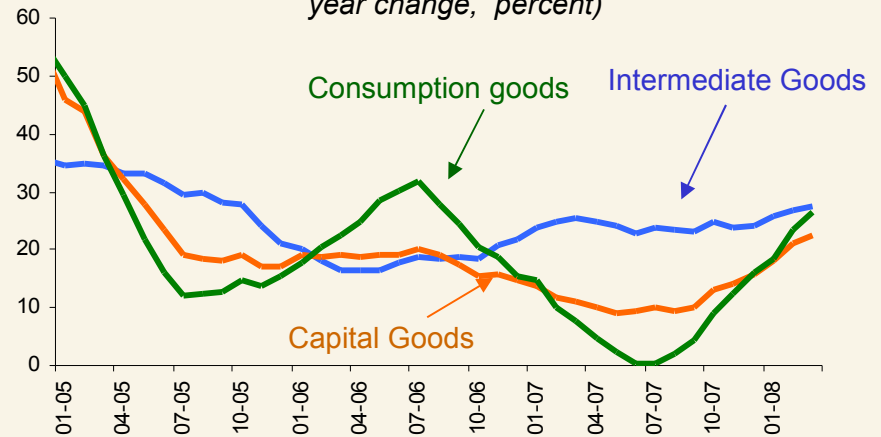
## The Rate of Increase in Imports



- ✓ The pace of imports, which slowed down since mid-2006 due to the weakening domestic demand, has been rising since July 2007.
- ✓ Total growth of imports has outpaced that of the imports of capital goods since May 2006.
- ✓ Squeeze in credits accompanied with recent developments in exchange rates increases the possibility of slowdown in imports.
- ✓ Imports of consumption goods has been following an upward trend since July 2007.
- ✓ Year-on-year increases in imports of durable goods and passenger cars are particularly strong

### Sub-components of Imports

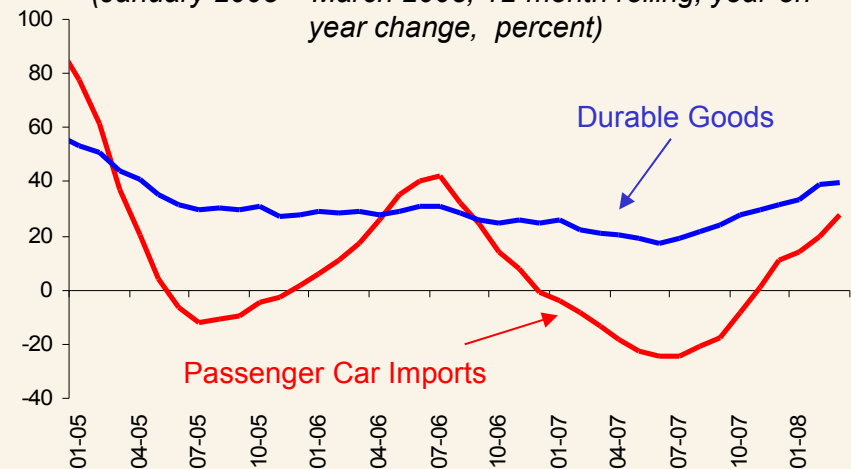
(January 2005 – March 2008, 12-month rolling, year-on-year change, percent)



Source: TURKSTAT

### Sub-components of Consumption Imports

(January 2005 – March 2008, 12-month rolling, year-on-year change, percent)



Source: TURKSTAT

**In the first quarter of 2008, budget realizations were more favourable compared to the previous year.**

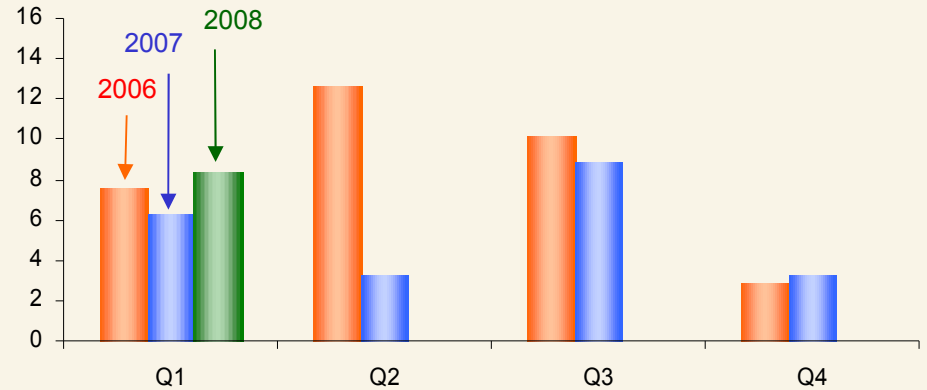


✓ According to program-defined central government budget accounts, primary surplus stood at YTL 8.3 billion in the first quarter of 2008, increasing by 34% compared to the same period of 2007.

✓ Quarterly rate of increase in tax revenues has outpaced that of the primary expenditures since the last quarter of 2007.

## Central Government Primary Balance

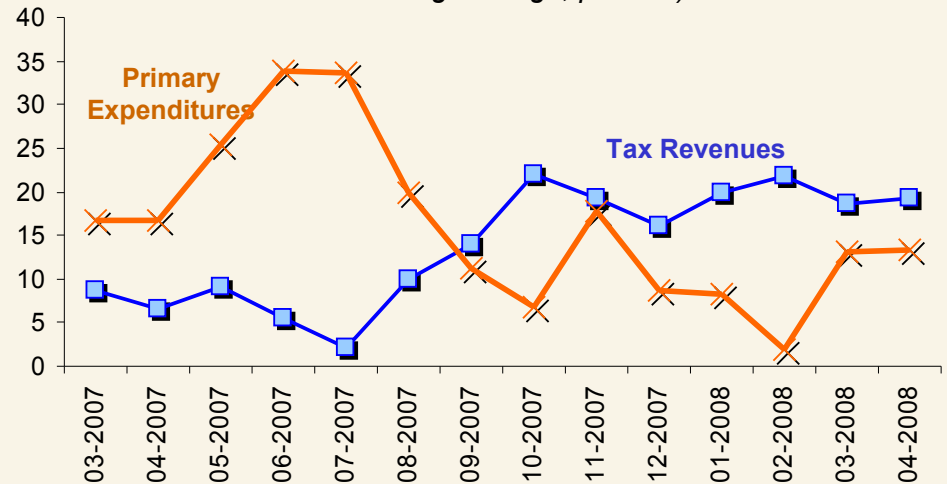
(Program defined, quarterly total, 2006 Q1 - 2008 Q1, YTL billion)



Source: Undersecretariat of Treasury

## General Budget Primary Expenditures and Tax Revenues

(March 2007 – April 2008, year-on-year change, -3-month moving average, percent)



Source: Ministry of Finance

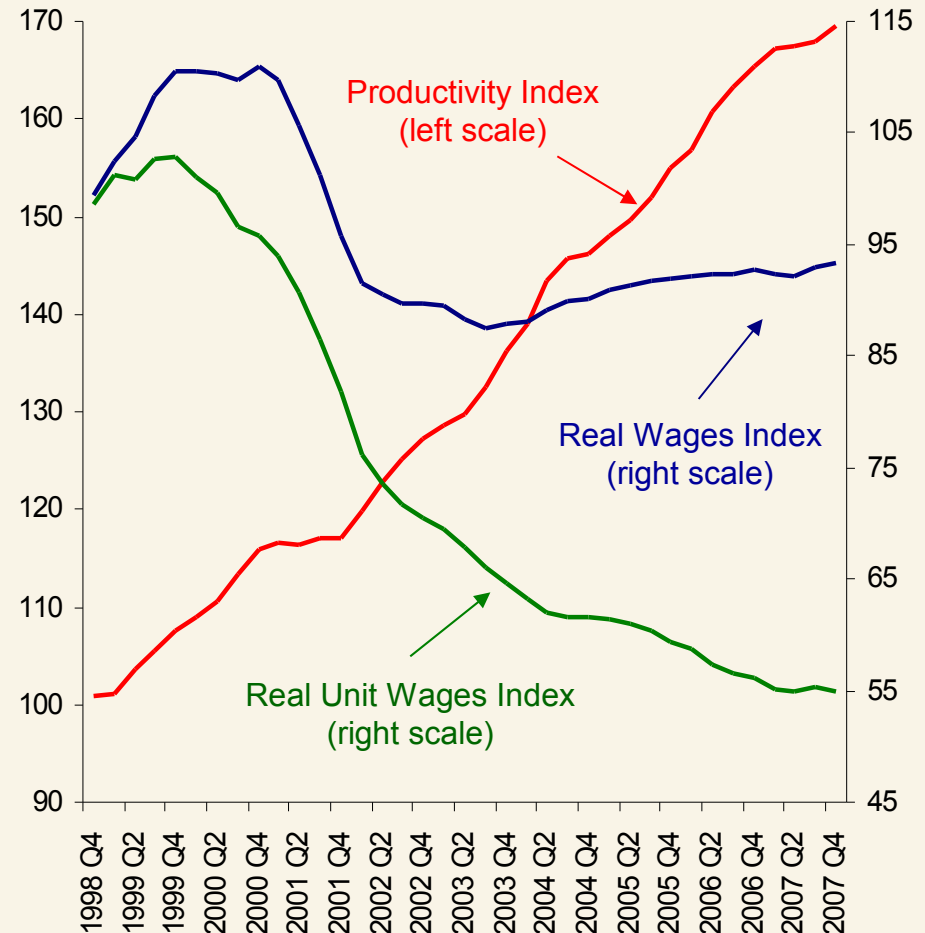


# Productivity and Wages

## Productivity and Wages

- ✓ In the manufacturing industry;
  - The rate of increase in productivity maintains its high level despite its deceleration in the second quarter of 2007.
  - Real wages have displayed a moderate increase since mid-2003 following the rapid decline in the post-2001 crisis era.
  - Due to the increase in productivity above the rises in real wages, real unit wages index calculated by dividing real wages by the productivity index keeps decreasing.

**Productivity, Real Wages and Real Unit Wages Index in the Manufacturing Industry**  
(1998 Q4 – 2007 Q4, per hour worked, 4-quarter moving average)



Source: TURKSTAT, CBT



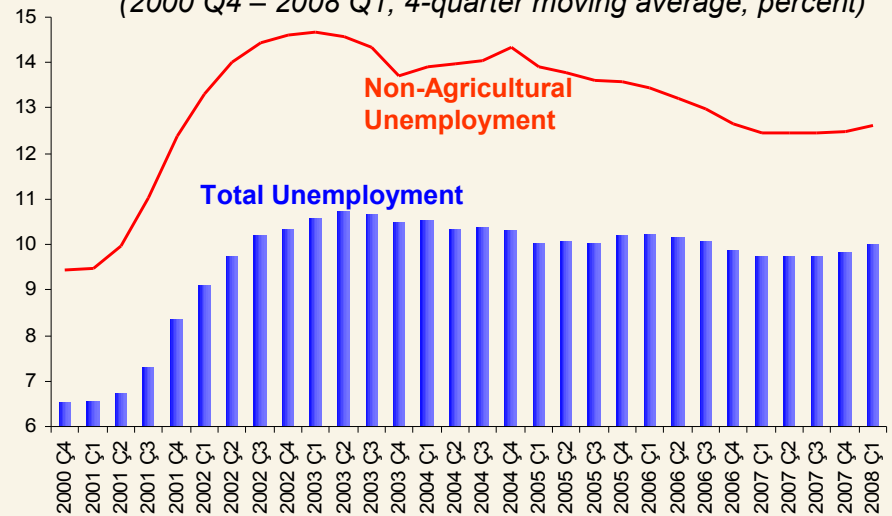
# Employment

## Labor Market



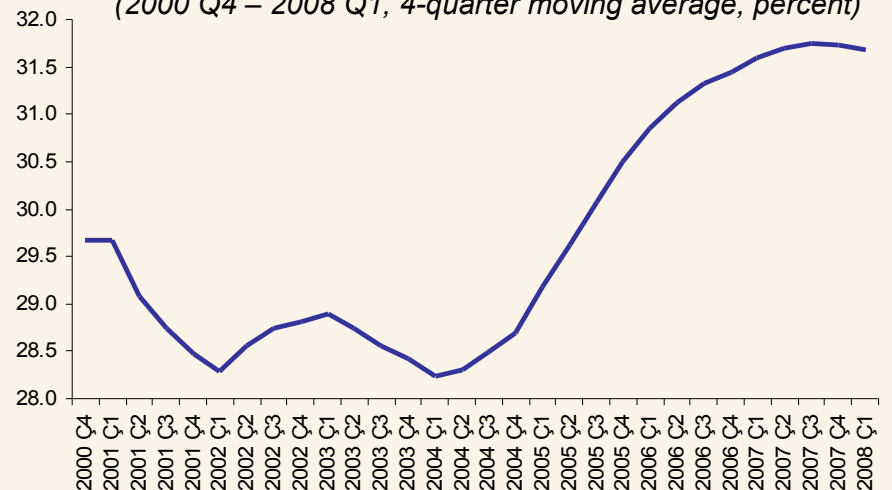
- ✓ Unemployment rate stood at 11.6% as of in February 2008, 2 points higher than compared to the same month of last year. Non-agricultural unemployment rate was unchanged at 14.2%.
- ✓ The employment in non-agricultural economic activities comprising industrial, construction and services decelerated in the second half of 2007.
- ✓ 355 thousand new jobs were created in the non-agricultural sectors in the last 12 months as of February 2008.

**Unemployment and Non-Agricultural Unemployment Rates**  
(2000 Q4 – 2008 Q1, 4-quarter moving average, percent)



**Ratio of the Non-Agricultural Employment to the Population Aged 15 and Above**

(2000 Q4 – 2008 Q1, 4-quarter moving average, percent)





# Foreign Trade Developments

The openness of the Turkish economy has increased since 2001 and foreign trade has posted high growth rates.



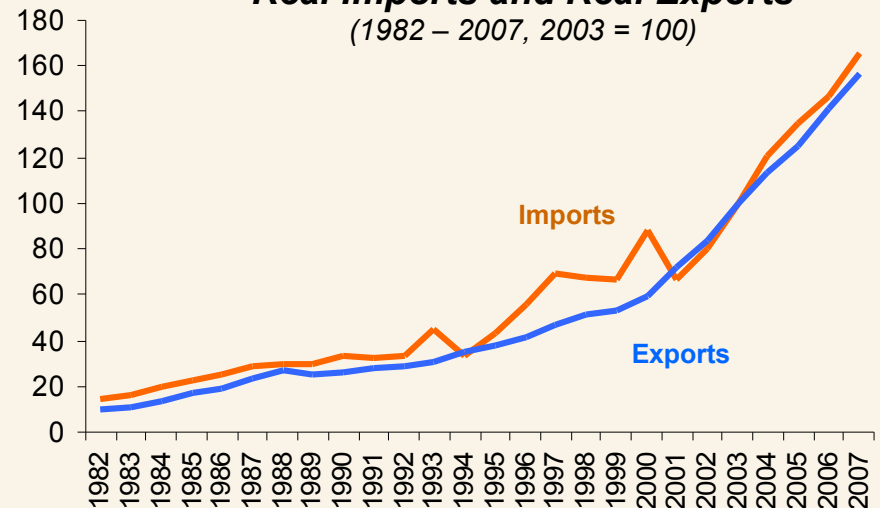
✓ Contrary to the 1995-2000 period, real exports and real imports have grown parallel to one another.

✓ As of March 2008 exports posted a 30.0% increase over the last 12 months, while that of imports stood at 26.6%.

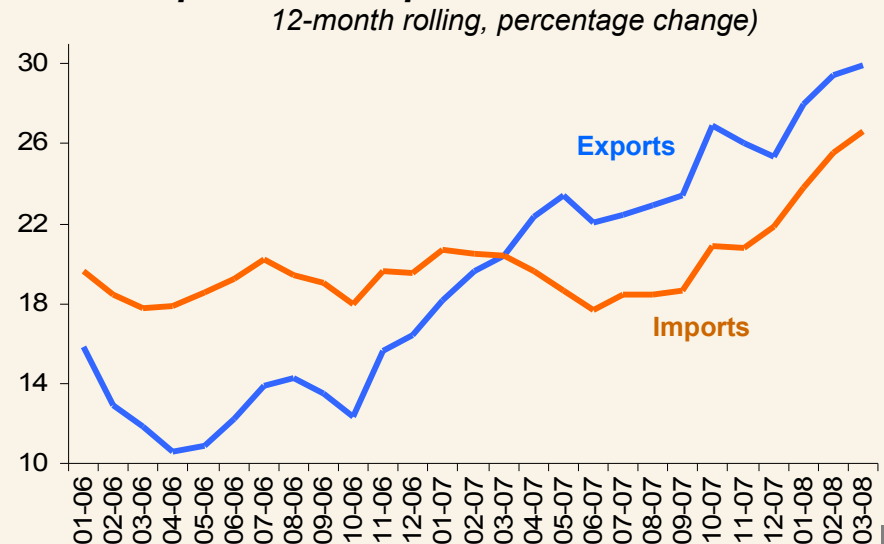
✓ The expected slowdown in developed economies poses a downside risk in export performance in the upcoming period.

**Real Imports and Real Exports**

(1982 – 2007, 2003 = 100)



**Imports and Exports** (January 2006 – March 2008, 12-month rolling, percentage change)



Source: TURKSTAT



# Balance of Payments – Current Account

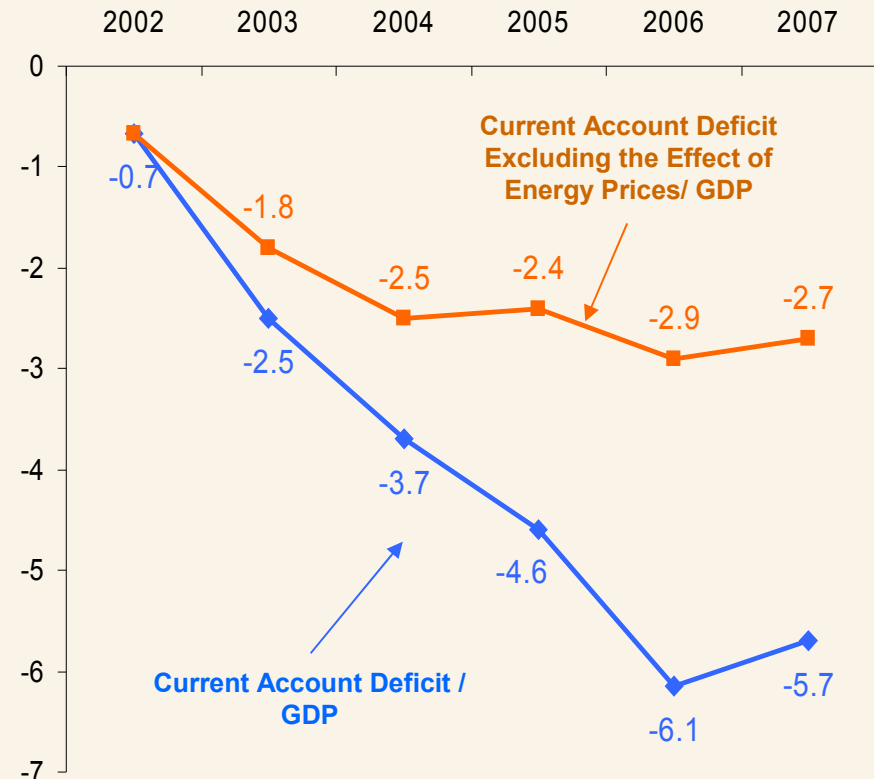
✓ Current account deficit in 2007 rose by 18.0% compared to 2006 and reached USD 38 billion.

✓ In 2007, the ratio of current account deficit to GDP declined by 0.4 points compared to 2006 and stood at 5.7%.

✓ The adverse effect of high energy prices on current account deficit continues.

✓ High energy prices contributed around 3 percentage points to the of ratio current account deficit to GDP in 2007.

**Current Account Balance and The Effect of Energy Prices on the Current Account Deficit\***  
(2002 – 2007, ratio to GDP, percent)



\*The effect of energy price increases on the current account in the 2003-2007 period was calculated by keeping the prices of 2002 constant. Energy Sub-items: Stone coal and lignite, crude oil and natural gas under the mining and quarrying sector, and coke coal, refined petroleum products and nuclear fuels under the manufacturing industry.

Source: TURKSTAT, CBT

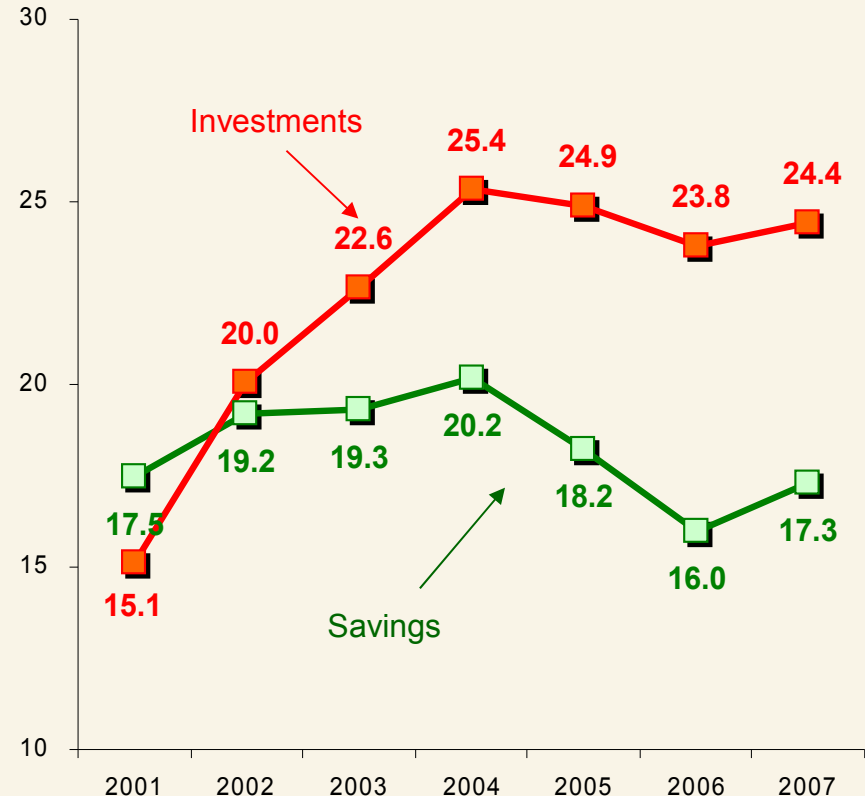




# Balance of Payments – Current Account

- ✓ There is a direct and strong relationship between current account deficit and economic growth rates.
- ✓ The high increase in investments is the primary reason of the current account deficit .
- ✓ Current account deficit is a structural problem. Macroeconomic stability and falling interest rates lead to an increase in consumption and investment demand. The structural characteristics of the economy necessitate the imports of intermediate goods in order to meet the increase in production.
- ✓ Current account deficit should be controlled via supply and demand-side macro and micro policies with a medium and long-term perspective.

**Domestic Savings and Investments**  
(2001-2007, ratio to GNP, percent)



\*1987 based series

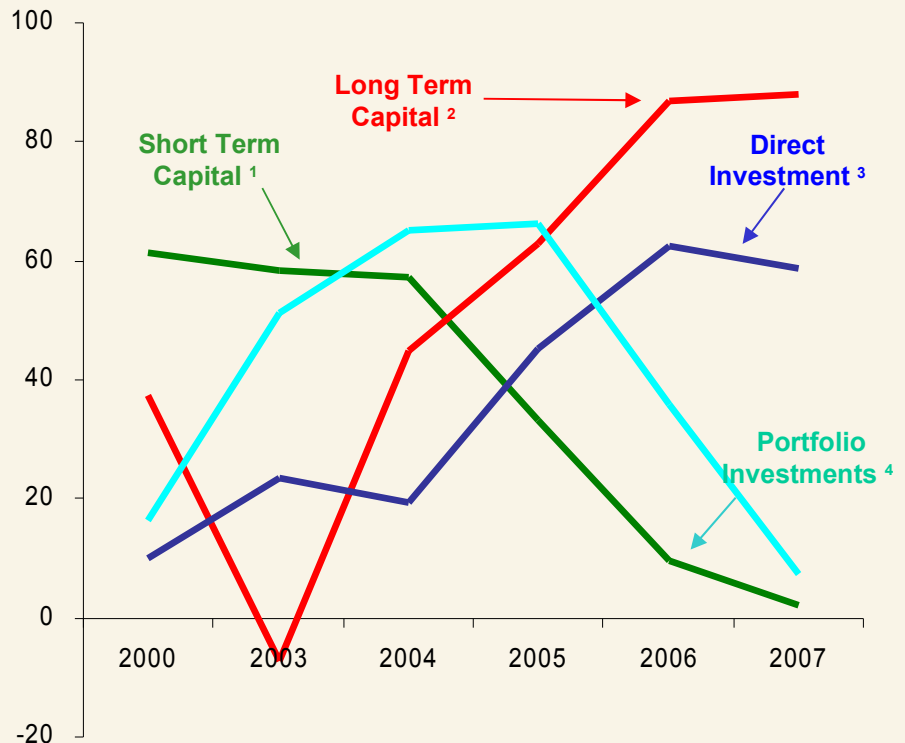
Source: : SPO Program for 2008, CBT

## Capital Flows



- ✓ Long-term credits, along with foreign direct investments, are crucial for the financing quality of current account deficit as well as for reducing fragility of the economy to external shocks.
- ✓ Short-term capital and portfolio inflows have substantially declined in 2007.
- ✓ In this period, current account deficit has been financed via long-term credits and foreign direct investments.

**Ratio of the Financing Items of the Current Account Deficit to Current Account Deficit (2000 – 2007, percent)**



<sup>1</sup> **Short Term Capital**: Net short term loans borrowed by overseas banks, the real sector and the public sector besides the deposits possessed by the residents abroad in the banks

<sup>2</sup> **Long Term Capital**: Net long term loans borrowed by overseas banks, the real sector and the public sector besides the deposits possessed by the residents abroad in the banks

<sup>3</sup> **Direct Investment**: Direct Domestic Investment Inflow

<sup>4</sup> **Portfolio Investment**: Equities and Securities purchases of residents abroad

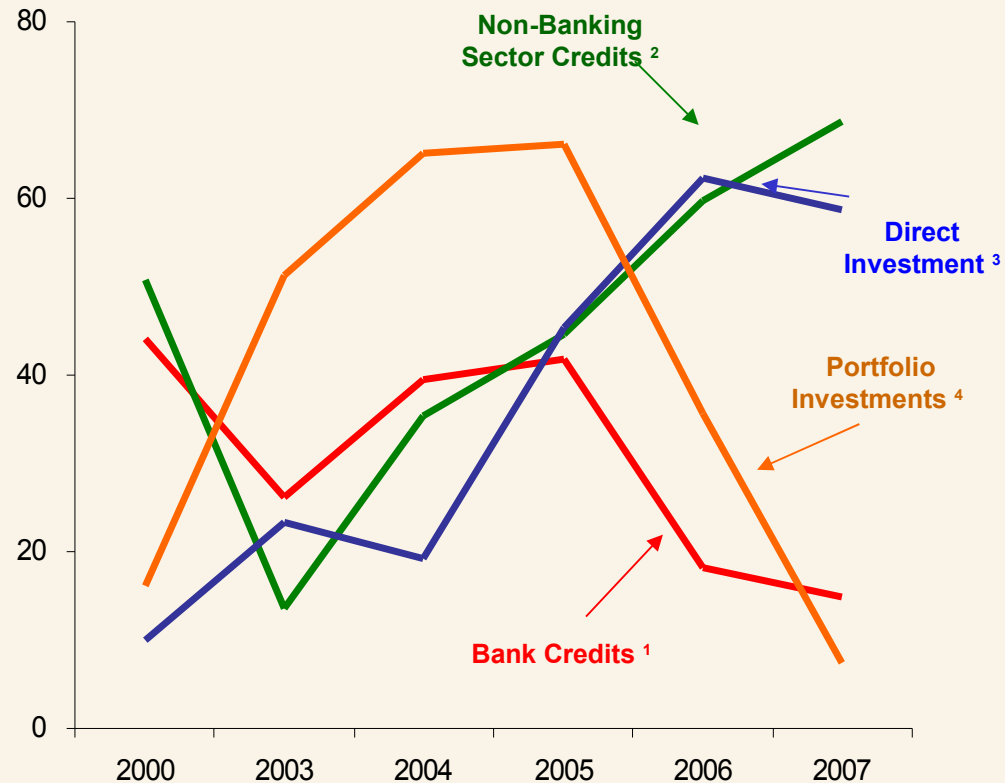
## Capital Flows



✓ The ratio of foreign direct investment and long-term capital to GDP, which was 7.5% in 2006, fell to 3.4% in 2007.

✓ The ratio of portfolio investments and short-term capital to GDP declined from 3.3% to 1.3%.

**Ratio of the Financing Items of the Current Account Deficit to Current Account Deficit (2000 –2007, percent)**



<sup>1</sup> **Bank Credits:** Short and Long Term Credit Utilization of the Banking Sector abroad

<sup>2</sup> **Non-Banking Sector Credits :** Short and Long Term Credit Utilization of the Non-Banking Sector abroad

<sup>3</sup> **Direct Investment:** Direct Domestic Investment Inflow

<sup>4</sup> **Portfolio Investment:** Equities and Securities purchases of residents abroad

Source: CBT



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

**PRESENTATION BEFORE THE COUNCIL OF  
MINISTERS, AND**

**THE PLANNING AND BUDGET COMMISSION OF  
THE GREAT NATIONAL ASSEMBLY OF TURKEY**

**Durmuş YILMAZ  
Governor**

**May 2008**