TÜRKİYE CUMHURİYET MERKEZ BANKASI

Monetary Policy and Financial Stability

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Deputy Governor

May 2011

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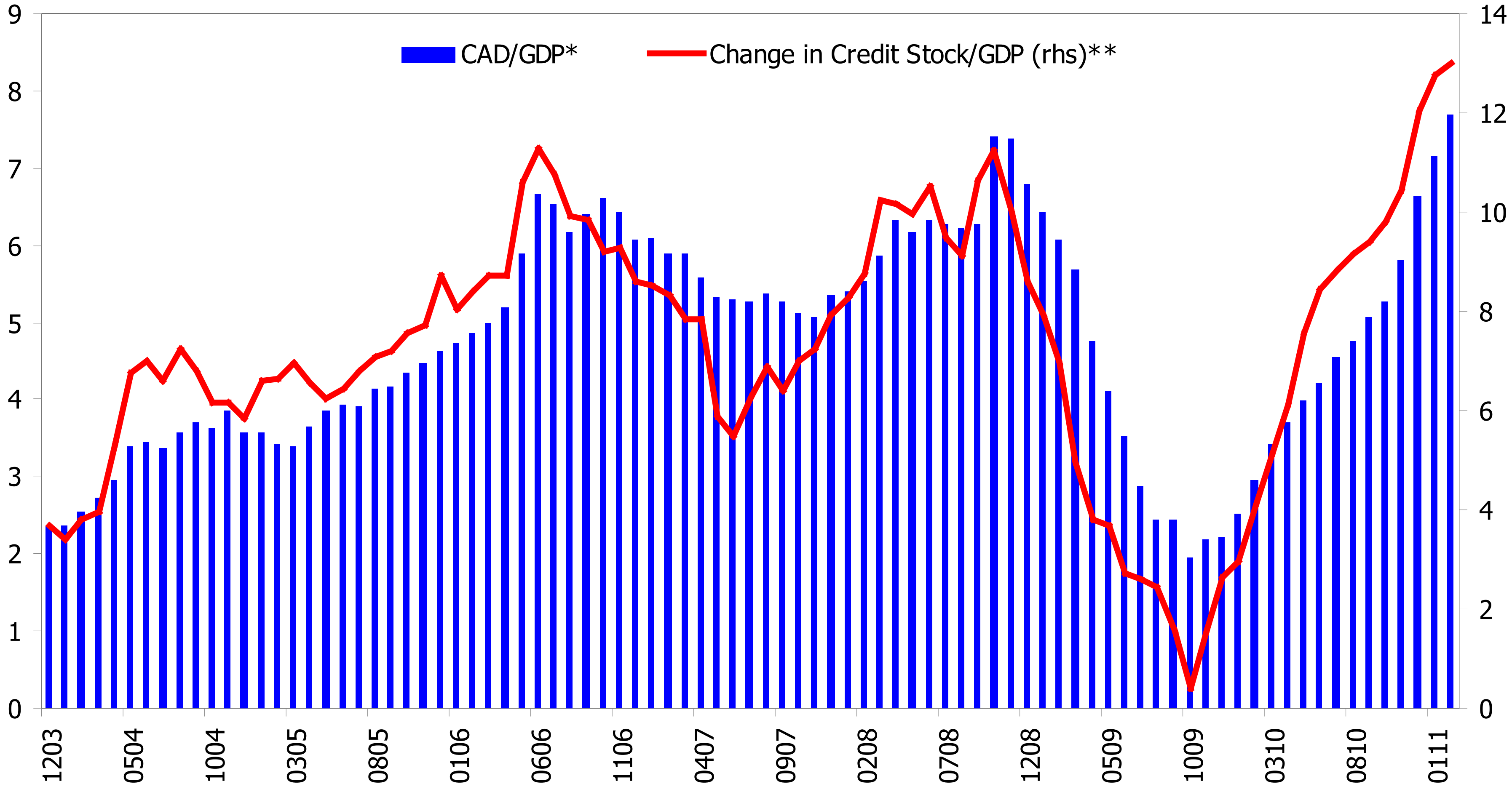
A monetary policy challenge: Existence of the financial stability problem…

Credit Growth and Current Account Deficit (%)



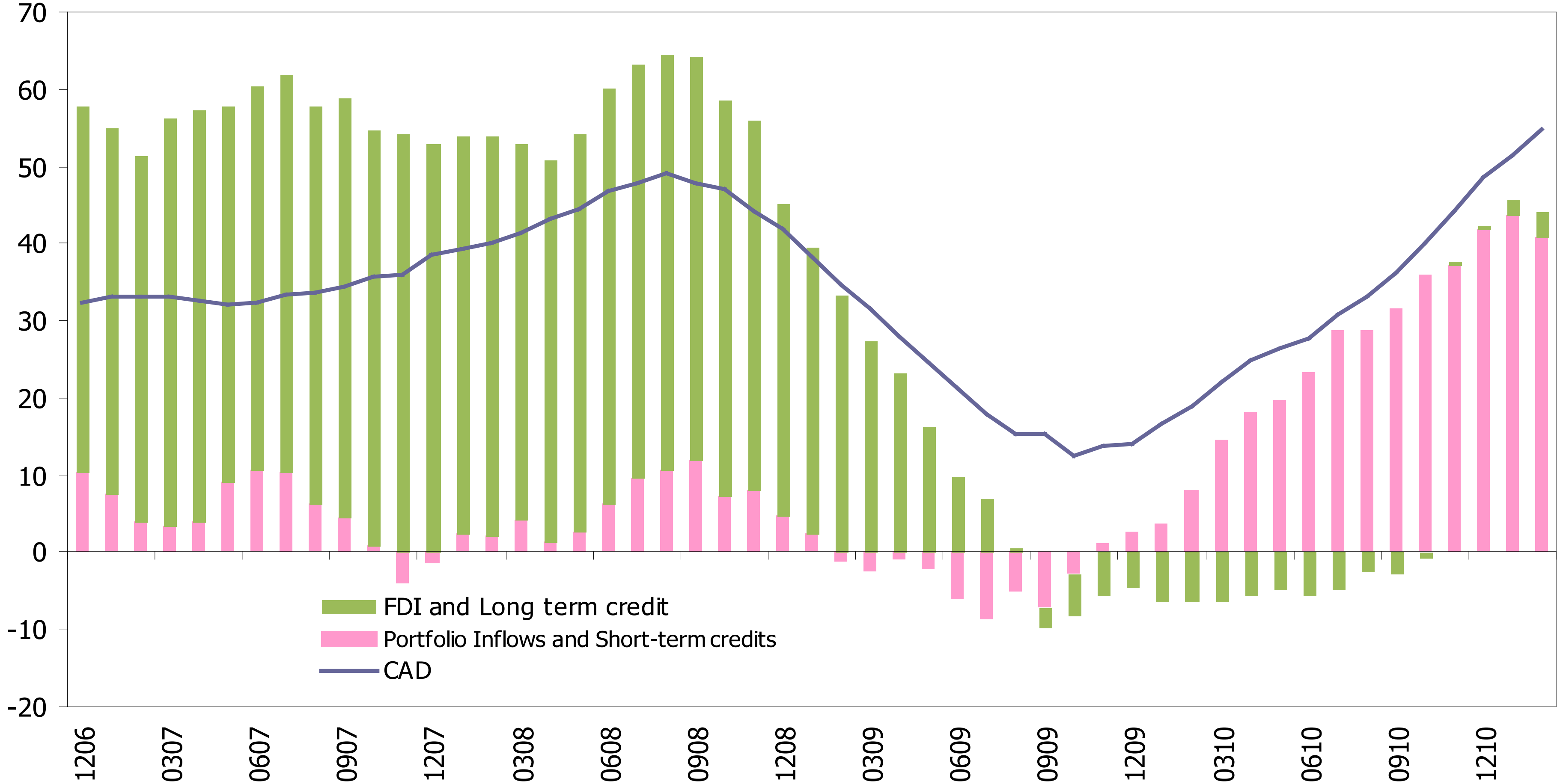
Source: CBRT

Last observations: April 2011 for Credit,

Worsening CAD financing…

Finance of Current Account Deficit, USD billion,

12-month rolling sum



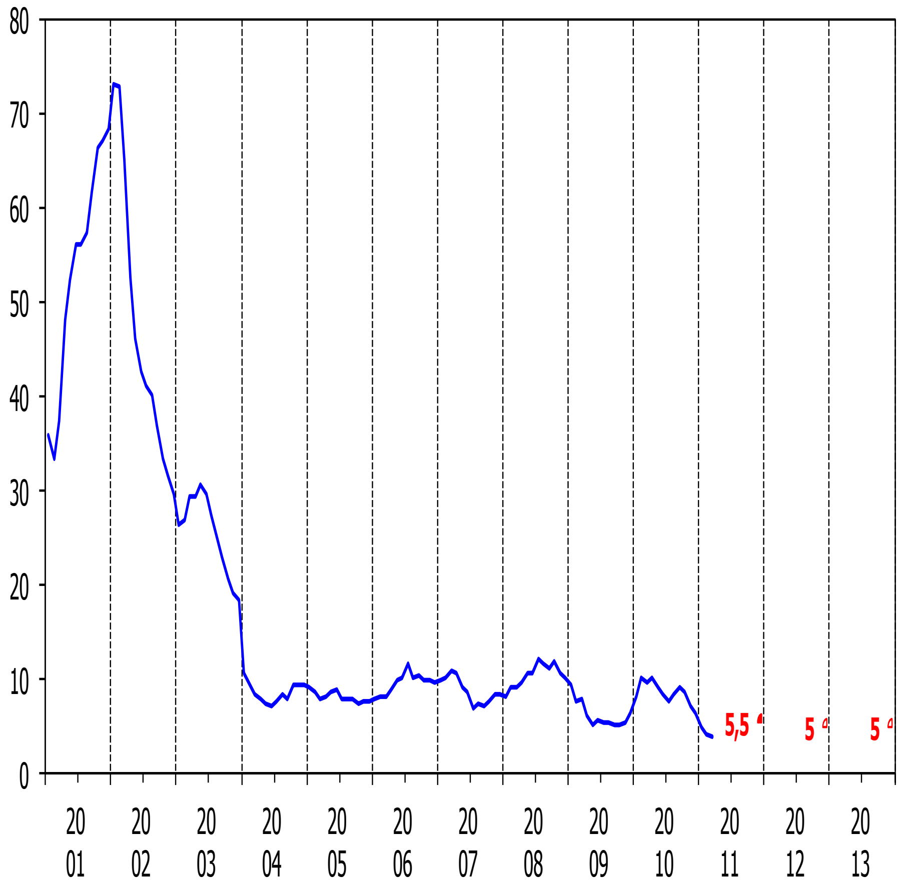
Source: CBRT

Last observations: March, 2011 for BoP, April 2011 for Credit,

despite disinflation continues

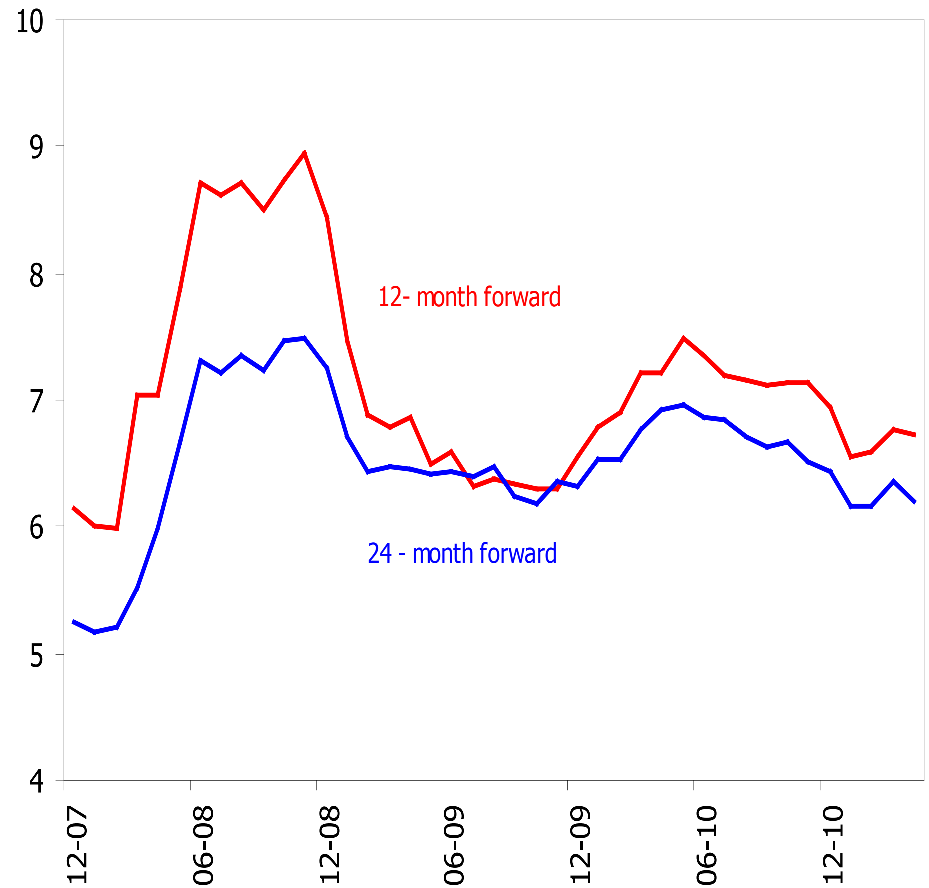
Inflation Realizations

(%, red dots are the year-end inflation targets)



Inflation Expectations

(%.)



Source: CBRT

Last observations: May, 2011

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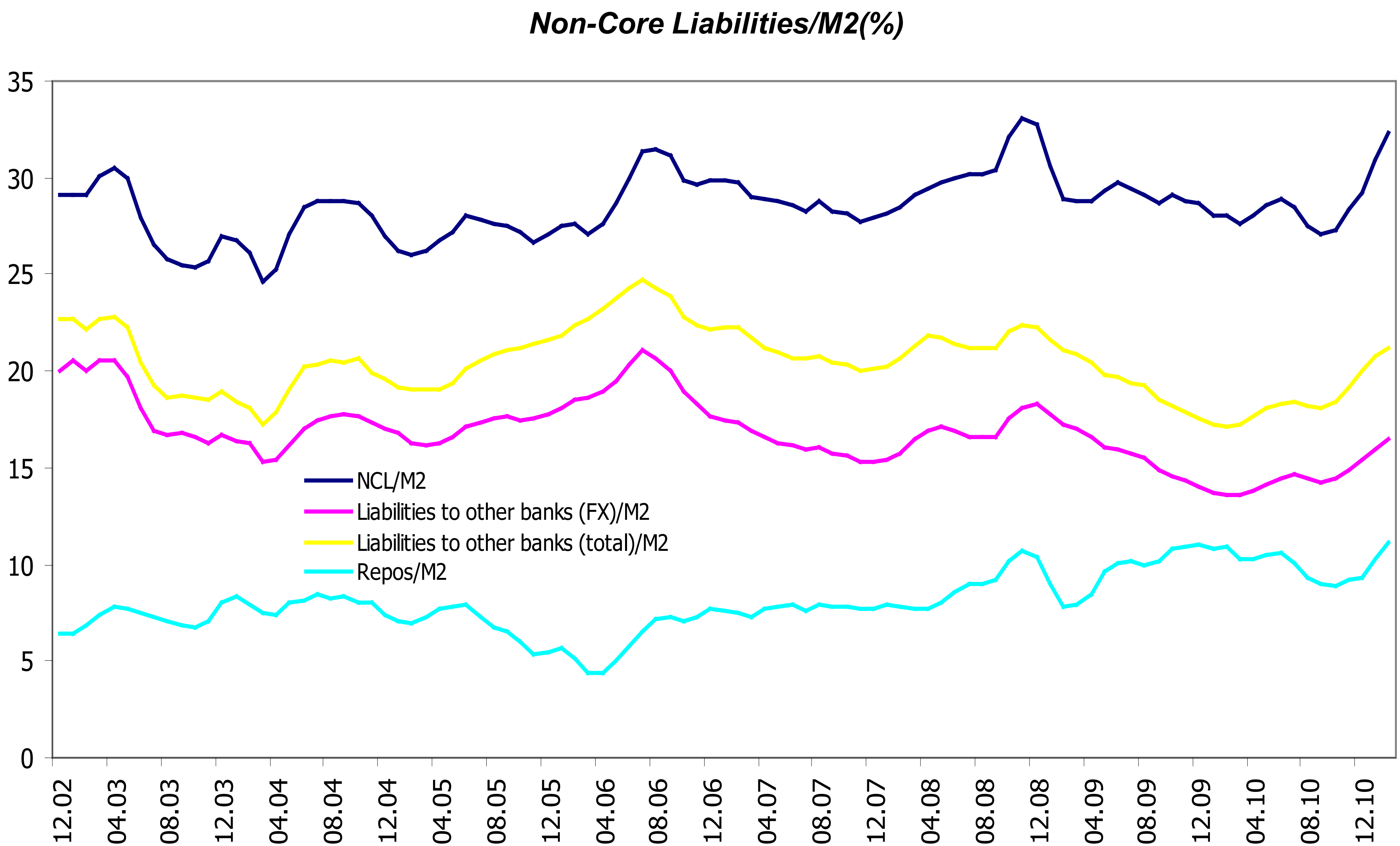
Non-core liabilities: A source of funding for excessive credit?



Source: CBRT

Last observations: March, 2011

No Dichotomy Between Monetary and Financial Policy

- Financial disruptions could do serious harm to economy
- But also they endanger price stability
- Monetary and financial policies are intrinsically linked
- Central banks need to coordinate monetary and financial policy

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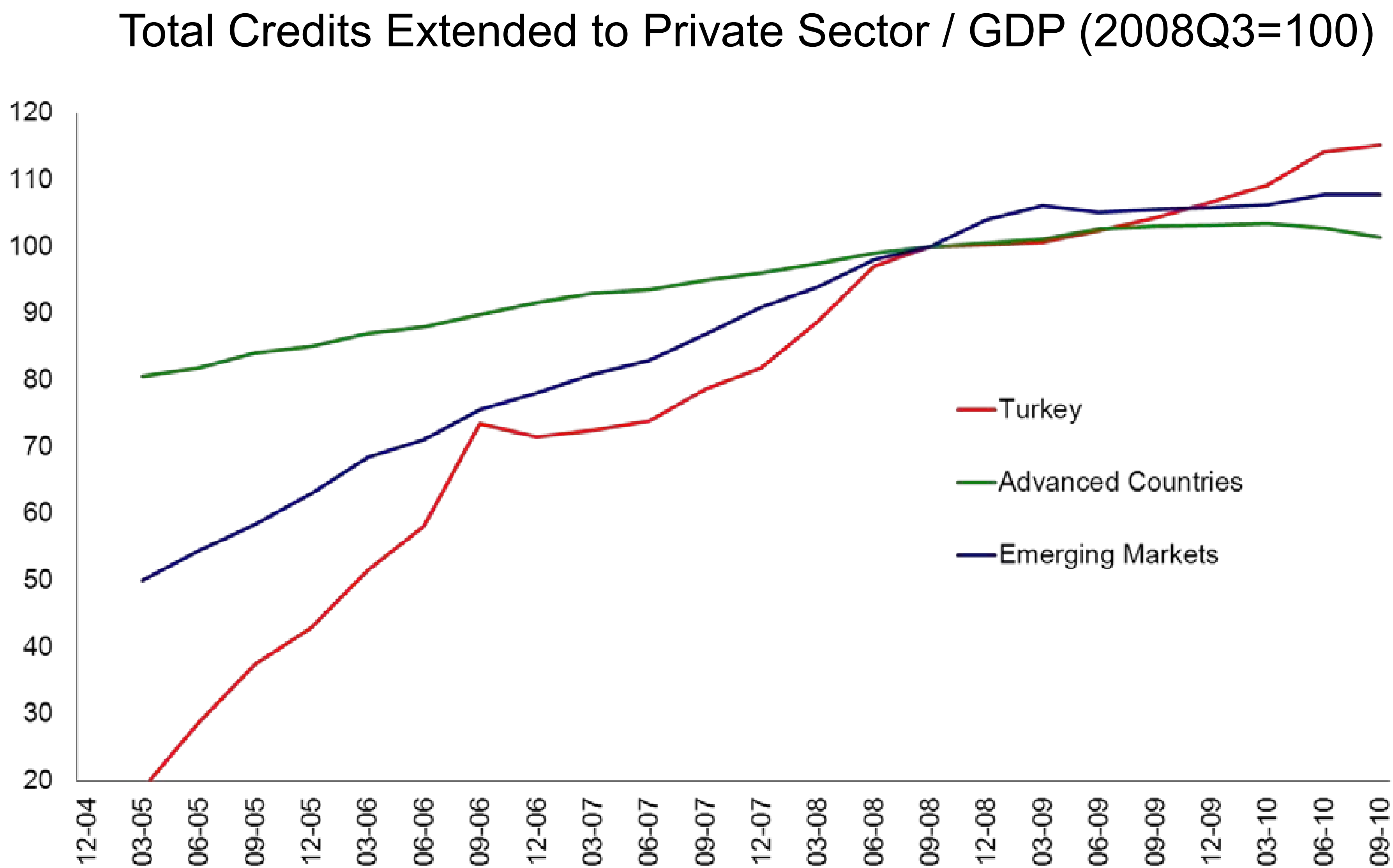
III. New Policy Mix

IV. Outcomes of the New Policy

V. Discussion on Monetary and Macroprudential Policies

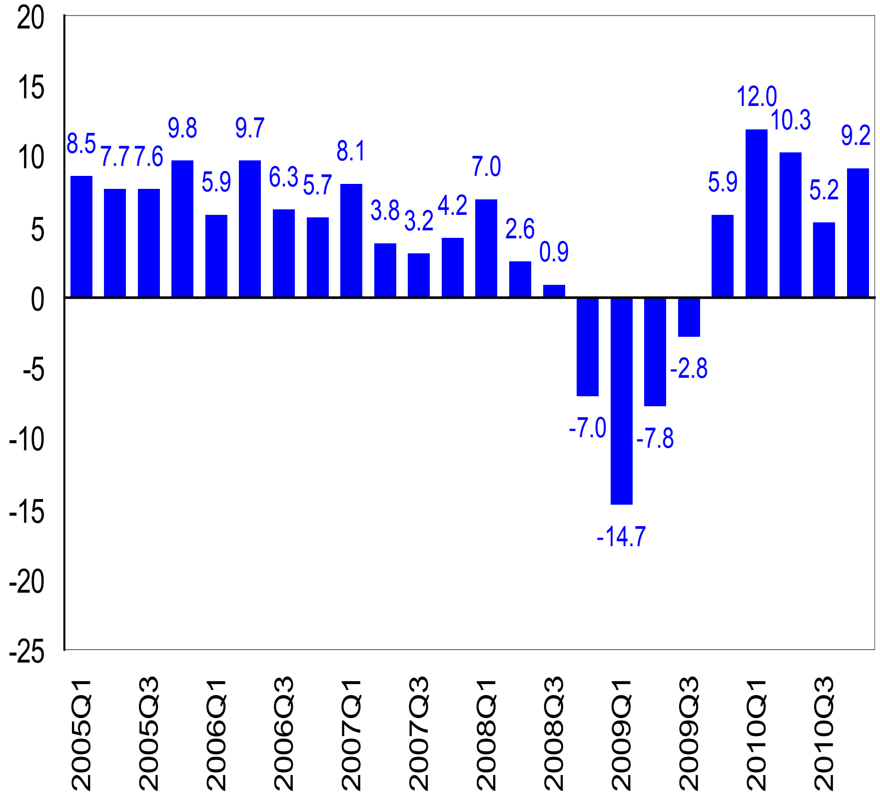
I. Financial Stability Problem

Excessive credit growth

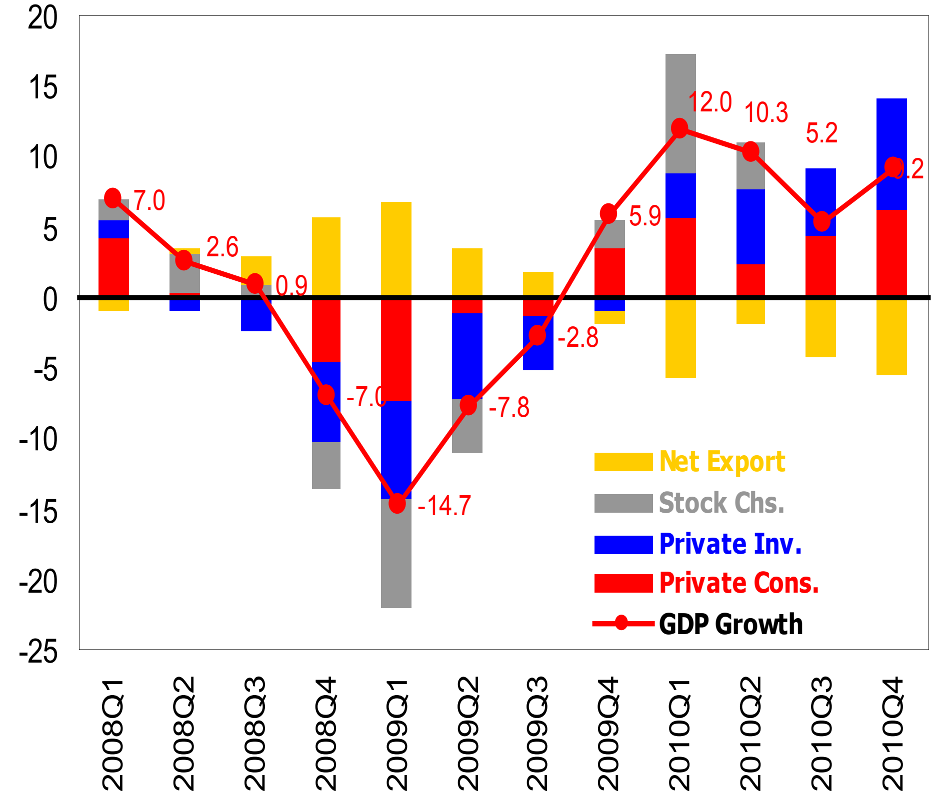


Recovery in economic activity is more pronounced...

GDP Growth
(%)



GDP Growth and its Contributors
(%)

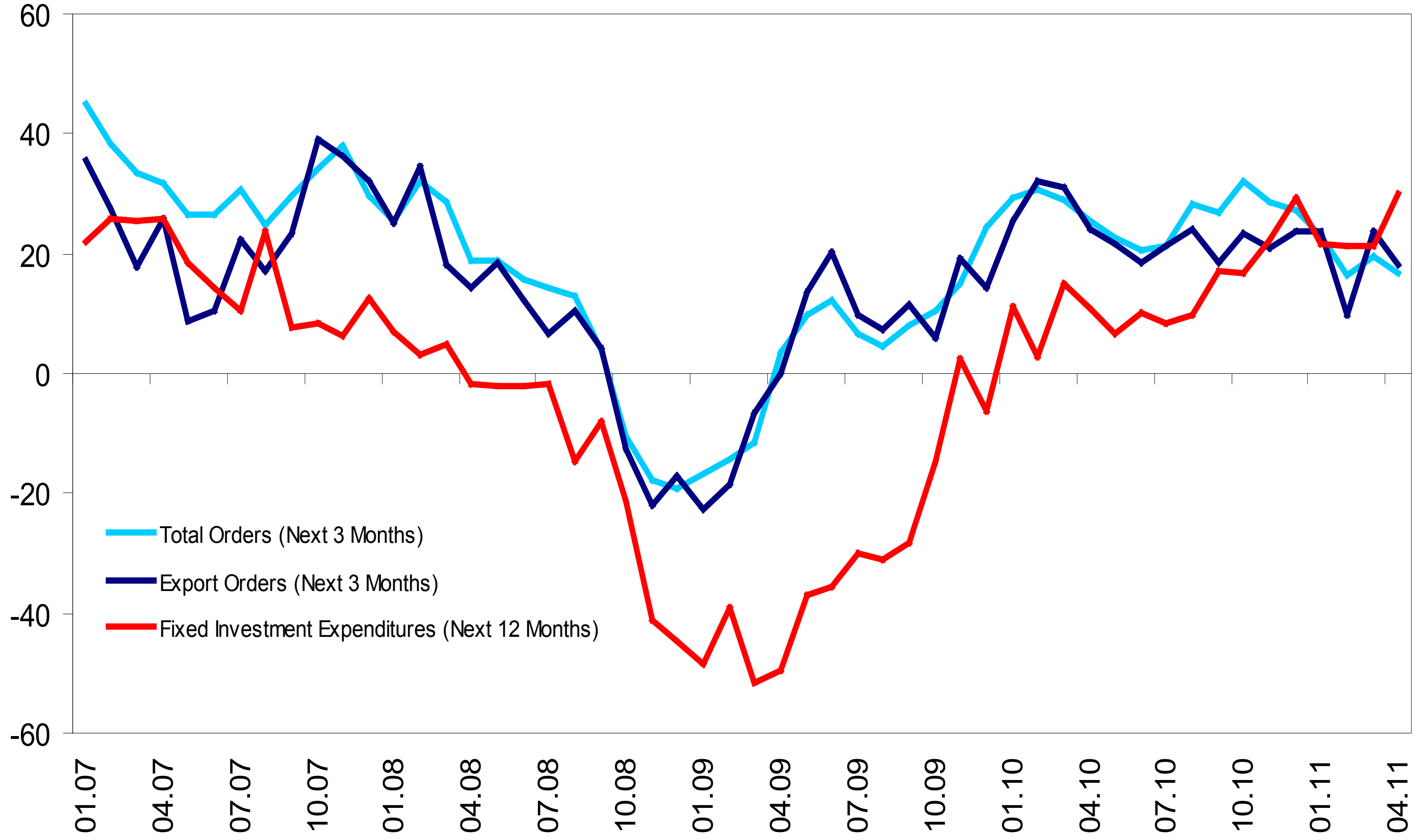


Source: TURKSTAT, CBRT,
Last Observation: March, 2011

...and surveys point to an ongoing growth

New Orders and Invetment Expectations

(Seasonally Adjusted,)

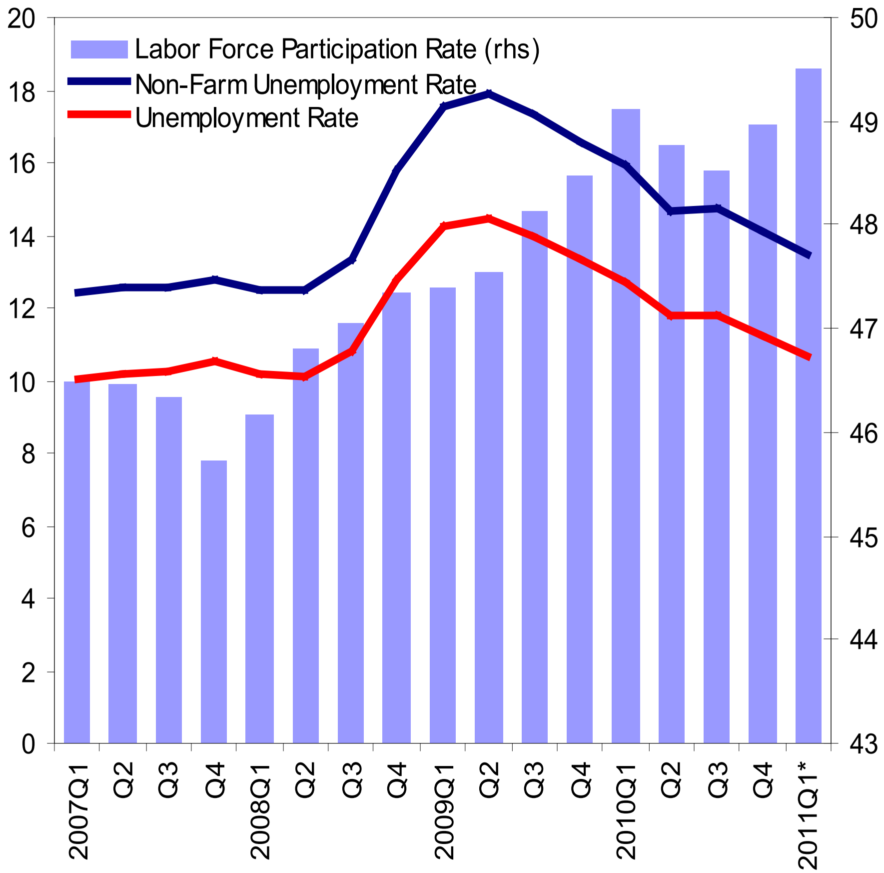


Source: TURKSTAT, CBRT,

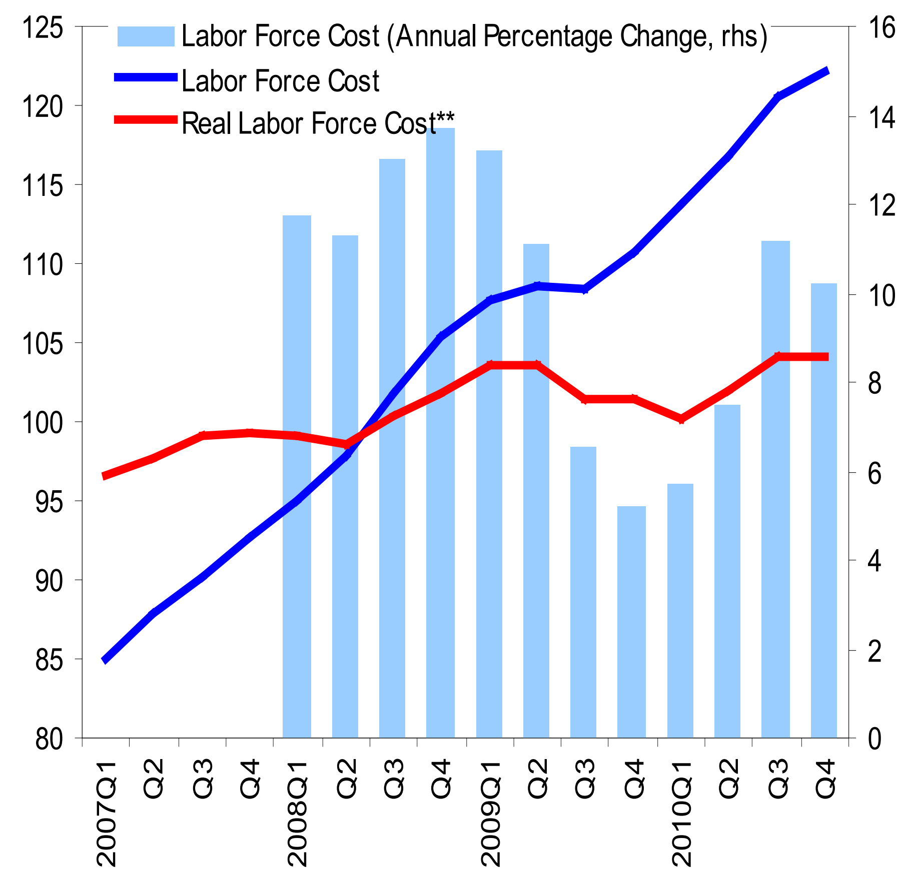
Last Observation: April 2011

Employment is recovering and labor cost is stable….

Unemployment Rates
(Seasonally Adjusted, percentages)



Hourly Labor Force Cost
(Seasonally Adjusted, 2008=100)

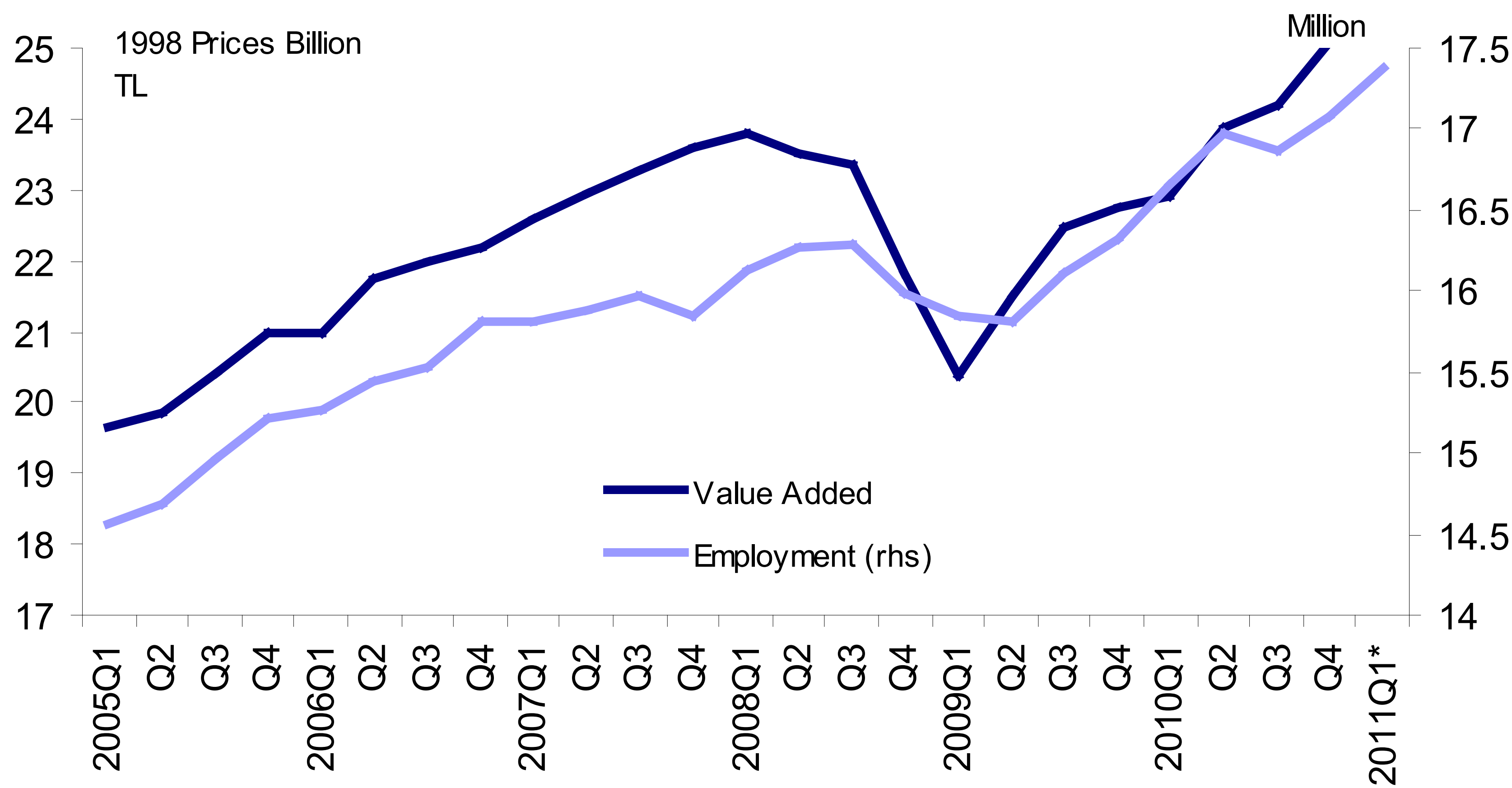


Source: TURKSTAT, CBRT

**As of January, **Deflated by CPI*

… while labor productivity continues to rise

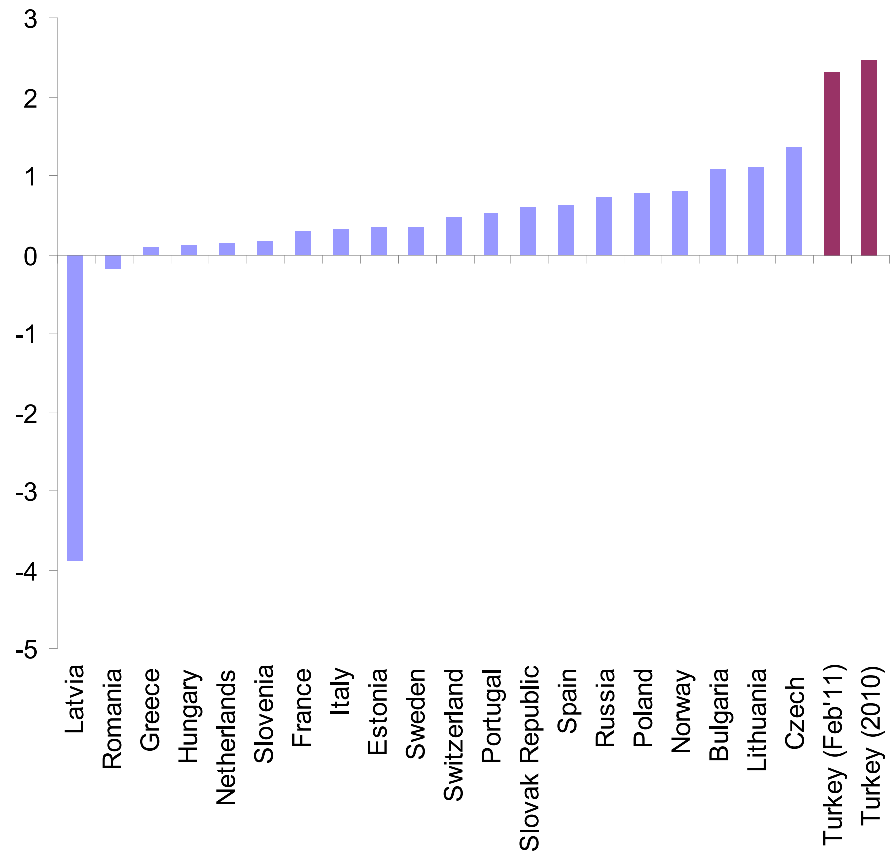
Non-Farm Value Added and Employment
(Seasonally Adjusted,)



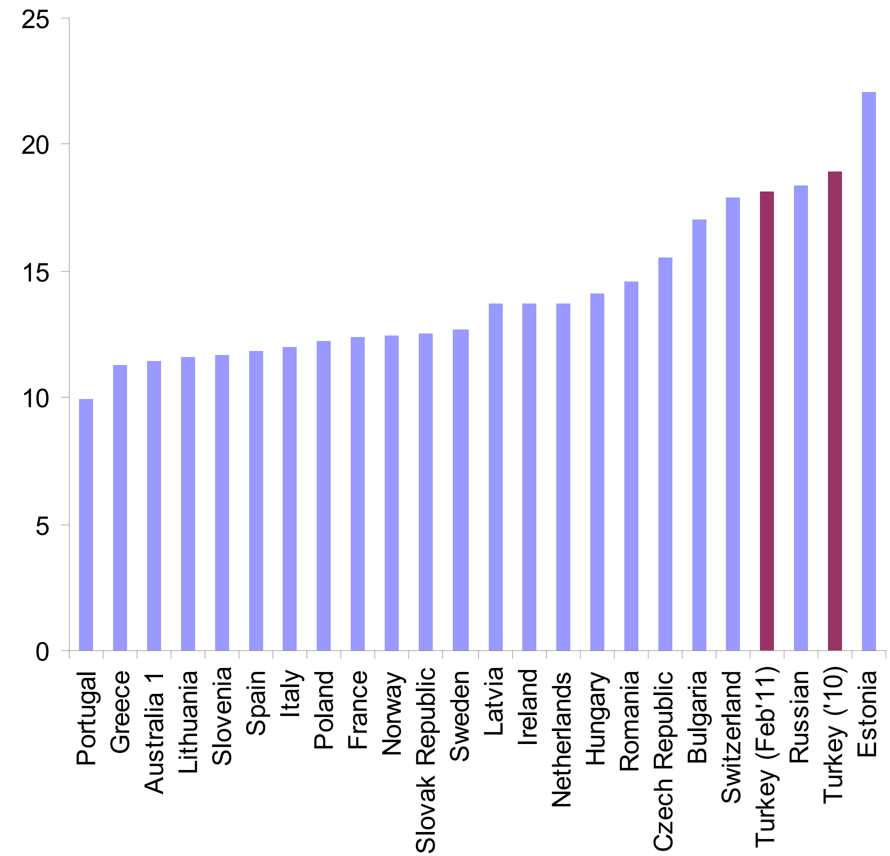
Source: CBRT,
Last Observation: April 2011

Outstanding outlook in the banking sector…

Return on Assets
(%)



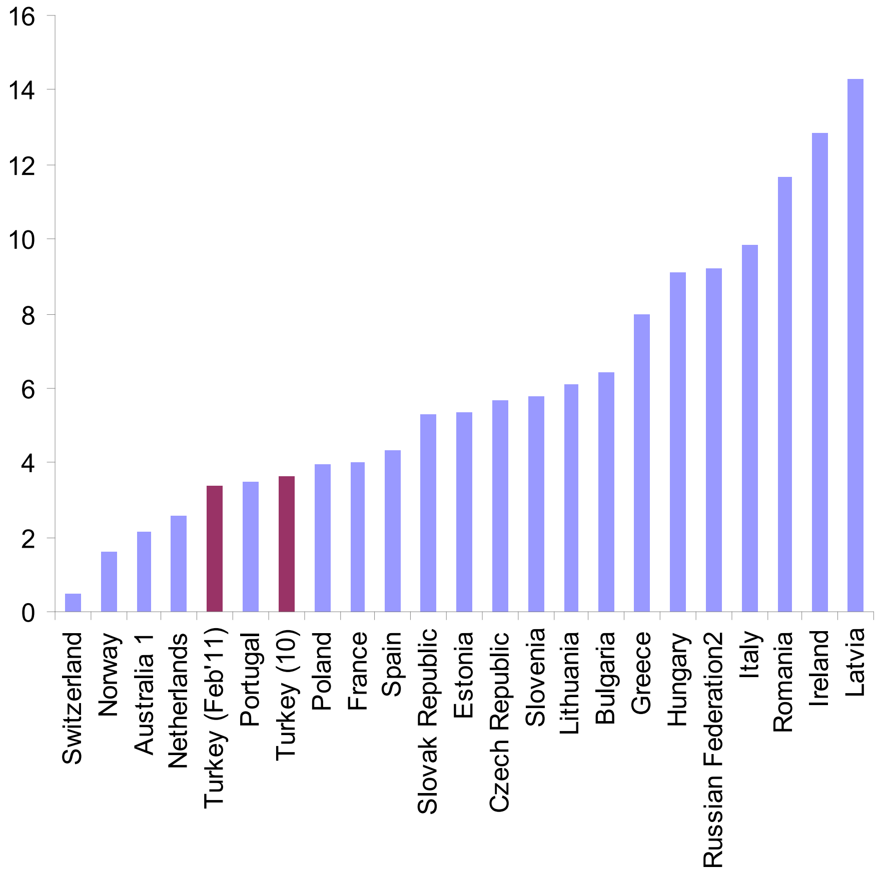
Capital Adequacy Ratio
(%)



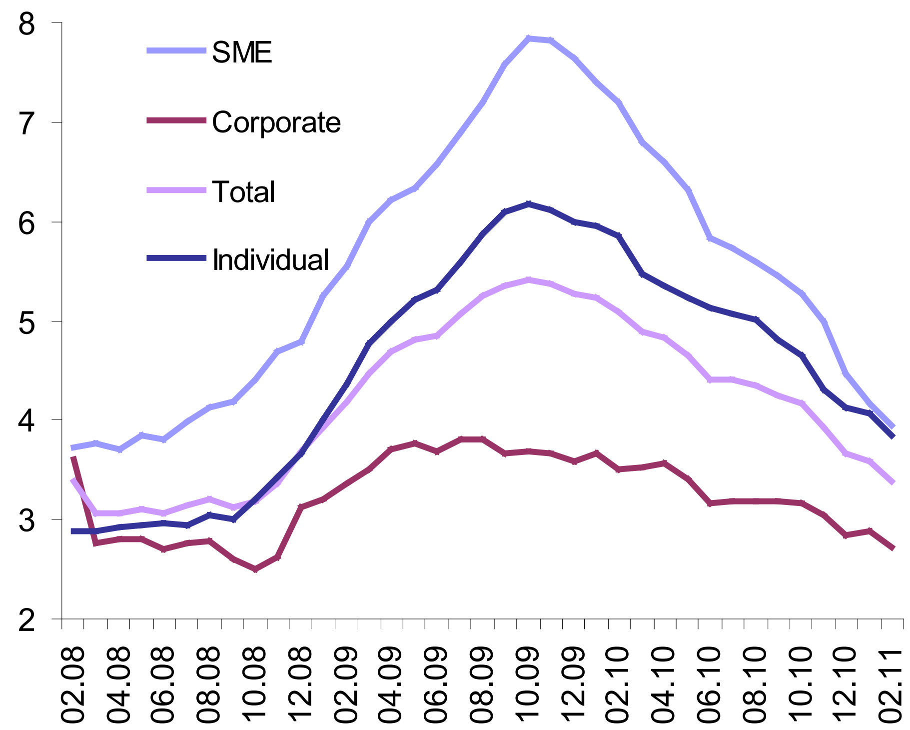
Source: IMF
Latest Data Available varies btw 2009-2010

…with comparatively very low NPL ratios,

NPL Ratios of Selected Countries
(%)



NPL Ratios in Turkey
(%)



Source: IMF, BRSA
Latest Data Available varies btw 2009-2010

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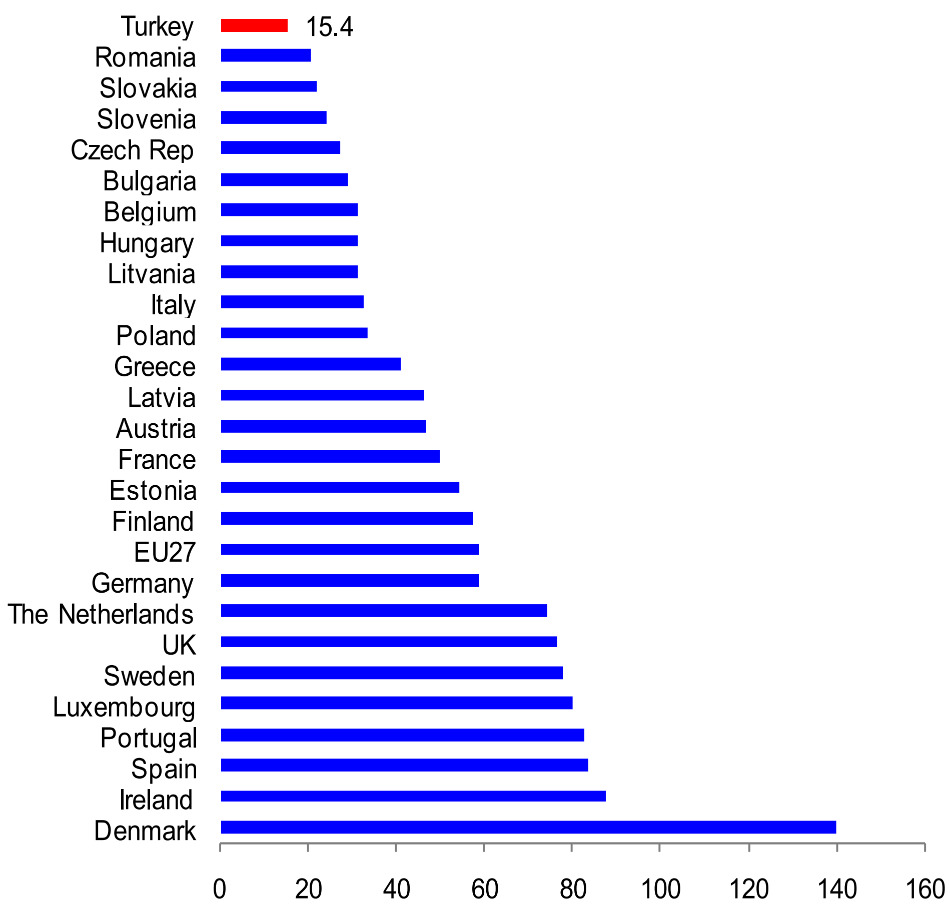
Healthy household’s balance sheets…

Household Liabilities to GDP Ratios

(%)



Household FX Positions

	2009	Sep. 2010
Households FX Assets*	67,597	69,338
Households FX Liabilities*	2,172	1,572
FX Position*	65,425	67,766
GDP*	616,753	734,723
FX Position/GDP (%)	+10.6	+9.2

** (USD million)*

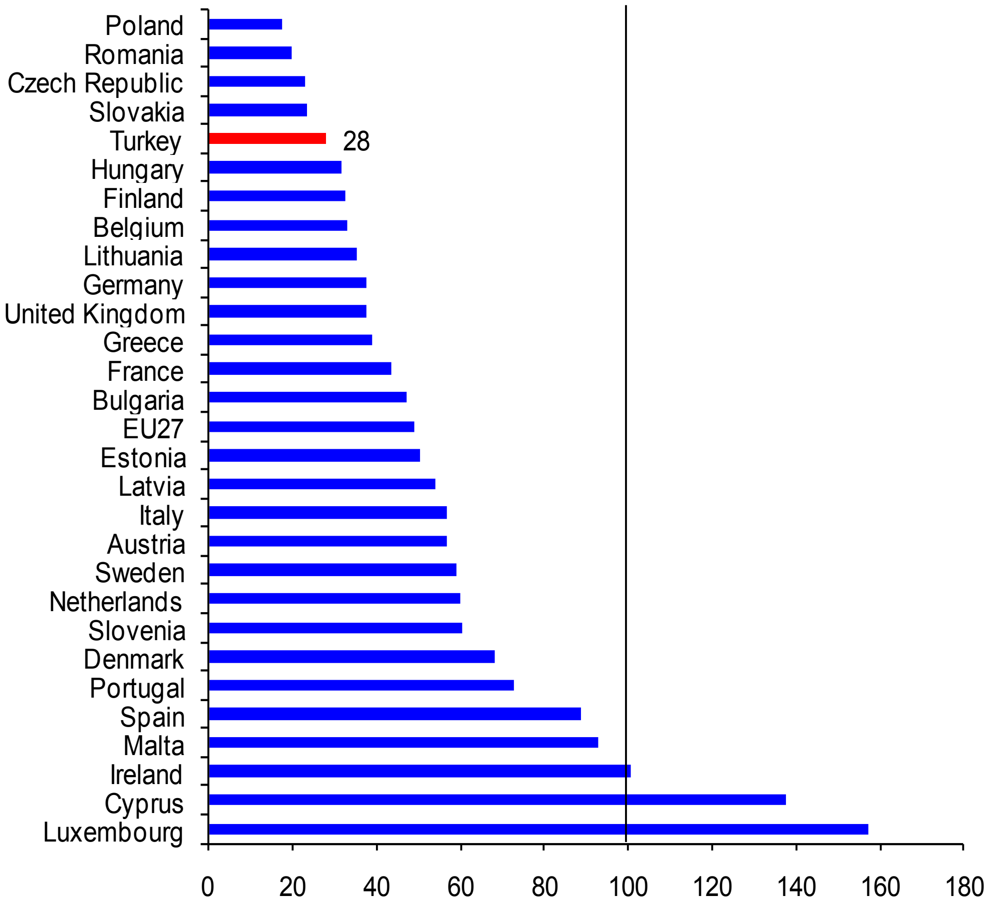
Source: Eurostat, CBRT

Last observations:Sep. 2010

… with very low non-financial sector's short-term FX positions,

Bank Loans to Non Financial Companies

(% of GDP)



Non Financial Companies (NFC) FX Positions

	December 2010
NFC FX Assets*	86.7
NFC FX Liabilities*	181
FX Position*	-94.3
FX Position/GDP (%)**	-12.8

•*(USD million).*

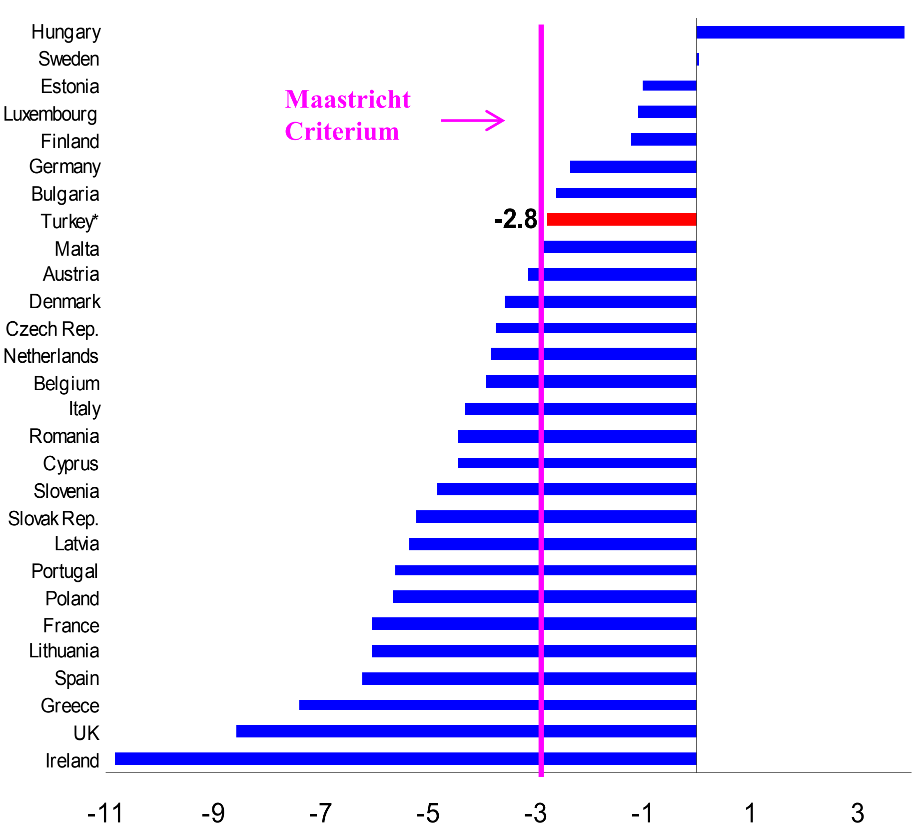
***** Note that the short FX position for short term liabilities are less than 1% of GDP (USD 313 mio). Non-Banking Sector FX position is balanced.***

Source: Eurostat, CBRT

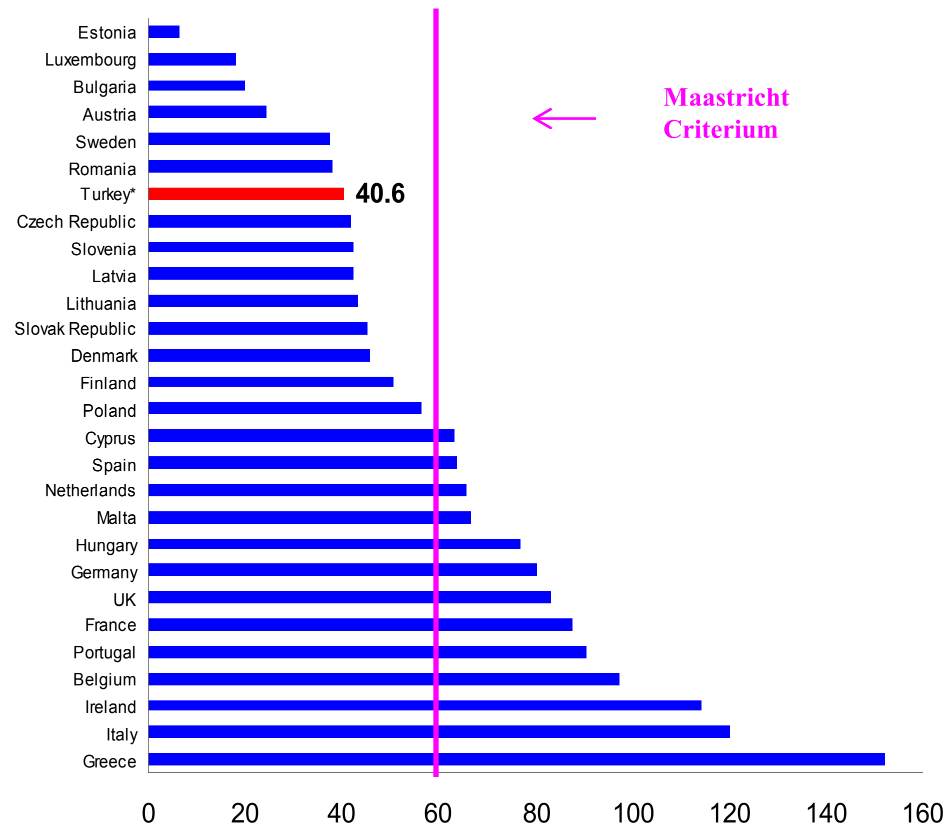
Last observations: December, 2010

...and sound public balances all support financial stability.

Budget Deficit Forecast for 2011
(% of GDP)



Public Debt Forecast for 2011
(% of GDP)



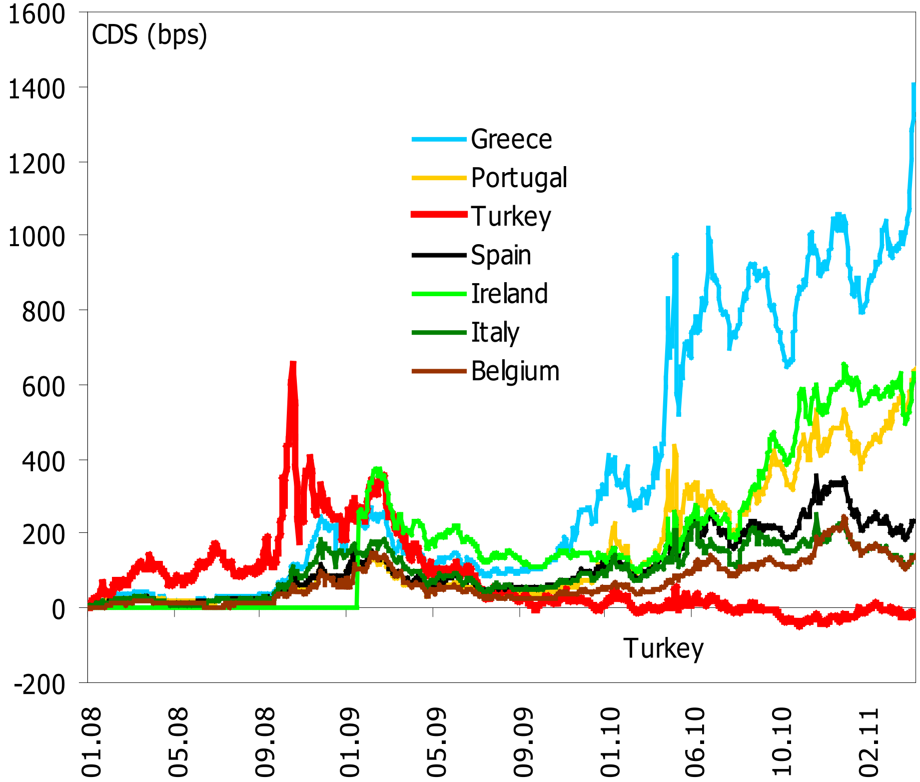
*: Turkey's budget deficit figure is MTP (2011-2013 projection) for central govenment. IMF WEO April 2011 budget deficit forecast for Turkey is 1.7% and better than what was envisaged in Turkey's MTP as 2.1% for general government.

*: Turkey's debt figure is MTP (2011-2013) projection. IMF WEO April 2011 public debt forecast for Turkey is 39.4%.

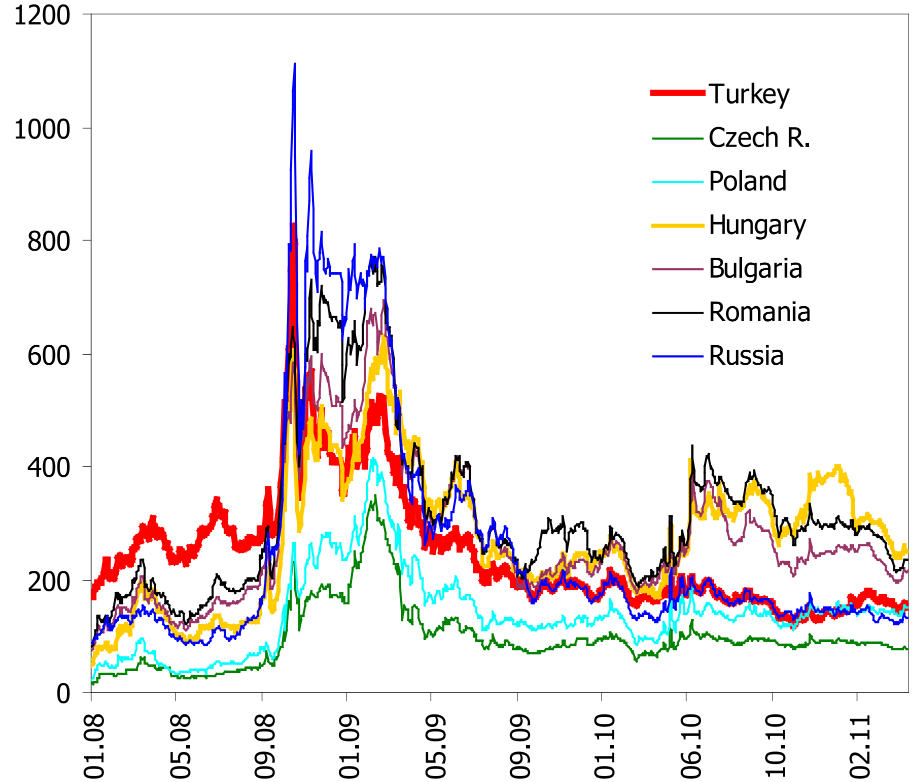
Source: MoF, Treasury, MTP (2011-2013) Targets, IMF WEO April 2011

Risk indicators are low despite the lower credit ratings.

CDS Premia of Selected Countries
(January 1, 2008=0, May 06, 2011)



CDS Premia of Selected Countries
(January 1, 2008 - May 06, 2011)



Source: CBRT

Last Observation: May 06

Risks to financial stability are rising.

<u>Advanced Economies</u>

Low Growth rates
&
Very Low Interest Rates

+

<u>Emerging Markets</u>

Strong Growth Prospects
&
High Interest Rates

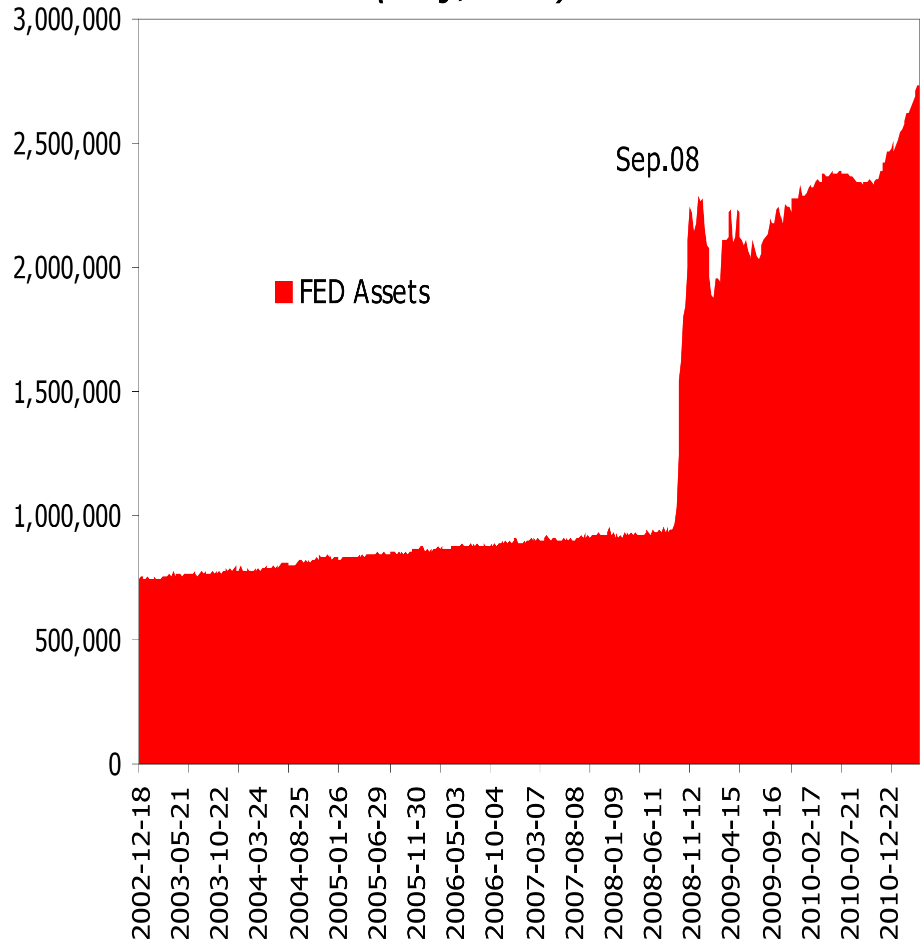
→ Capital Inflows to Emerging Markets

→ Credit Growth
&
Risk of Overheating

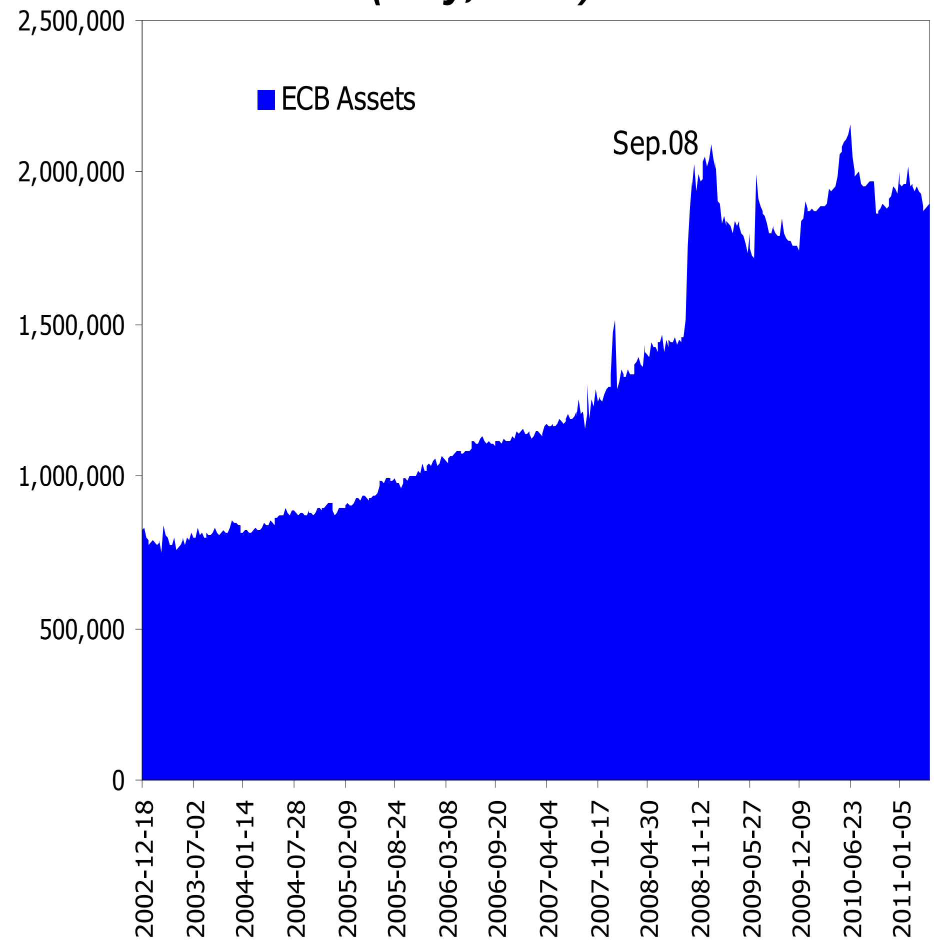
→ Risk of future instability!

Global liquidity glut

FED's Total Balance Sheet (assets, billion USD) (May, 2011)



ECB's total Balance Sheet (assets, billion EUR) (May, 2011)



Source: Federal Reserve, ECB

Last observations: May, 2011

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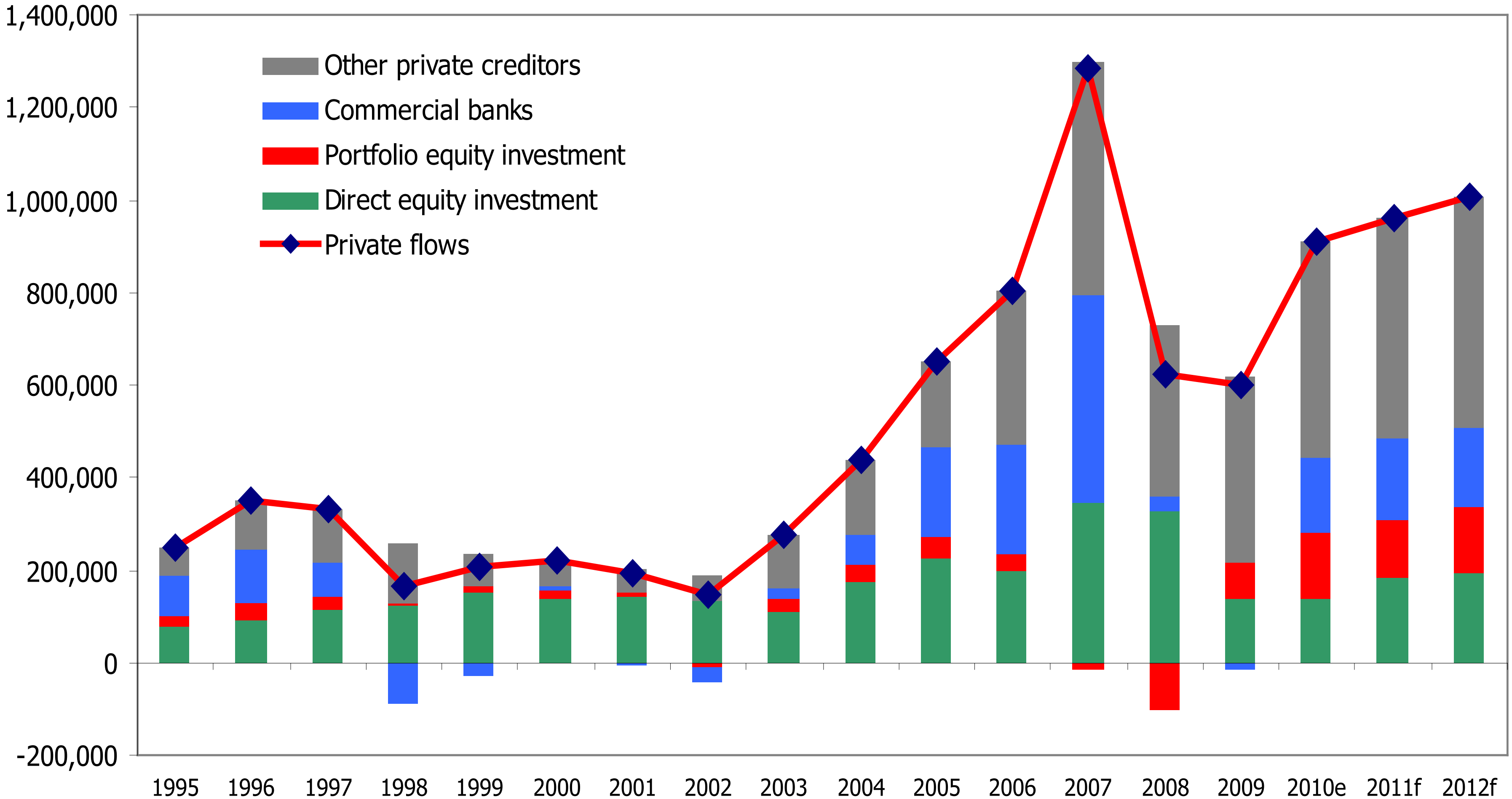
Global liquidity is leading to capital flows

Net Capital Flows towards Emerging Markets Economics (thousand USD)



Source: IIF, 2011

e: estimation, f: forecast

Financing Costs declined significantly in the last decade.

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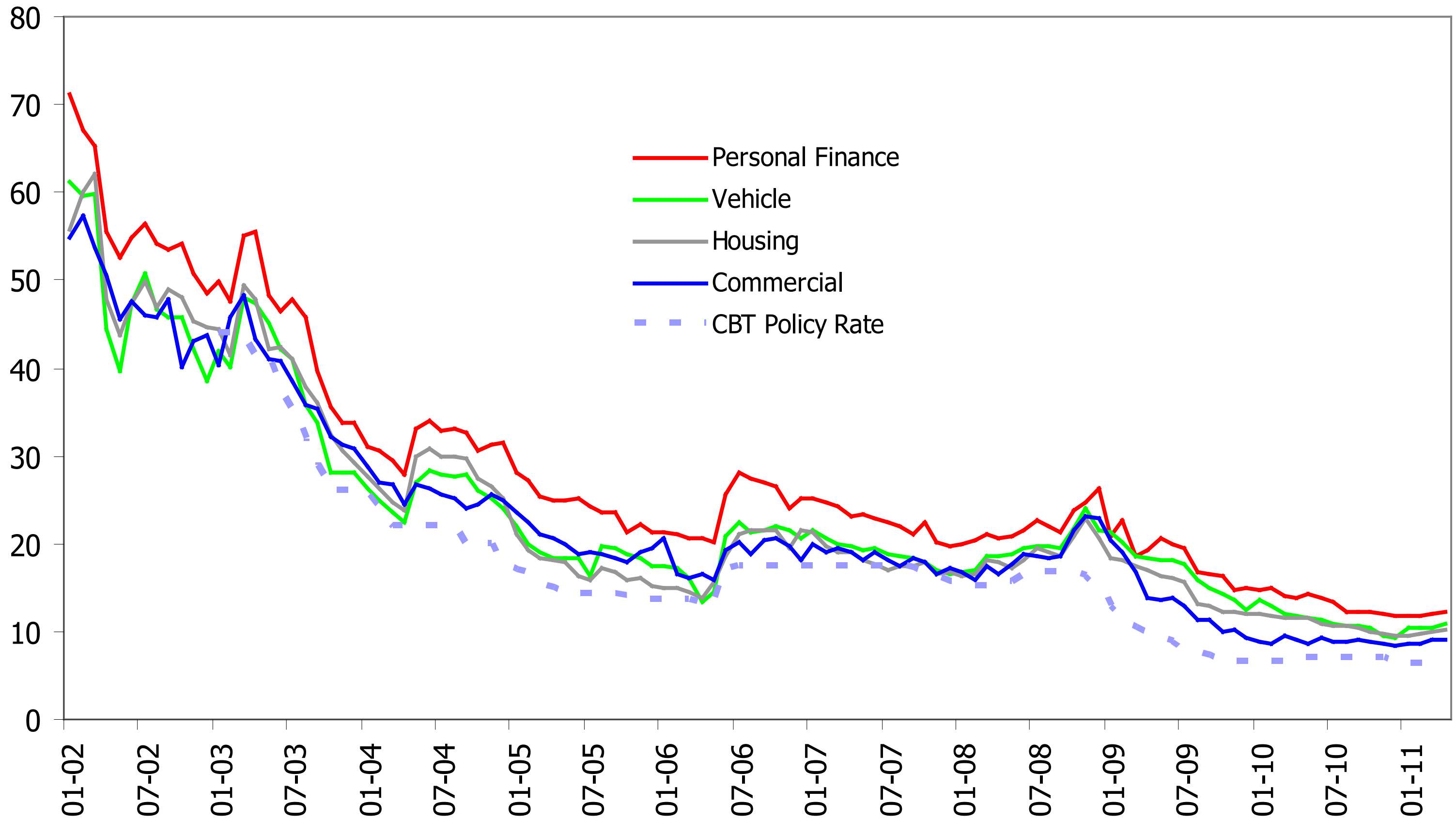
Lending Rates

(%, weighted averages for the categories)



Source: CBRT

Last Observation: April 2011

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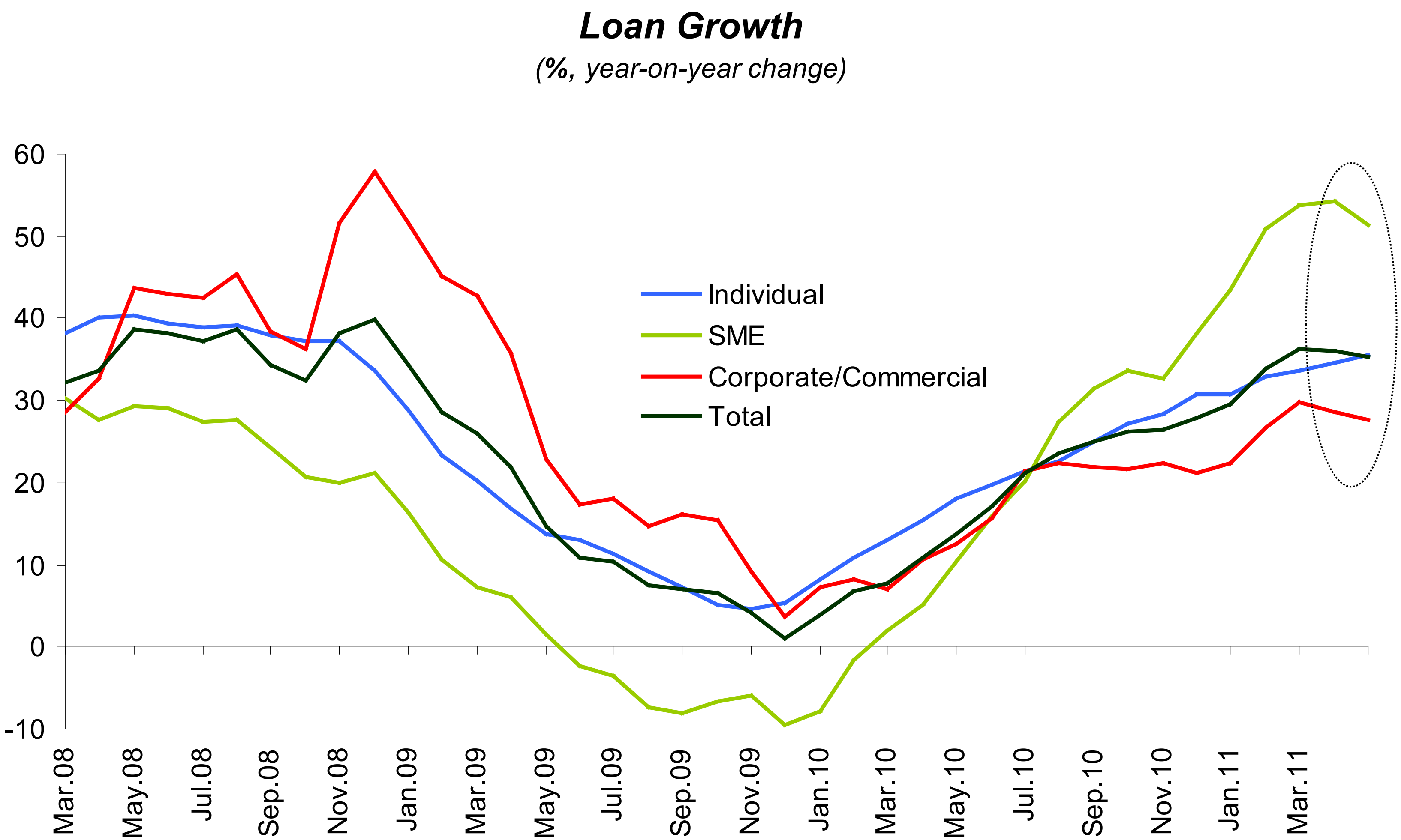
Strong domestic demand and capital flows is supporting the strong growth in credits…

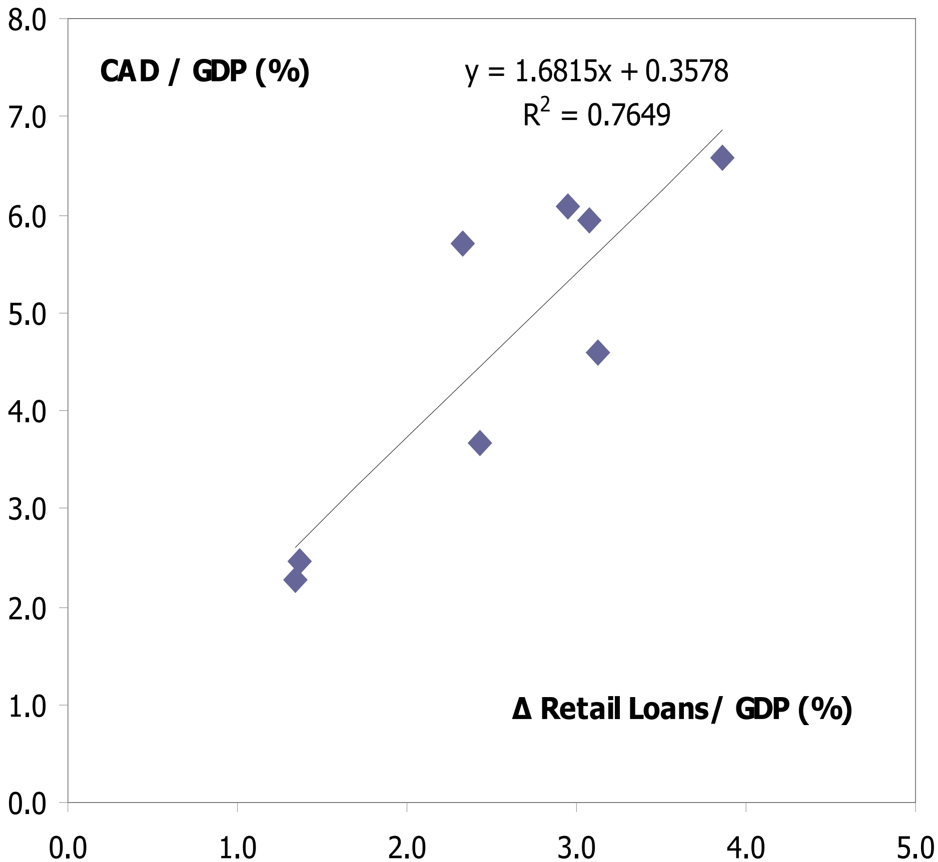


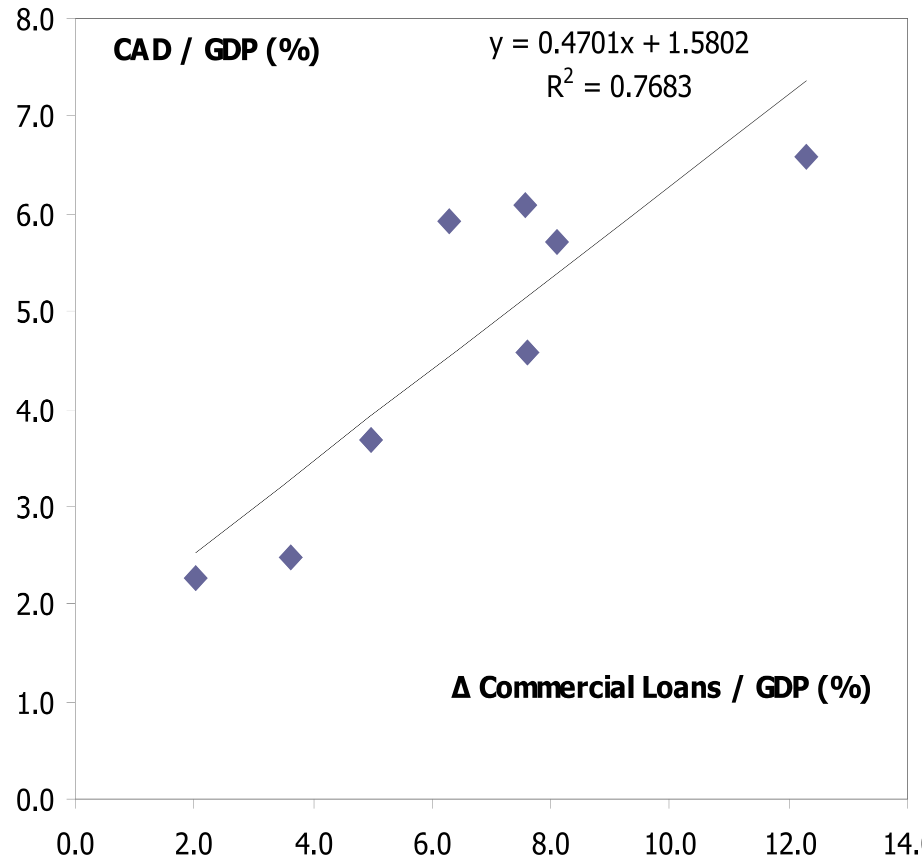
Source: BRSA

Last observation: March 2011

Statistical relationship between CAD and credit growth

Credit Growth and Current Account Deficit





Source: CBRT

Last observations: December, 2010

II. Non-Core Liabilities

Source of funding?

- Core Liabilities
  - e.g. household deposits
    - Reliable
    - Relatively cheaper
    - Move with the aggregate wealth of the household
- Non-core liabilities
  - e.g. borrowing from other banks
    - Sensitive to market conditions
    - Relatively more expensive
    - Procyclical
    - Short-term nature

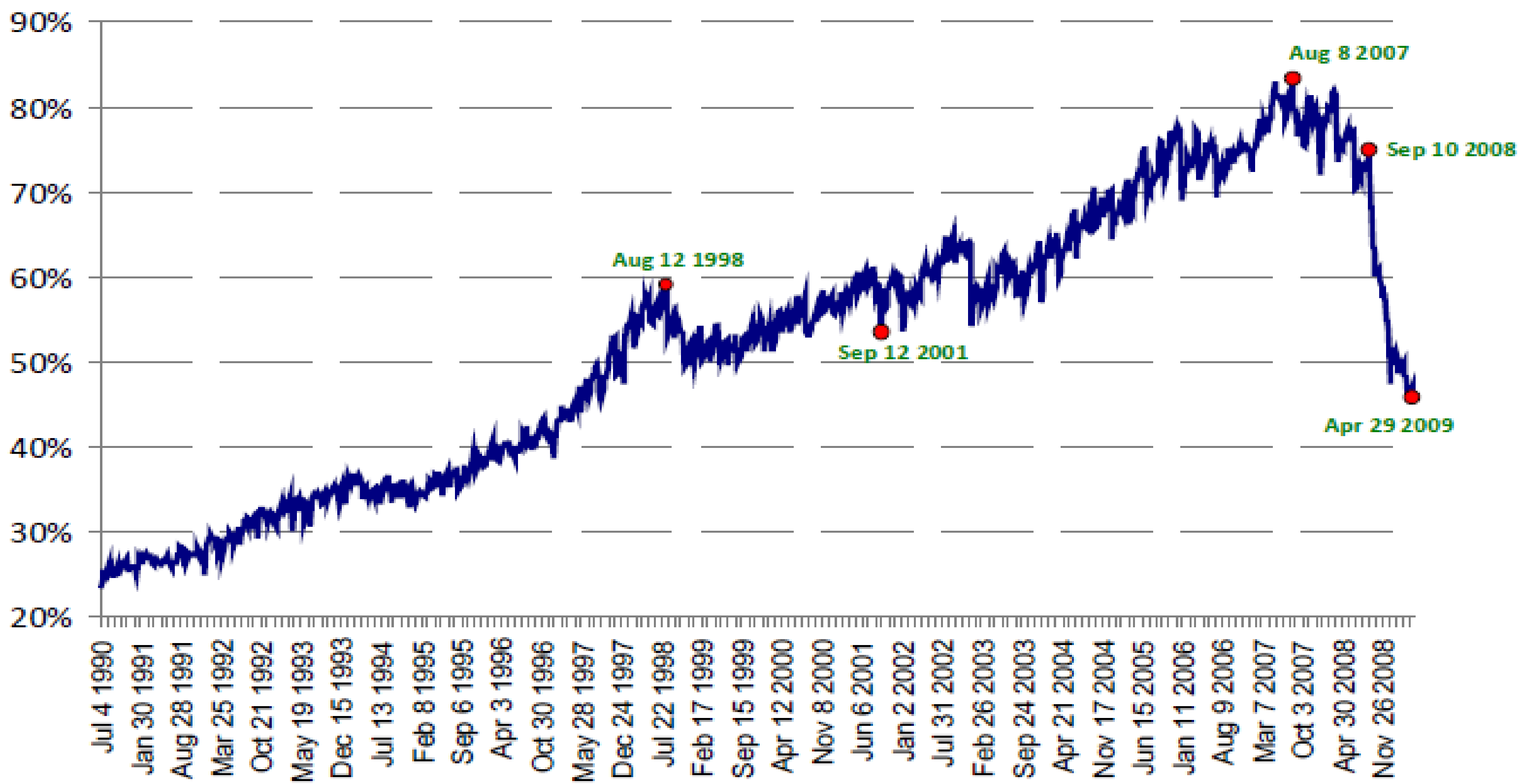
Core and Non-Core Liabilities

<table>
<tr><td rowspan="2"></td><th>Core Liabilities</th><th>Intermediate</th><th>Non-core Liabilities</th></tr>
<tr><th>(Households)</th><th>(Nonfin. Corp.)</th><th>(Financial Institutions)</th></tr>
<tr><td rowspan="3">Highly Liquid</td><td>Demand Deposits</td><td>Demand Deposits</td><td>Demand Deposits</td></tr>
<tr><td rowspan="2">Short Term Deposits (till 1-month)</td><td rowspan="2">Short Term Deposits (till 3-months)</td><td>Funds from Repo Transactions</td></tr>
<tr><td>Short Term Payables to Banks</td></tr>
<tr><td rowspan="2">Intermediate</td><td rowspan="2">Time Deposits (1 month - 1 year)</td><td rowspan="4">Time Deposits</td><td>Term Deposits</td></tr>
<tr><td>Medium and Long Term Payables to Banks</td></tr>
<tr><td rowspan="2">Illiquid</td><td rowspan="2">Long Term Deposits (>=1 year)</td><td>Subordinated Debt</td></tr>
<tr><td>Securities issued</td></tr>
</table>

Non-core liabilities: Procyclicality

- During booms: credit growth > deposit growth
- Need for alternative sources of funding!
- Excess liquidity: both before and after crises!
  - Capital flows to emerging markets.
- Shin (2010)
  - *U.S. is a net creditor in the banking sector even though it is a very large debtor overall. In effect, the U.S. borrows long and lends short through the banking sector*.
- Non-core liabilities: an indicator for financial stability?

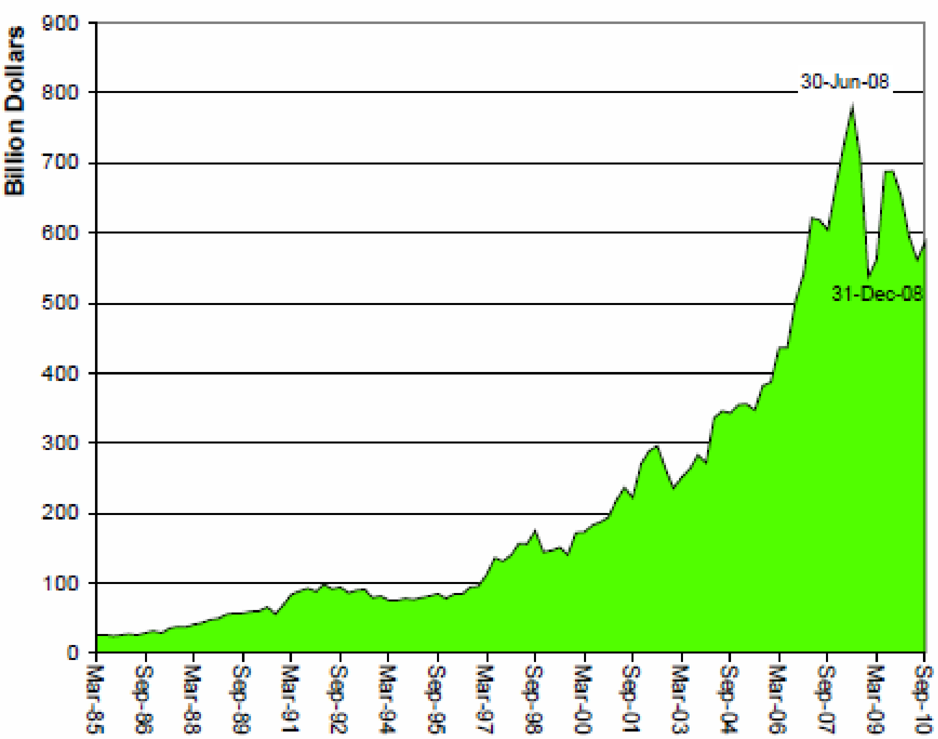
Non-core liabilities: US case

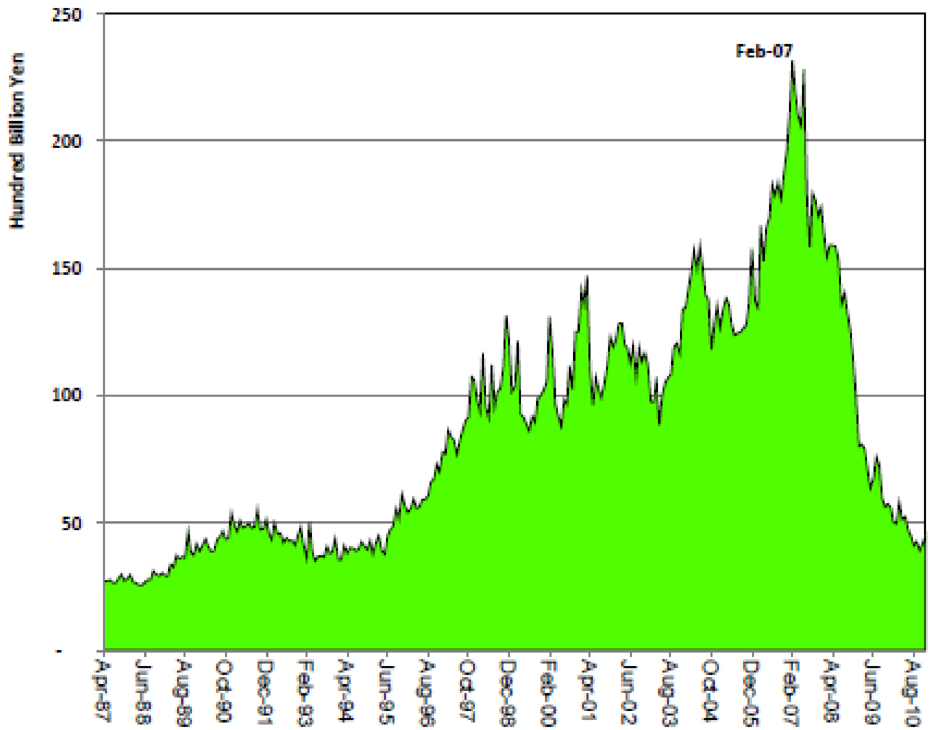


- A tax of 15 b.p. on non-core liabilities is proposed by Obama gov't.
- This works as a tool for macro-prudential regulation as well! (Shin, 2010)

Non-core liabilities: US case

Interoffice assets of foreign bank branches in US and Japan





Source: Remarks of SHIN, Hyun Song, "Global Liquidity", IMF, March 2011

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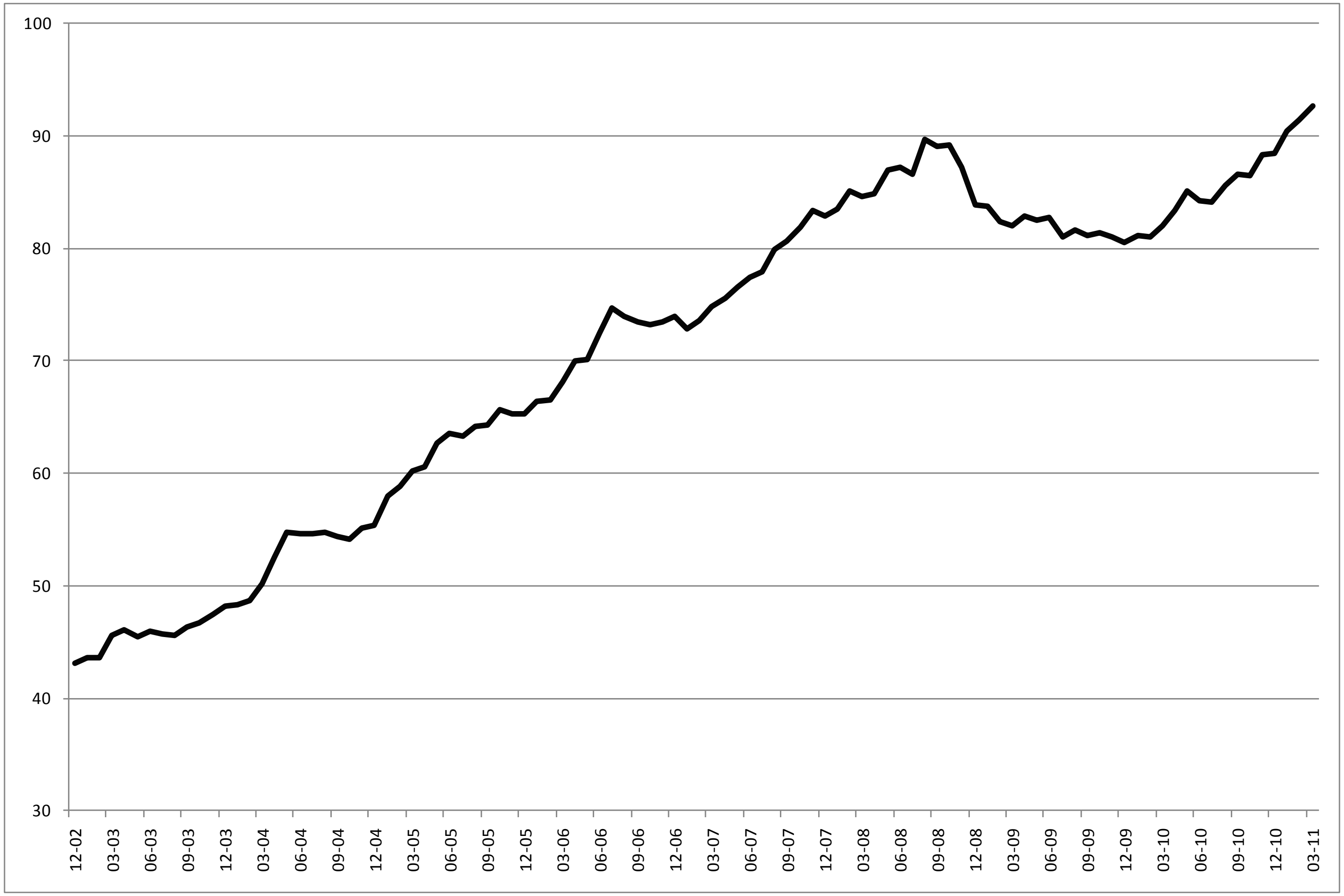
Non-core liabilities: Turkish case

Loan to Deposit Ratio (%) is robust:



Source: CBRT

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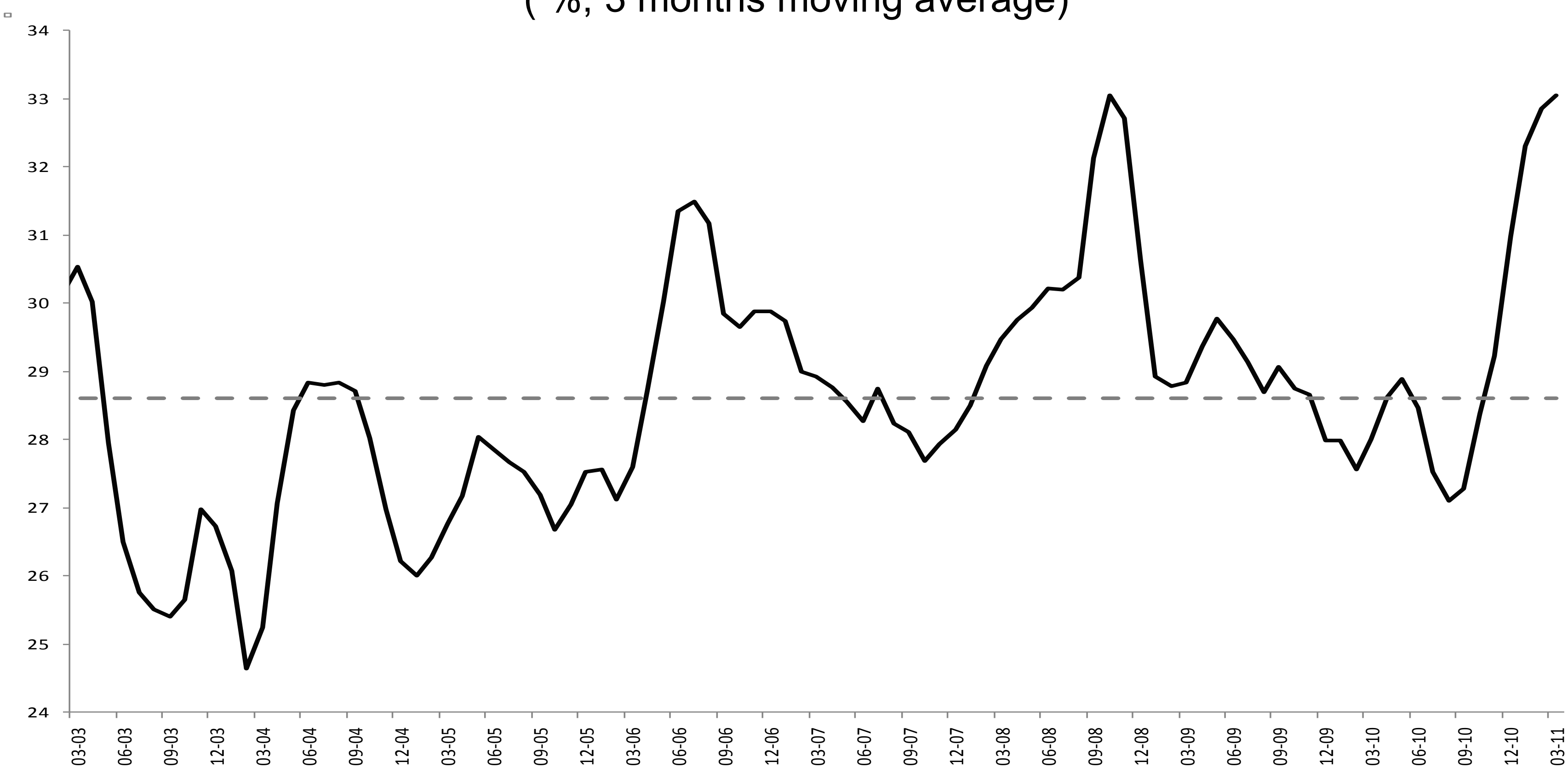
Non-core liabilities: Turkish case

Non-core Liabilities to M2

(%, 3 months moving average)



- **Similar pattern with the US figure between 2006-2009**
- **Notable upswing in the last year!**
  - **A source of funding for excessive credit?**

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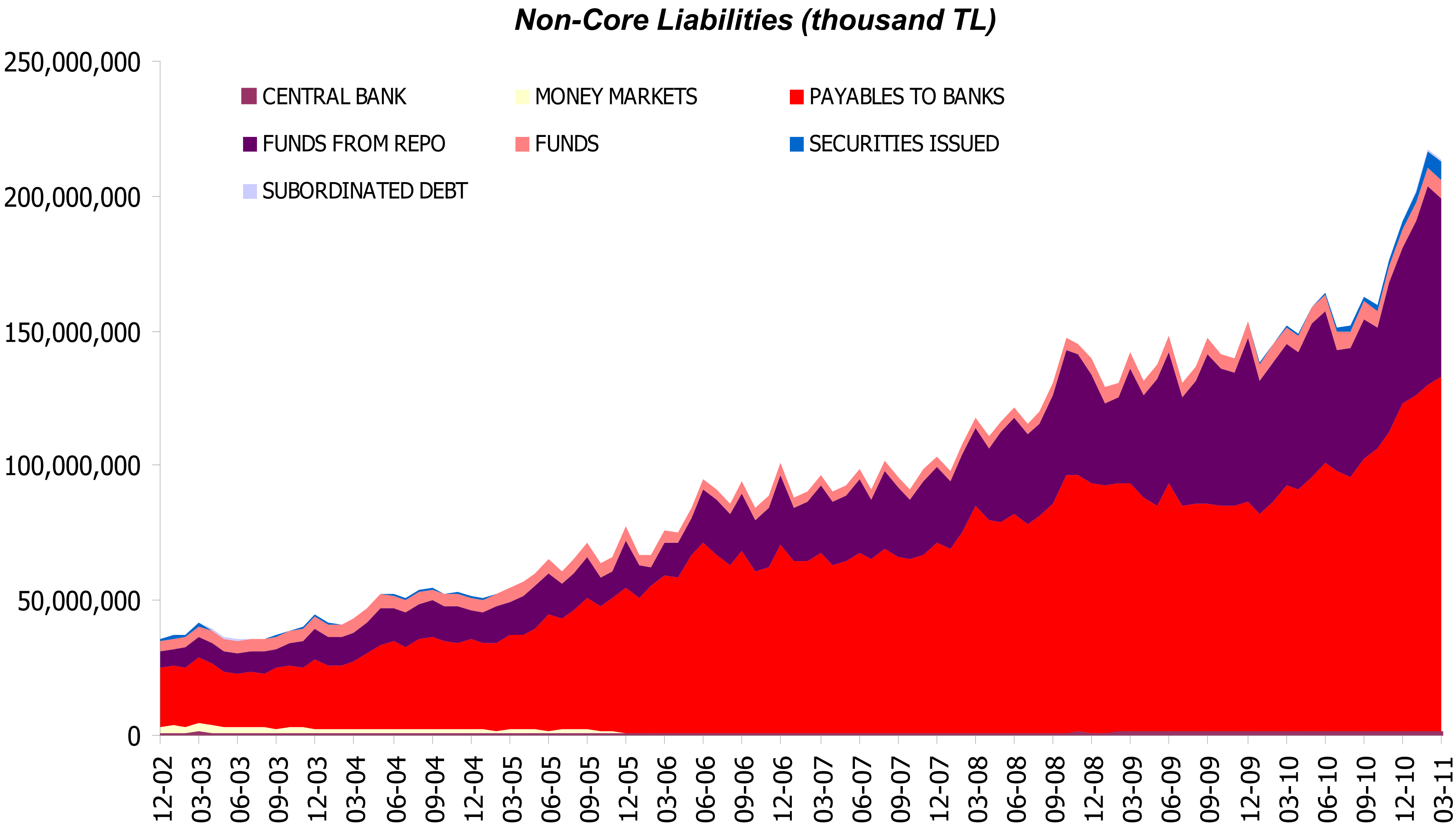
Non-core liabilities: Turkish case



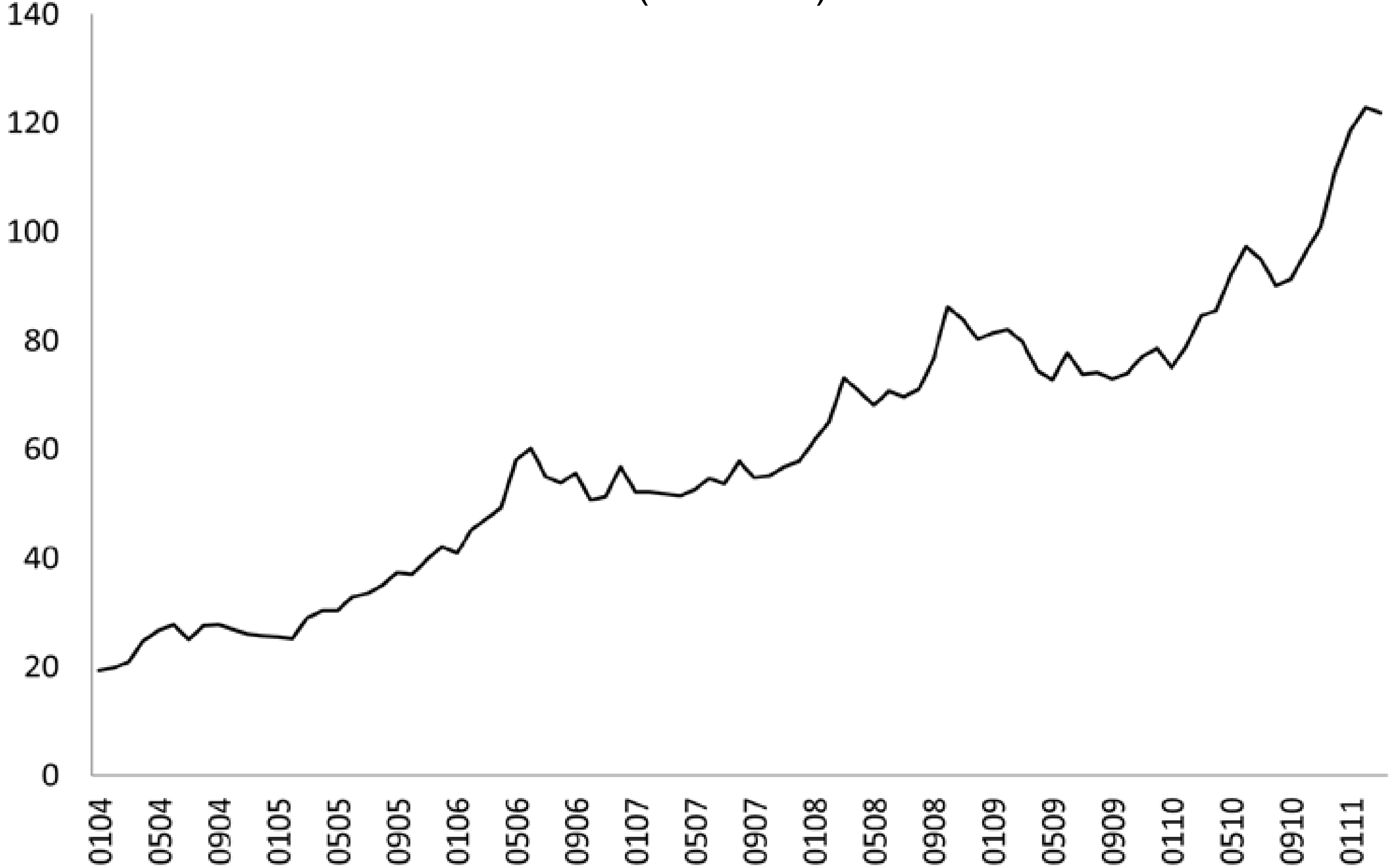
Source: CBRT

Last observations: March, 2011

Non-core liabilities: Turkish case

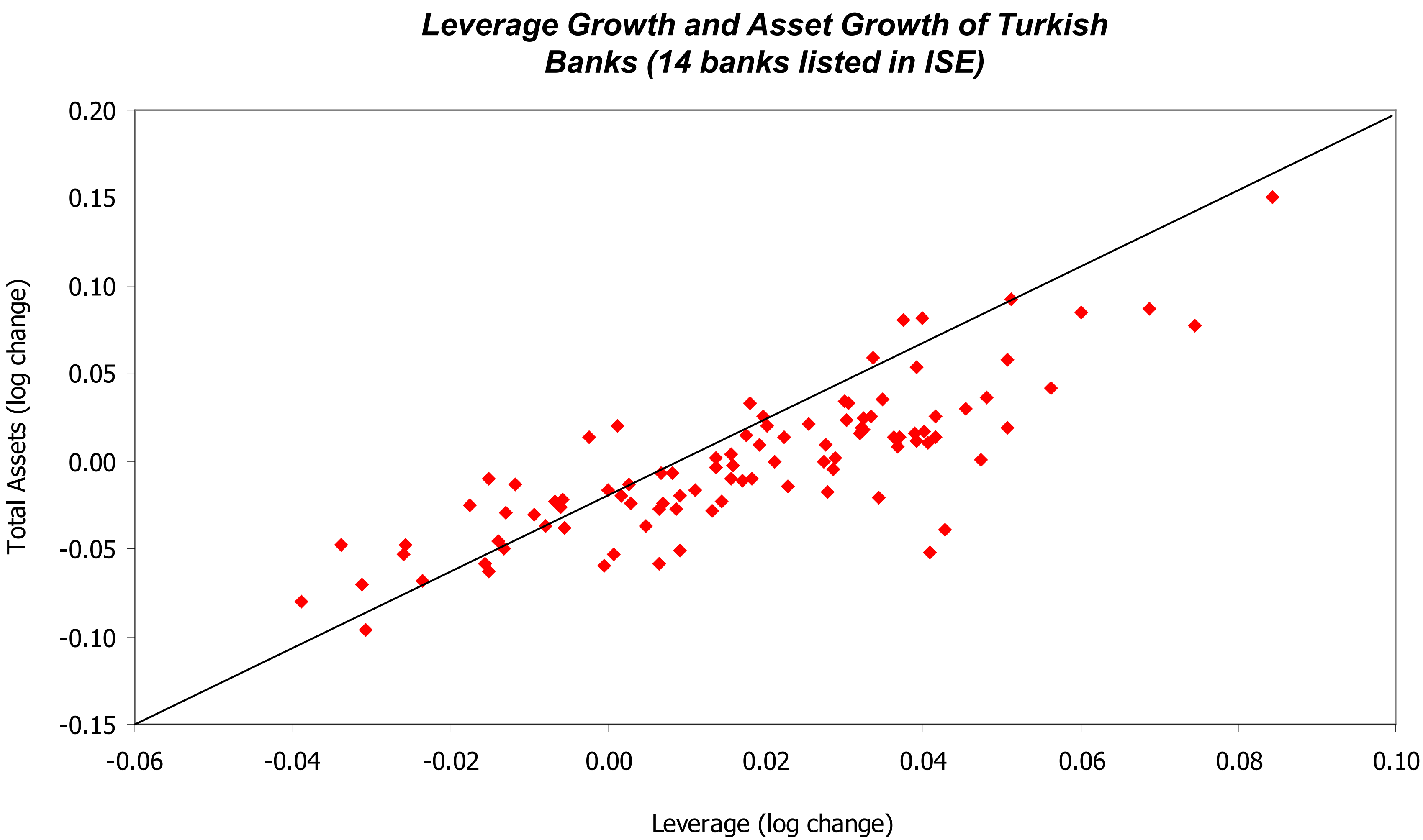
Payables to Foreign Banks

(TL billion)



- **Strong recovery after the crisis.**

Non-core liabilities: Turkish case



Source: CBRT

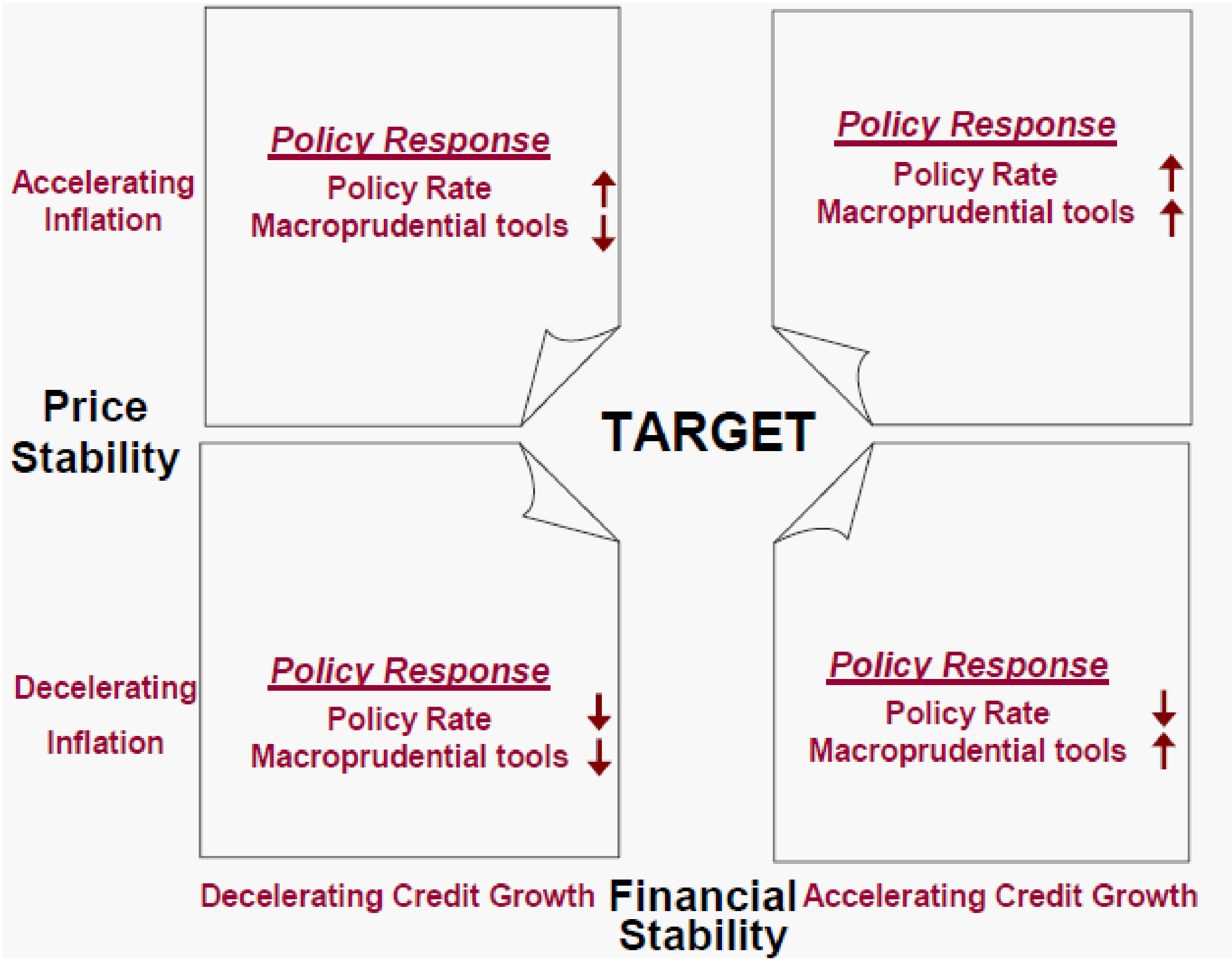
Last observations: May, 2011

The policy challenge

- *Unbalanced composition of growth*
  - *strong domestic demand vs. sluggish external demand*
- *Strengthening but shortening capital inflows*
- *Rapid credit expansion and worsening current account deficit*
  - *raises concerns for financial stability*
- *Need for a different, yet prudent approach in monetary policy*

III.New Policy Mix

Two Targets, Two Instruments



The new policy mix…

- **New Policy Mix (since November 2010)**

  1. A lower policy rate
  2. Wider interest rate corridor
  3. Reserve requirement policy
     1. Higher ratios on both TL and FX deposits
     2. Unremunerated
     3. Differentiated rates across maturities
  4. Tighter liquidity management

…which aims financial stability as well as price stability

- **Financial stability objectives**

  1. Lower leverage ratios
  2. Longer maturities of debt liabilities
  3. Stronger FX positions
  4. Better and efficient management of financial risk

- **Interest rate levels required for price stability and financial stability are not always consistent with each other.**

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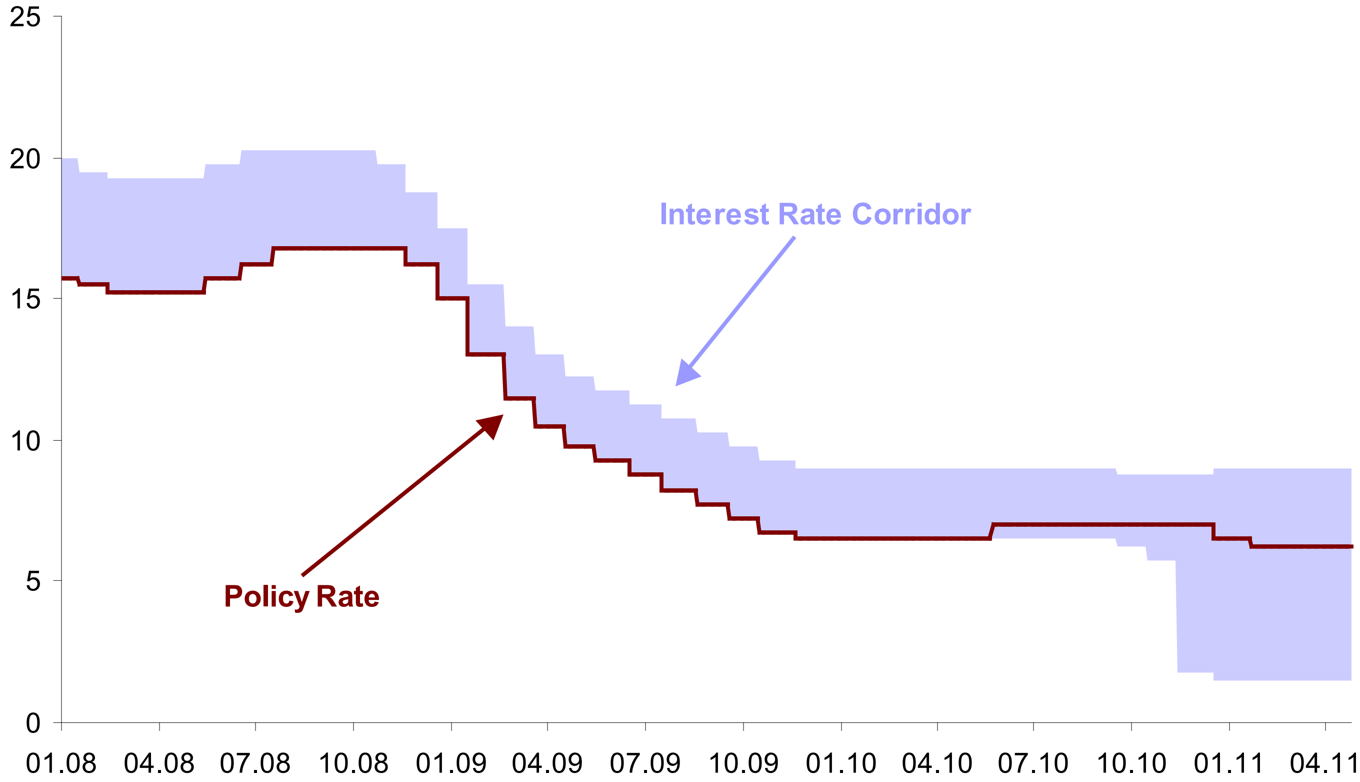
The lower policy rate and wider interest rate corridor of the new policy.

Policy Rate and Interest Rate Corridor

(%)

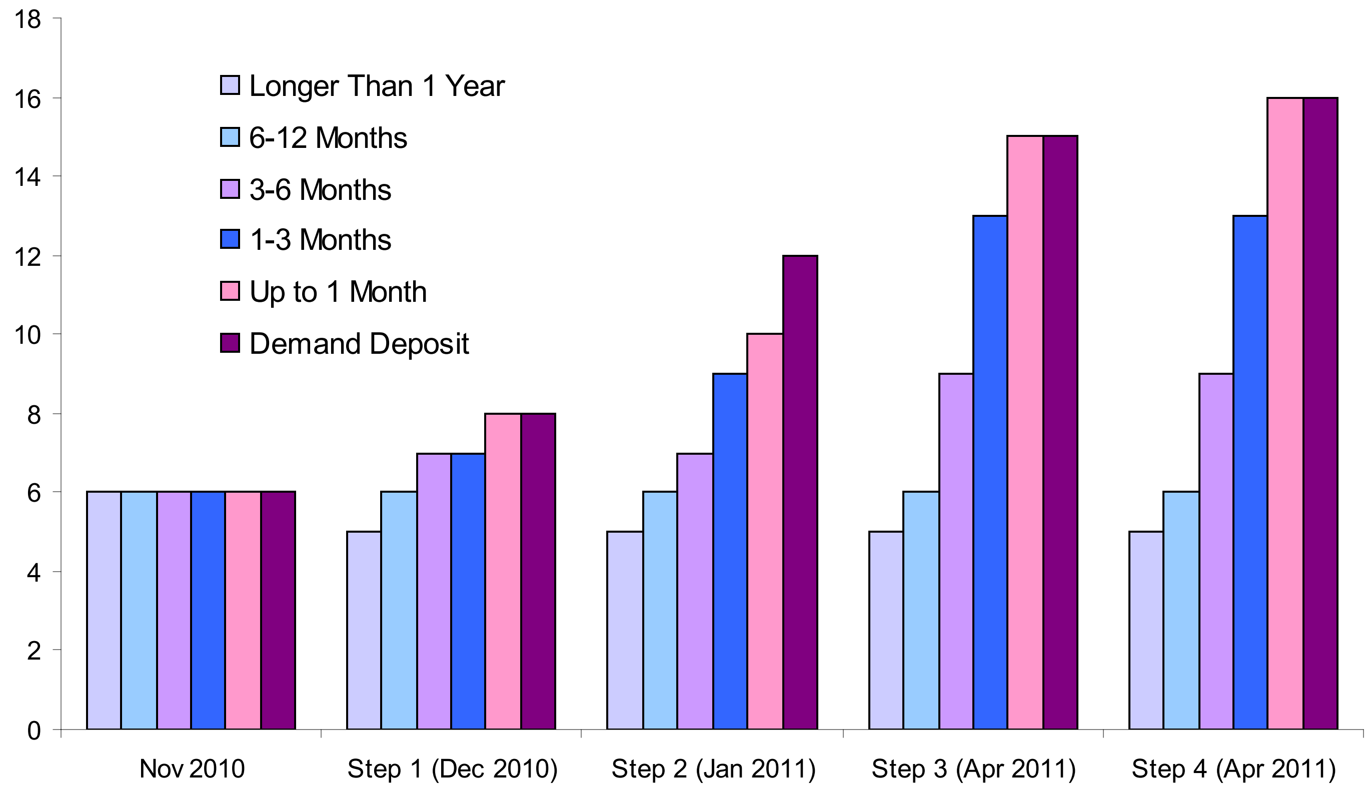


Source: CBRT

Last observations:May 2011

The new *reserve requirement policy*

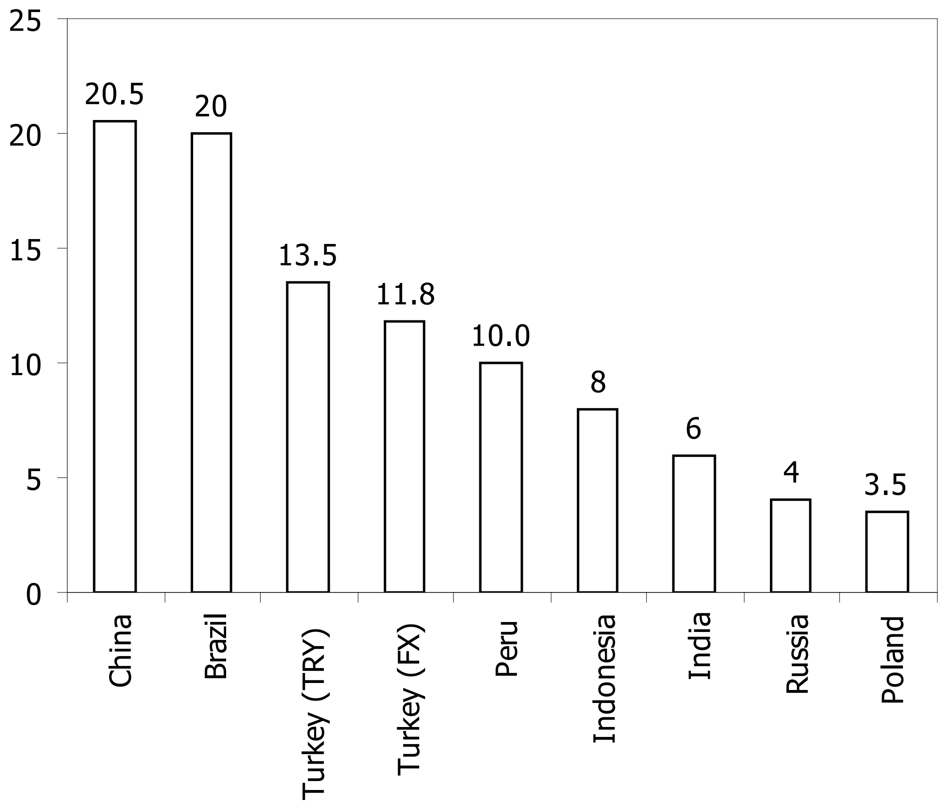
Reserve Requirement Rates
(%)



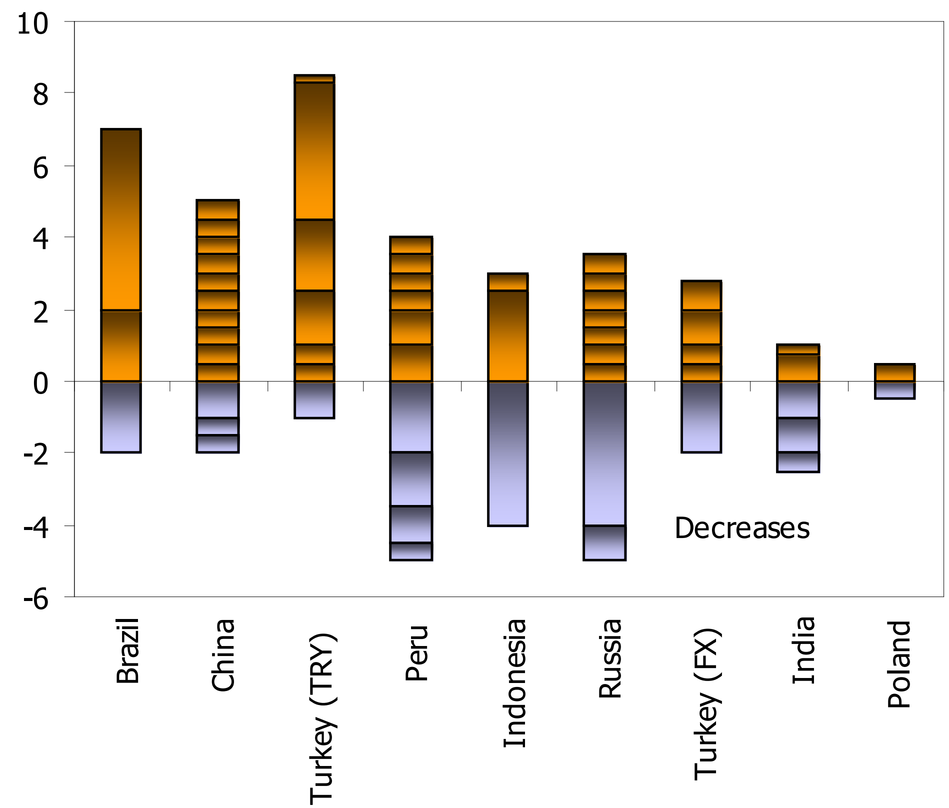
Source: CBRT
Last observations:May 2011

Reserve requirement policy is widely used in other emerging economies.

Current Reserve Requirement Ratios
_(%)_



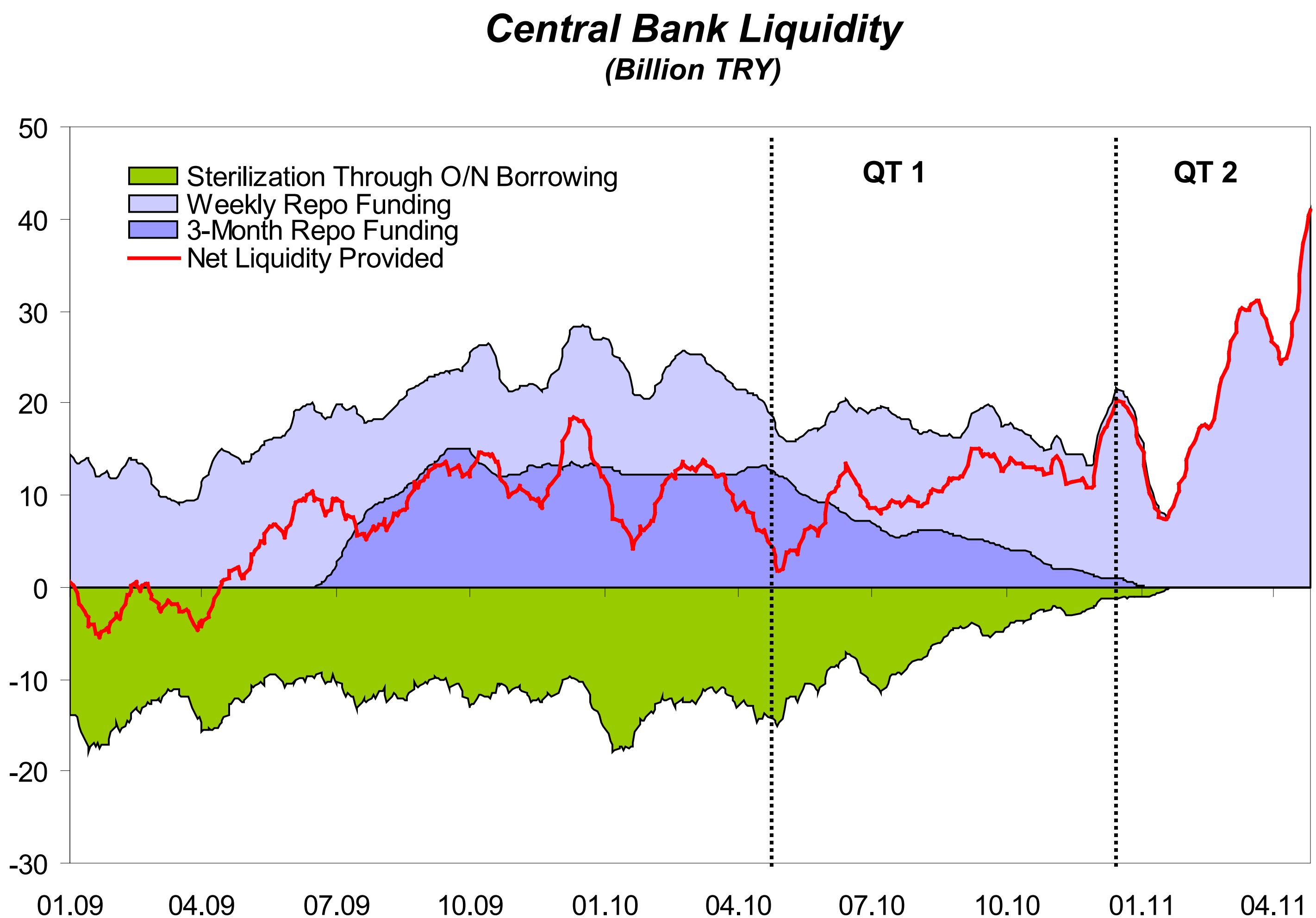
Change Since the Start of the Crisis
(percentage points)



Source: CBRT

Last observations:May 2011

Funding structue reshaped after monetary exit



Source: CBRT

Last observations:May 2011

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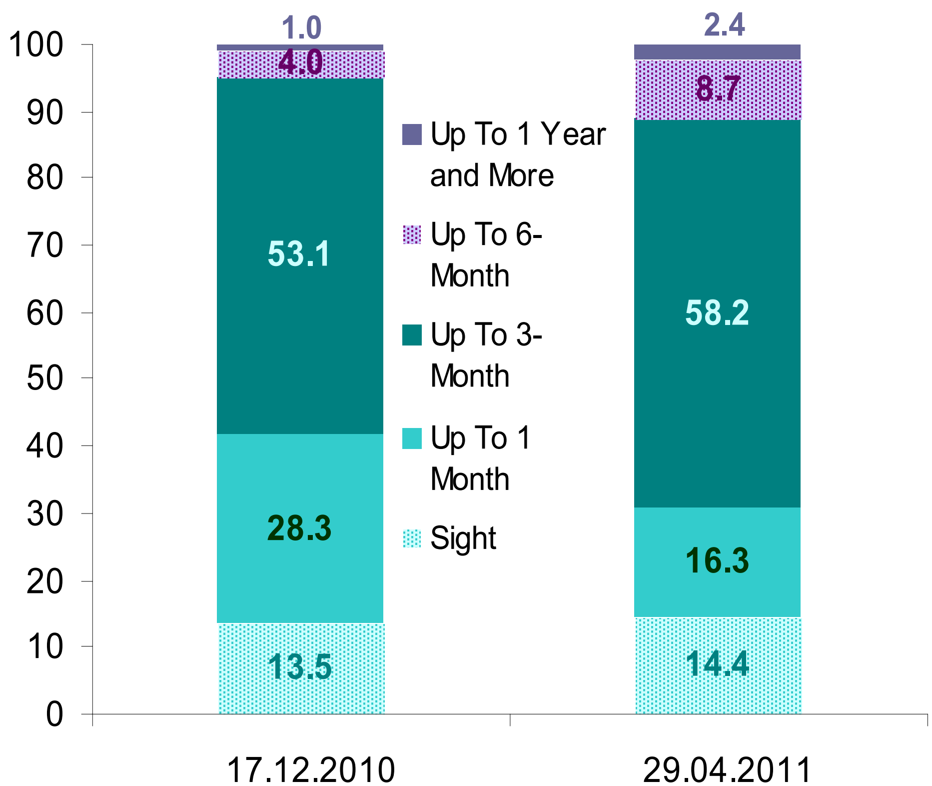
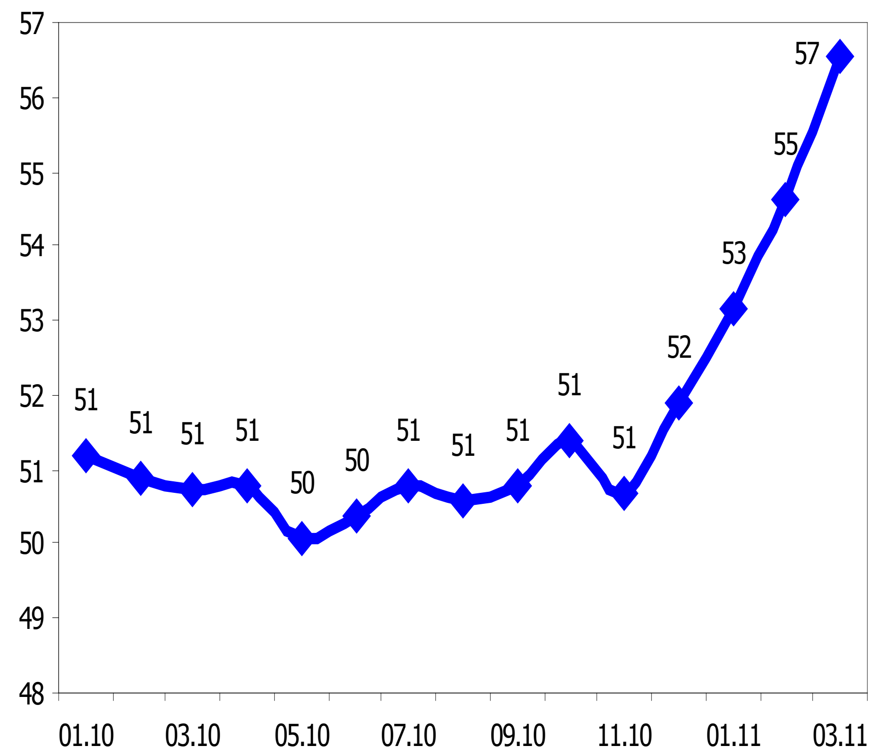
Maturities of deposits are lengthening.

Breakdown of TL Deposits by Maturities (%)



Average Maturity of TL Deposits (Day)



Source: BRSA & own calculations

Last Observation: April 2011

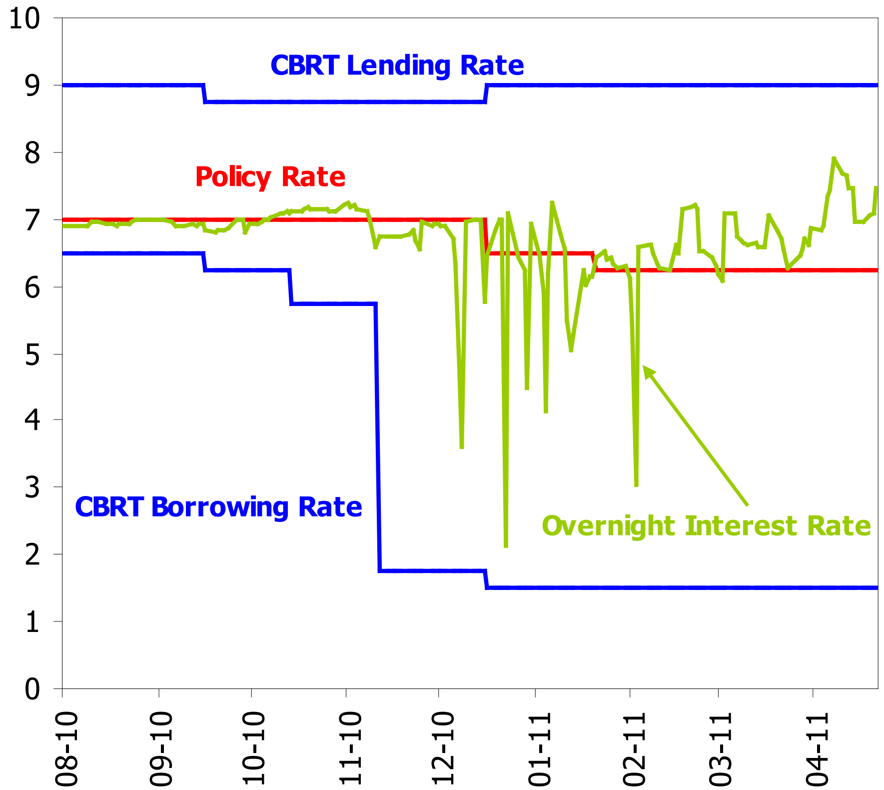
Macro prudential measures taken by other authorities in Turkey

1. Fiscal discipline
2. No FX loans to households
3. Domestic currency bond market
4. Loan/value restrictions
5. Tax hikes on certain consumer loans
6. Restrictions on credit card borrowing

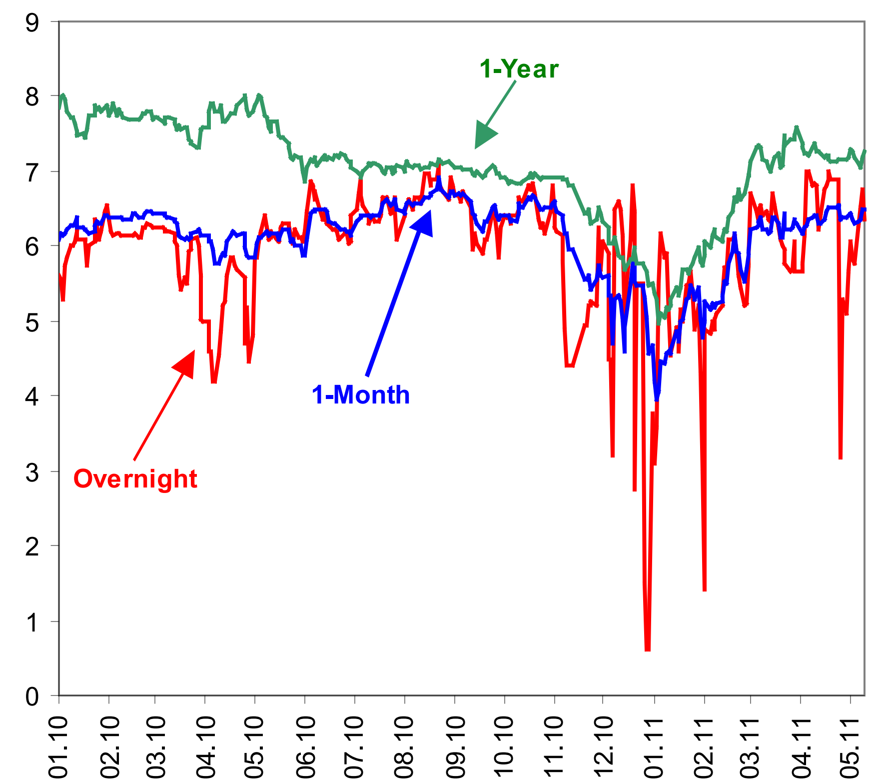
IV. Outcomes of the New Policy

Flexibility and volatility have been achieved in the Money Markets

Overnight Interest Rates
(%)



Swap Rates
(%)

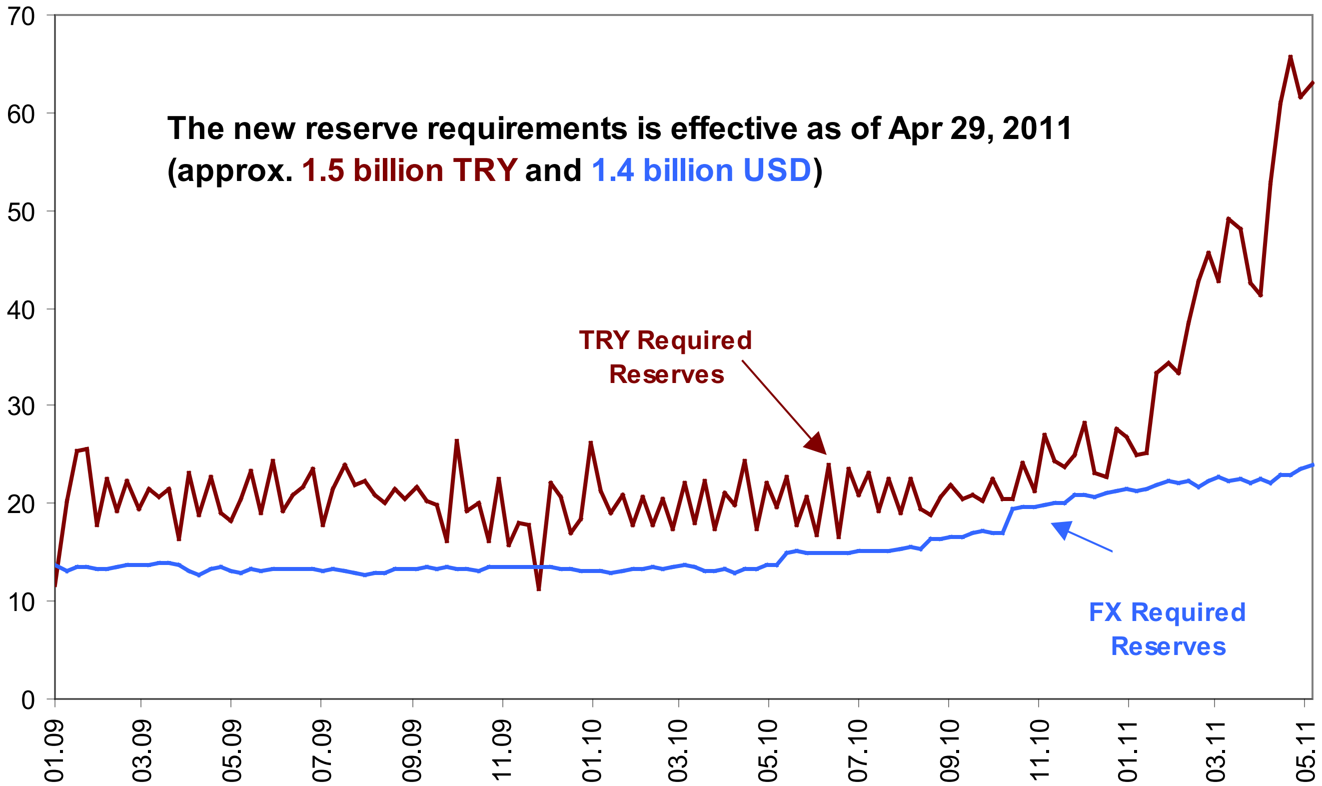


Source: CBRT

Last observations:May 2011

Liquidity is tightening

Reserve Requirements Balances
(billion TRY)



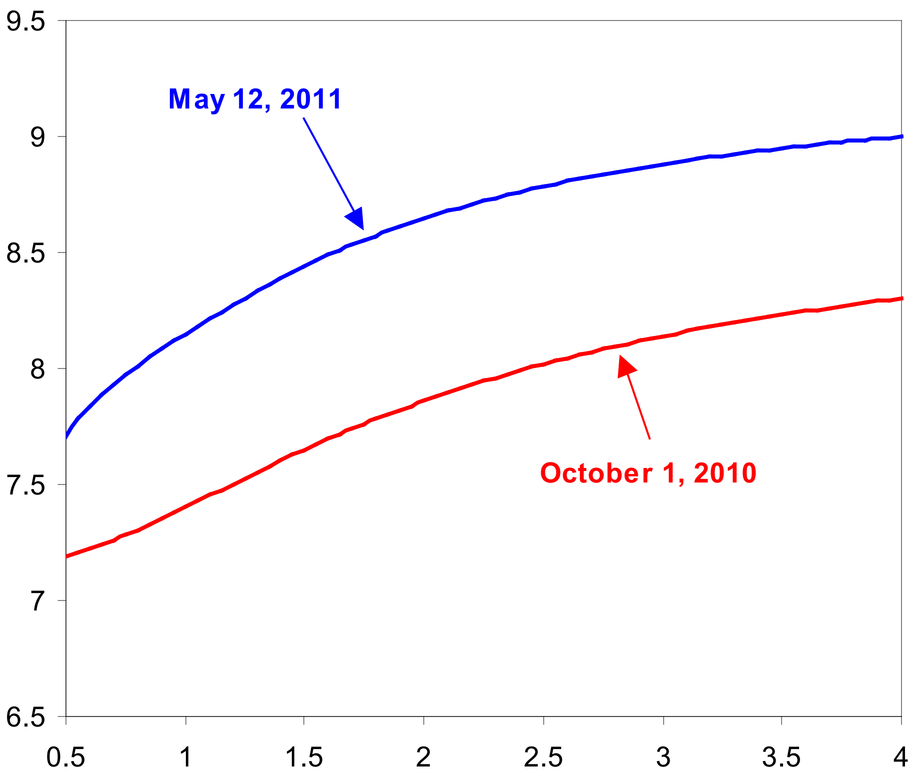
Source: CBRT

Last observations:May 2011

Yield curve becomes steeper and inflation expectations well-anchored.

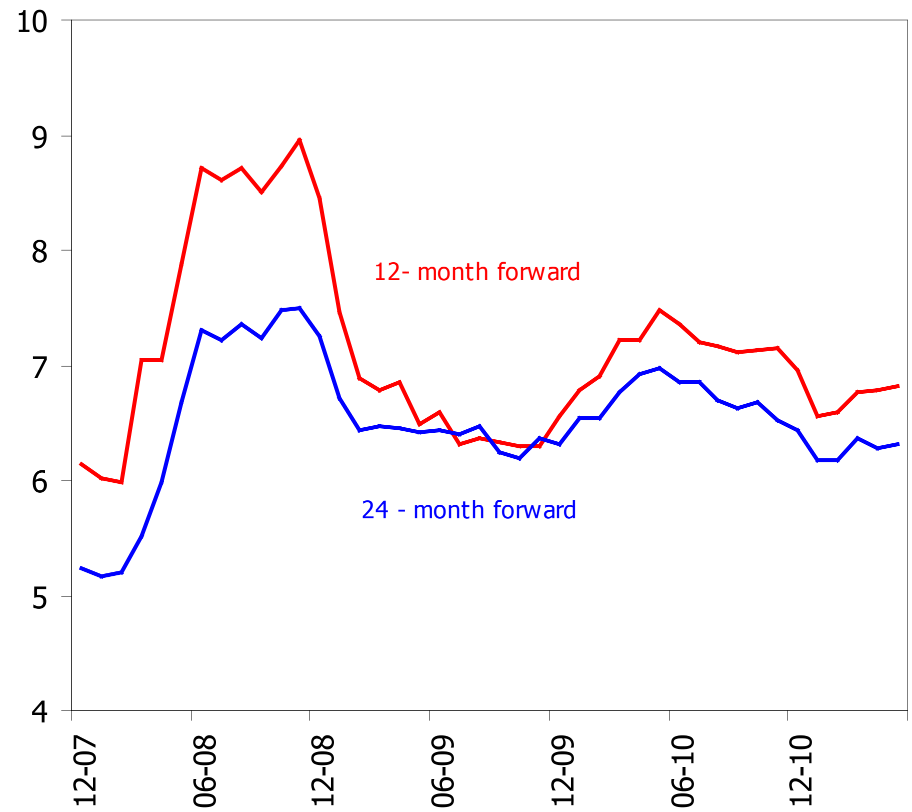
Yield Curve*

(%)



Inflation Expectations

(%.)



Source: CBRT

Last Observation: April 2011

**Calculated from the compunded returns on bonds quoted in ISE by using ENS method.*

Impact of New Policy Mix on Currency

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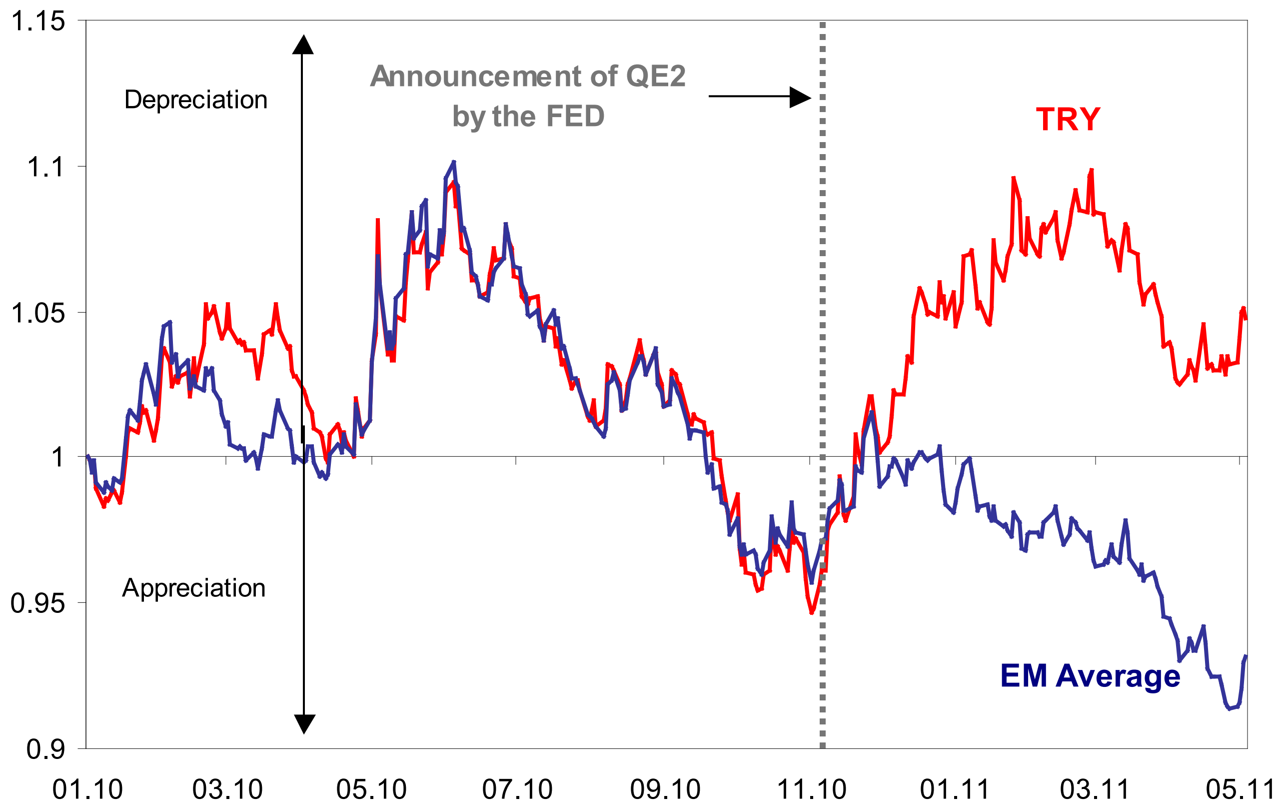
TRY and Other EM Currencies Against USD

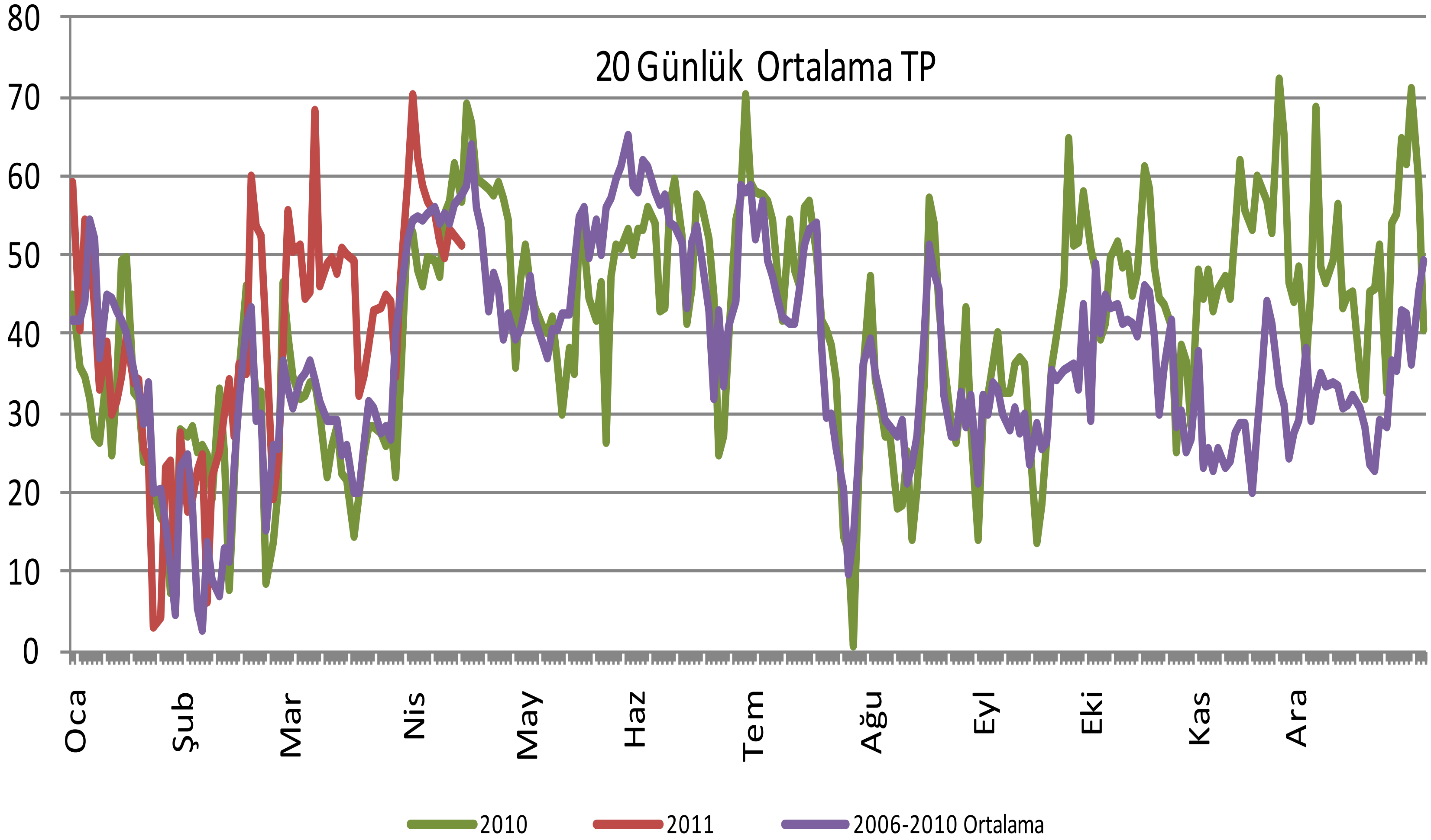
(4 Jan 2010= 1)



Source: CBRT

Last observations:May 2011

Daily credit growth



Source: CBRT

Last observations:Apr'il 2011

V. Discussion on Monetary and Macroprudential Policies

Macroprudential policies

- Effective policy to curb credit growth:

  1. Quantitative measures

     i) Restrictions on lenders (e.g. Reserve requirement policy)

     ii) Restrictions on borrowers (e.g. LTV, ITD etc.)

  2. Pricing measures: Raising lending rates through policy rate increases or levy on lending rates

- Answer depends on

  1. whether there exists a credit bubble
  2. whether there exists a monetary policy driven capital flows
  3. Mandates of central banks

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Policies for non-core liabilities

- Whether target non-core liabilities?

  i) Reserve requirements on FX deposits

  ii) Capital controls

  iii) Levy on non-core liabilities

- Answer depends on

  1. where the economy is in the financial cycle
  2. the importance of systemic risk spillovers

Monetary policy

- ❑ Separation of monetary policy from liquidity management
  - Interest on reserves
  - Banks put funds into a pecking order
- ❑ Wider interest rate corridor: constructive ambiguity
- ❑ Optimal coordination between monetary and financial policy

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Macroeconomic and Financial Stability in Turkey

Turalay Kenc

Deputy Governor

May 2011