



**TÜRKİYE CUMHURİYET  
MERKEZ BANKASI**

# **The IMF - World Bank Spring Meetings**

**Erdem Başçı  
Governor**

**April 2013**

# Overview

- Capital flow volatility may cause misalignments in credit and currency.
- Credit and currency misalignments hurt both price stability and financial stability in emerging market economies.
- Macroprudential policy has proven to be effective in reducing excessively high credit growth in Turkey.
- Using macroprudential policy effectively helps to reduce currency misalignments as well.
- Improvements in price stability and financial stability also improve balanced growth prospects in Turkey.

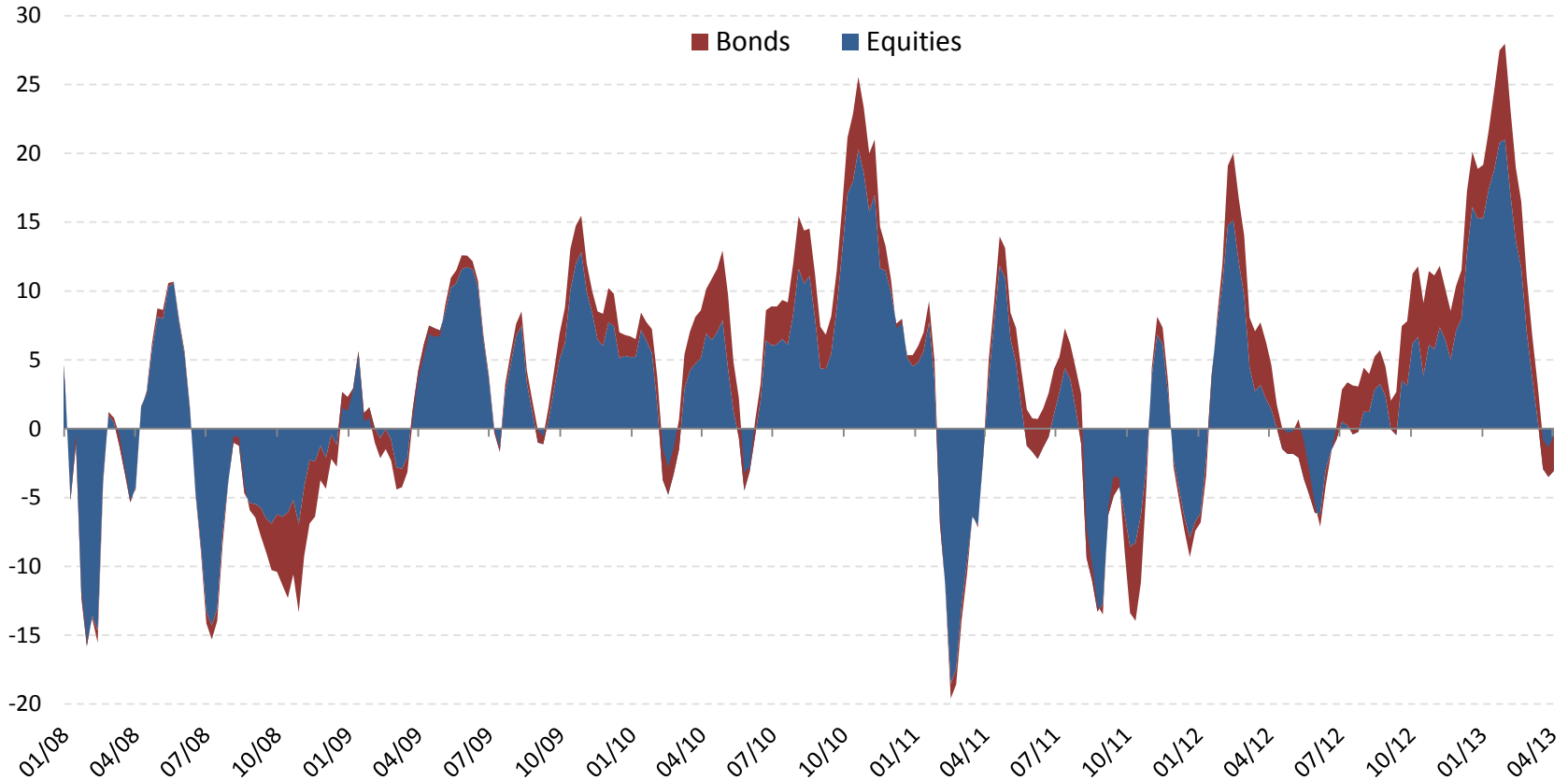
# Contents

- I. Capital Flow Volatility
- II. The Policy Framework
- III. Results
  - i. Rebalancing
  - ii. Inflation
  - iii. Growth

# CAPITAL FLOW VOLATILITY

# Capital Flows

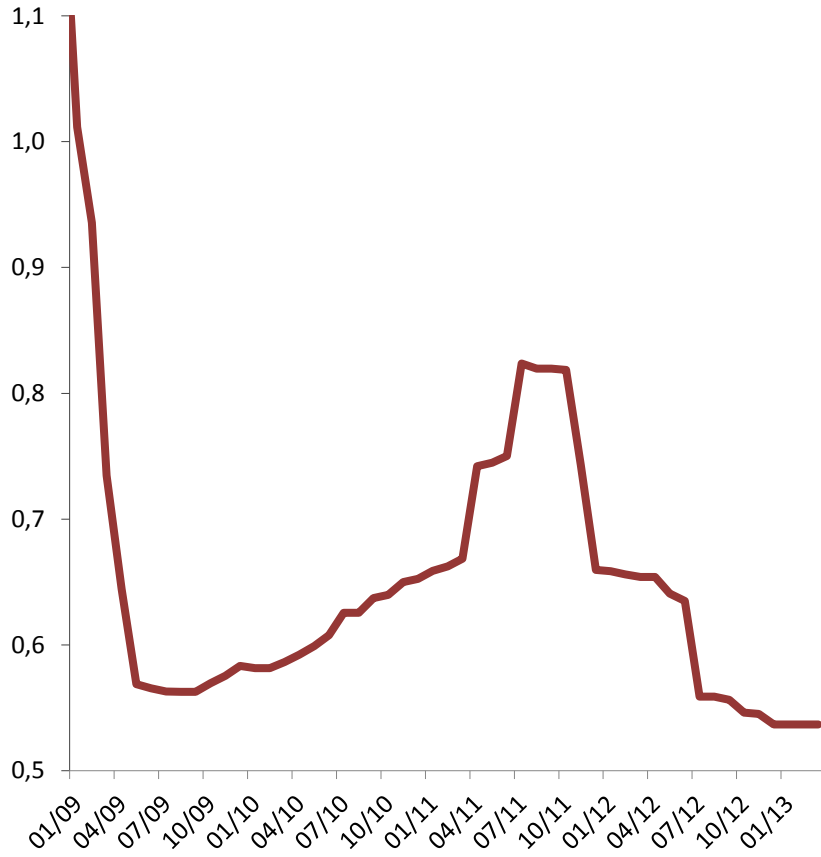
## Equity and Bond Flows to Emerging Market Economies (4-Week Moving Sum, Billion USD)



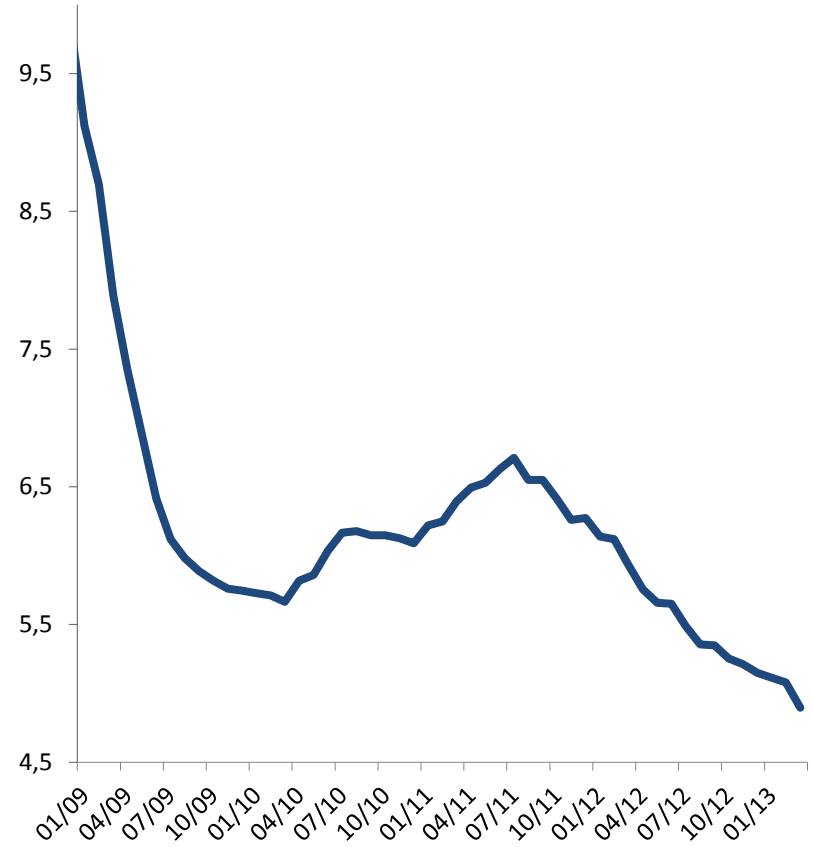
Source: Emerging Portfolio Fund Research (EPFR)

# Global Policy Rates

## Advanced Economies



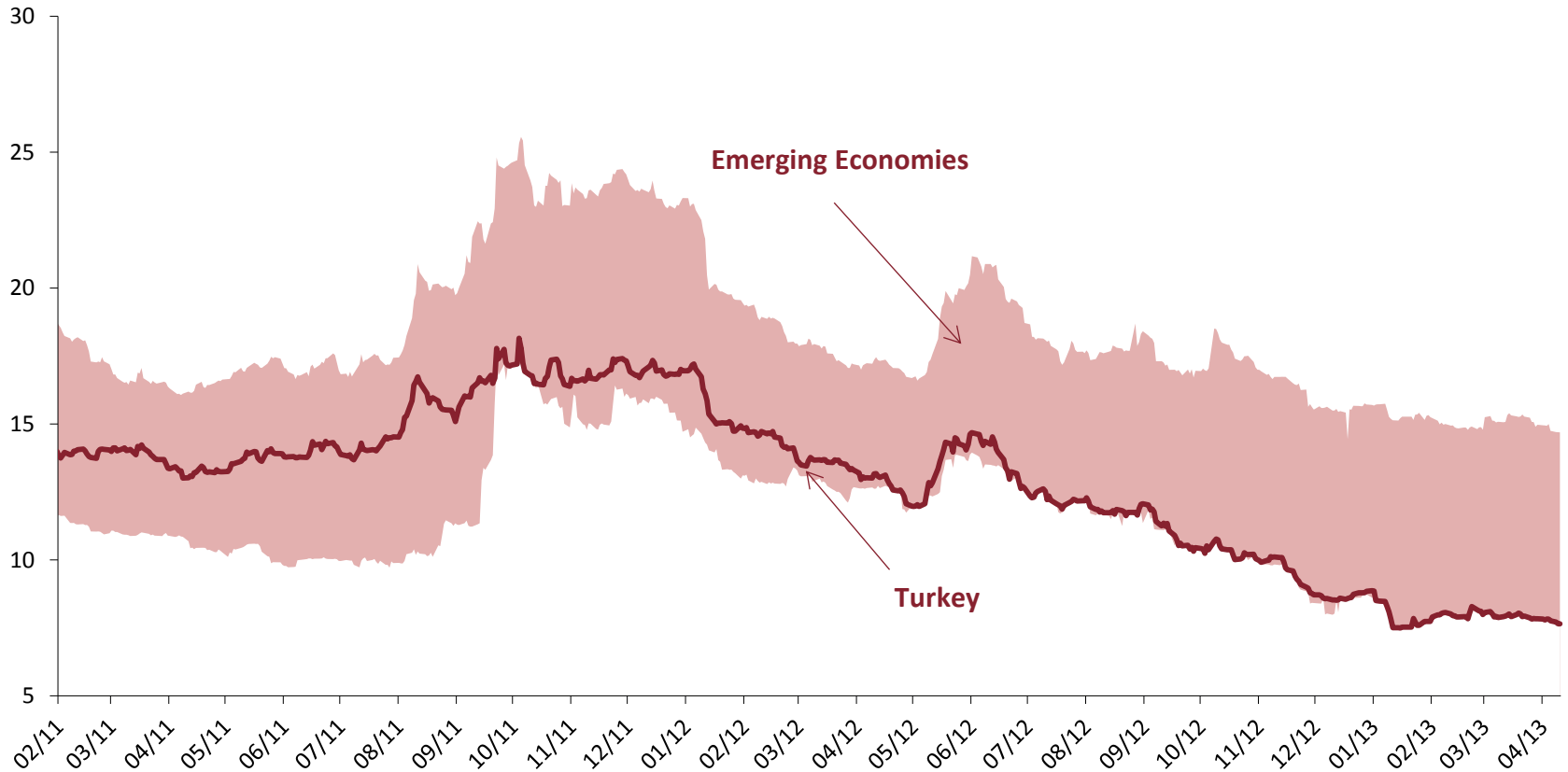
## Emerging Market Economies



Source: Bloomberg.

# Exchange Rate Volatility

## FX Volatility in Emerging Market Economies with CAD (Percent, Implied for the next 12 months)



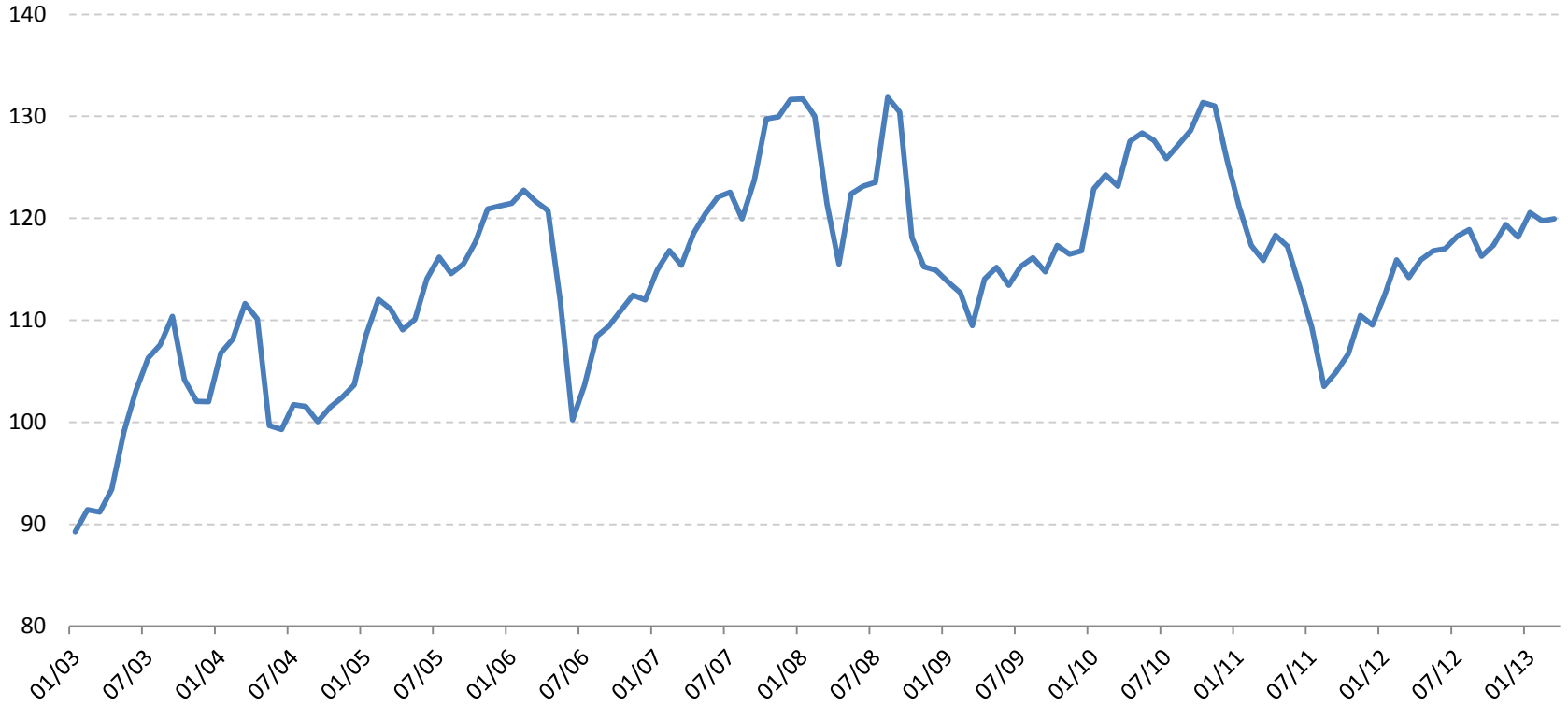
Source: Bloomberg, CBRT.

Emerging market economies that are running current account deficit are: Brazil, Chile, Colombia, Mexico, Poland, Czech Rep., S. Africa, Indonesia, Romania and Turkey.

# Real Effective Exchange Rate (REER)

CPI Based REER  
(Base year: 2003)

REER

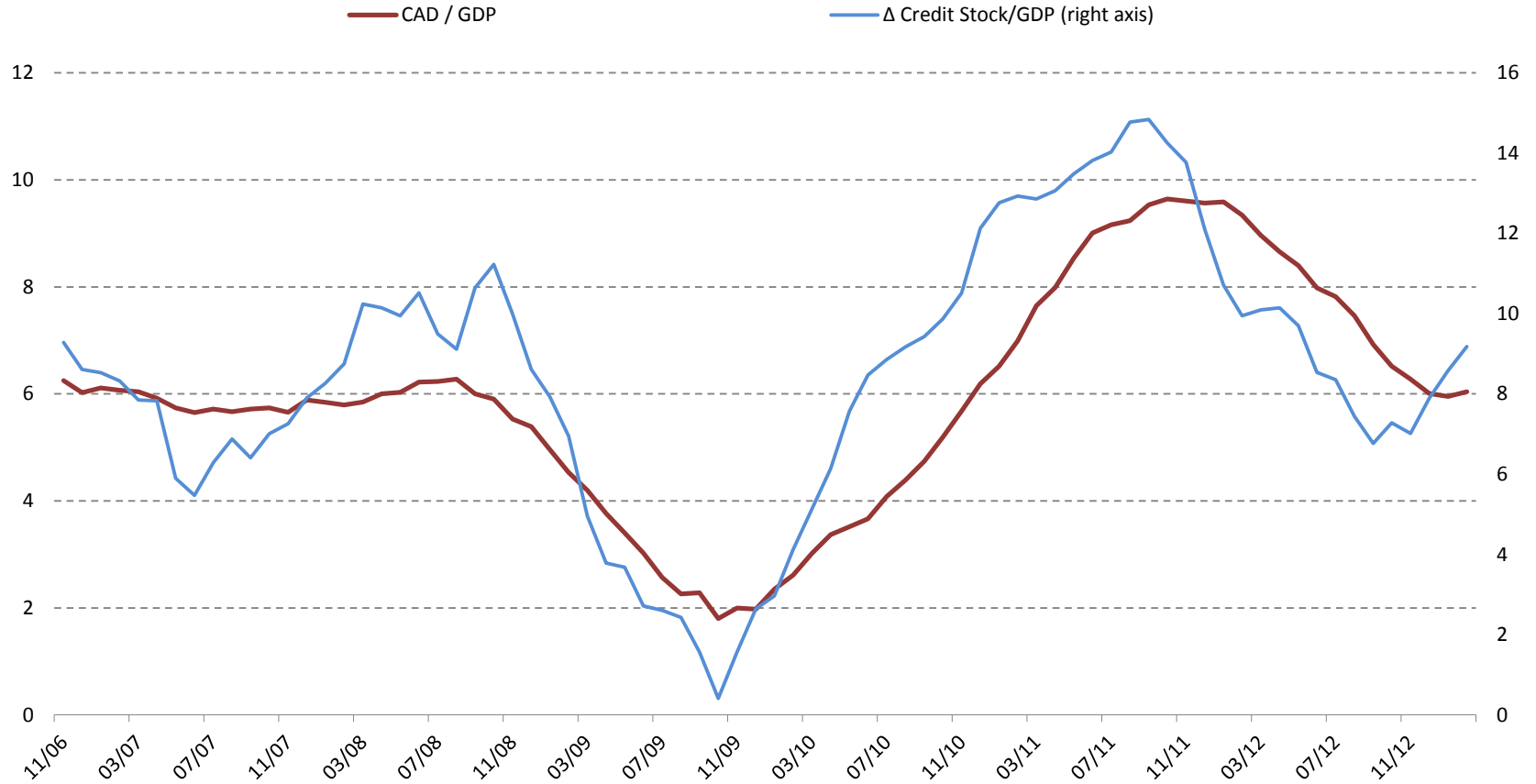


Source: CBRT.



# Credit Growth

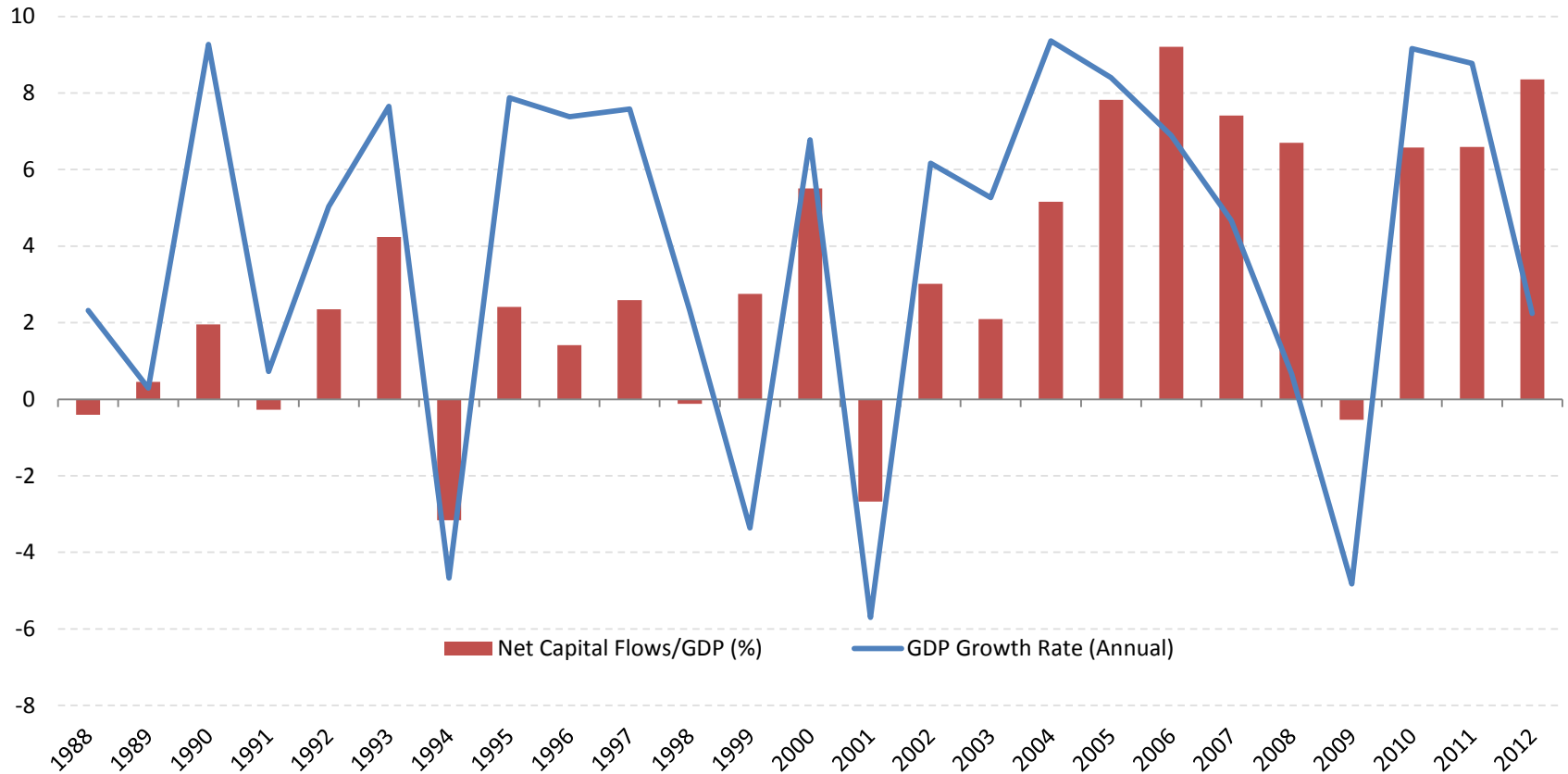
## Credit Growth and Current Account Deficit (Percent, 12-Month Cumulative)



Source: CBRT.

# GDP Growth

## Capital Flows and GDP Growth in Turkey (Percent, Annual)



Source: CBRT

# THE POLICY FRAMEWORK

# Policy Framework

	Old Approach	New Approach
Objectives	Price Stability	Price Stability Financial Stability
Policy Tools	Policy Rate	Structural Tools Cyclical Tools

# Structural Tools

- Maturity Based Reserve Requirements
- Leverage Based Reserve Requirements
- Reserve Options Mechanism

# Cyclical Tools

- Policy Rate
- Interest Rate Corridor
- TL Liquidity Management
- FX Liquidity Management

# Maturity Based Reserve Requirements

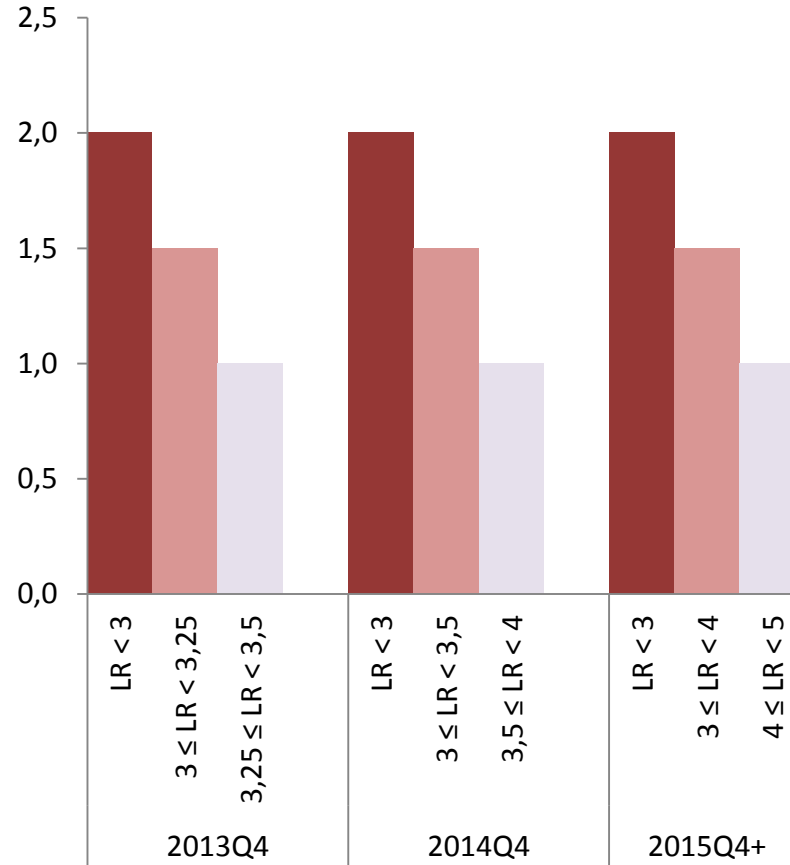
## Core Liabilities

	M < 1 year	M ≥ 1 year
TL	11.1%	5%
FX	12.5%	9%

## Non-Core Liabilities

	M < 1 year	M ≥ 1 year
TL	11.5%	6.4%
FX	12.3%	6%

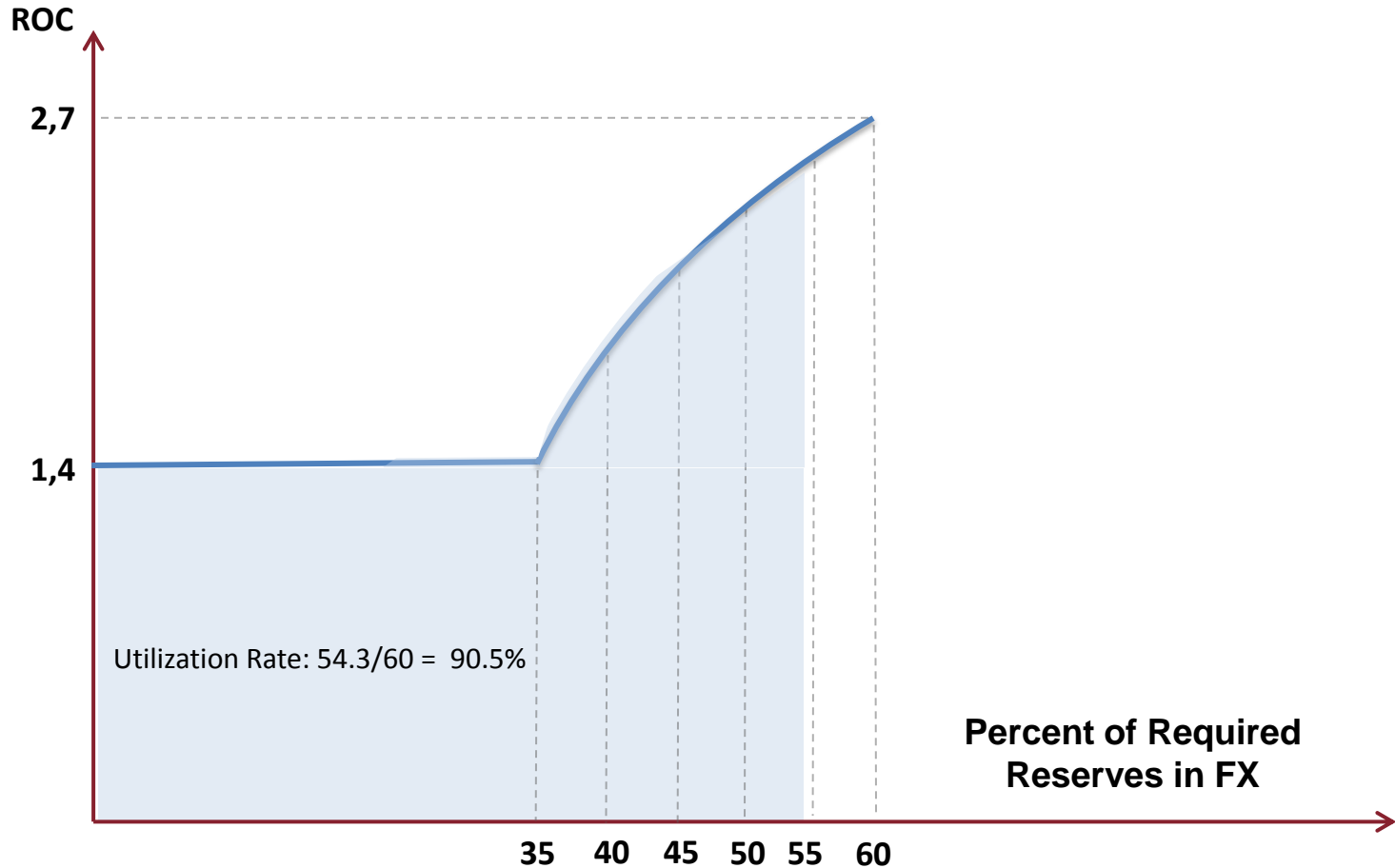
# Leverage Based Reserve Requirements





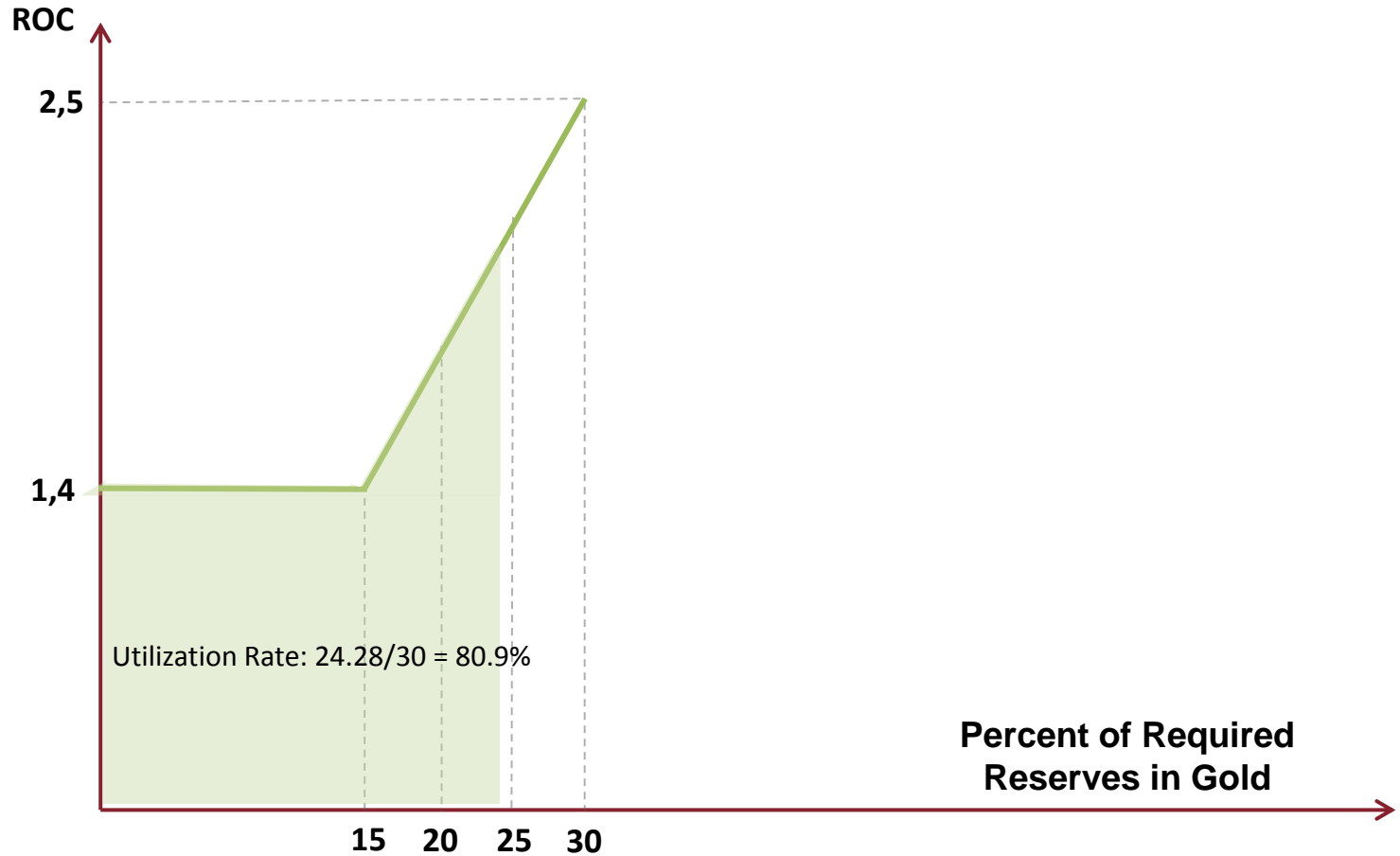
# Reserve Options Mechanism (FX)

## Reserve Option Coefficients (ROC)



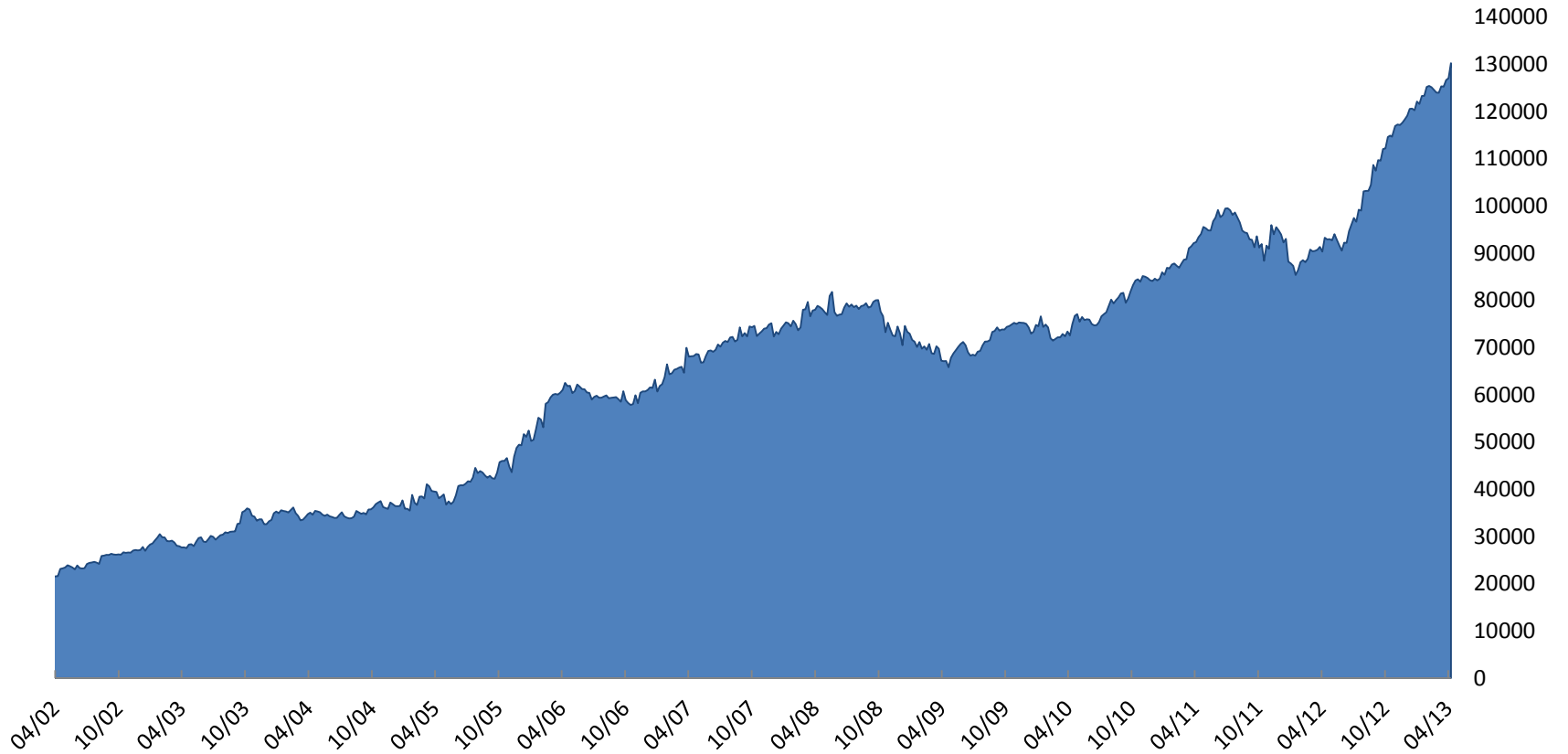
# Reserve Options Mechanism (Gold)

## Reserve Option Coefficients (ROC)



# CBRT Reserves

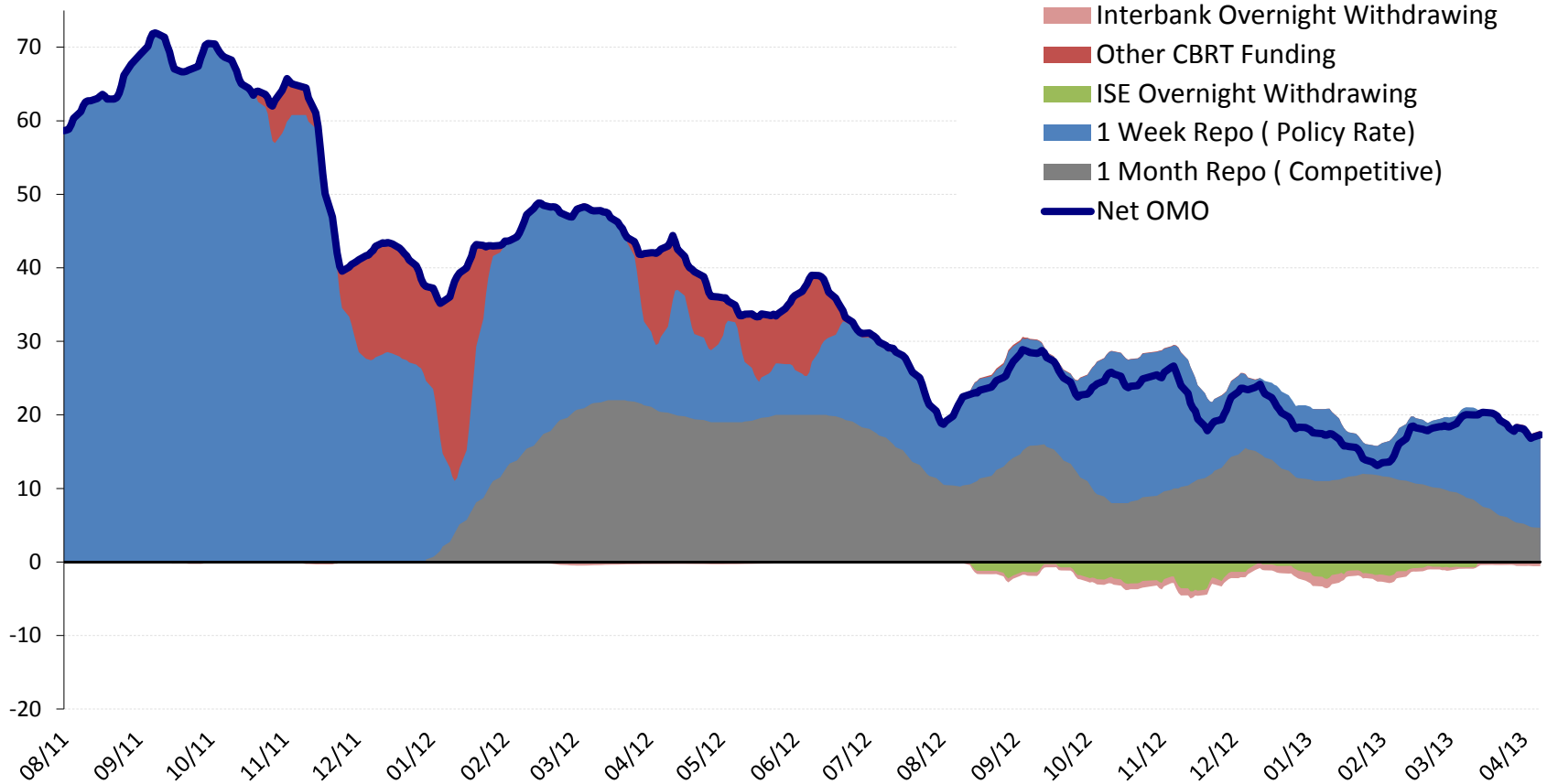
## FX and Gold Reserves (Million USD)



Source: CBRT

# Liquidity Management

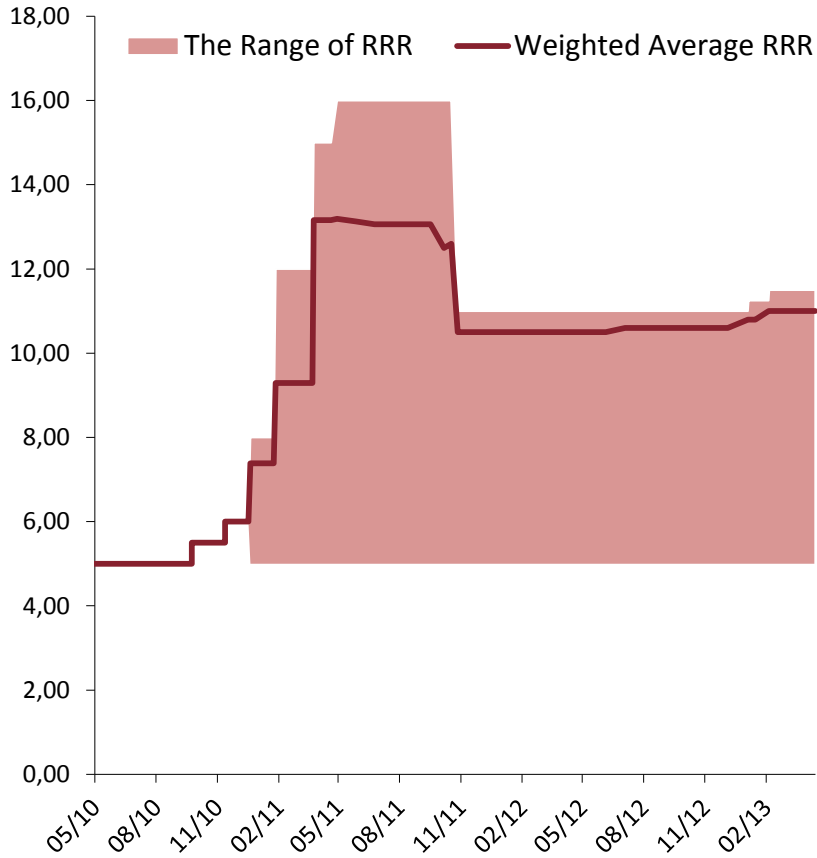
## CBRT Funding (Billion TRY)



Source: CBRT

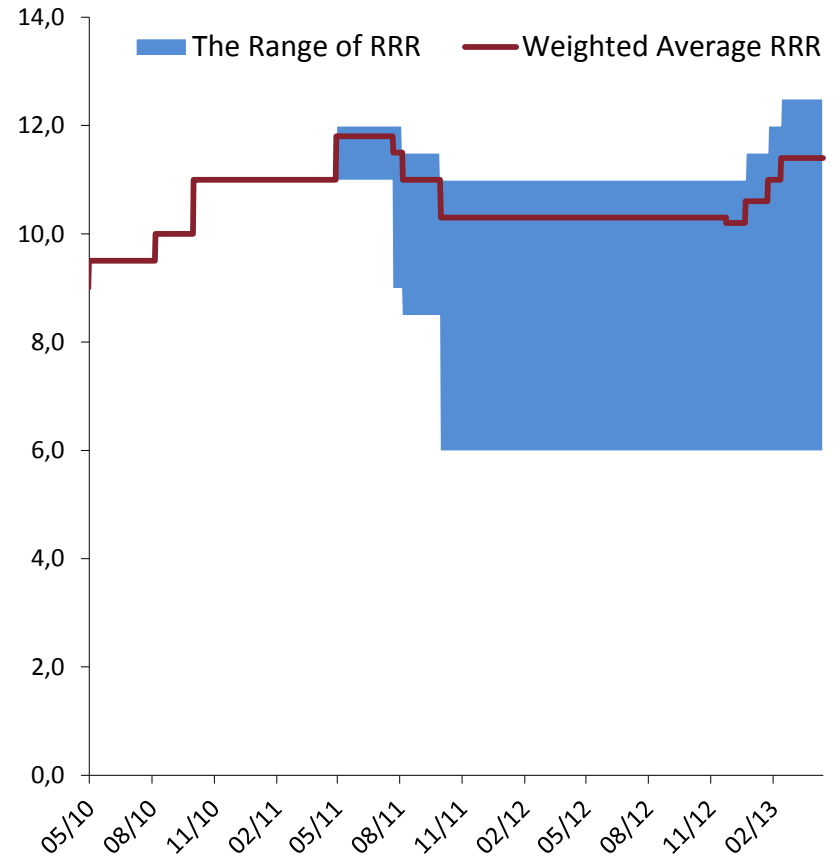
# Liquidity Management

## TL Reserve Requirements



Source: CBRT.

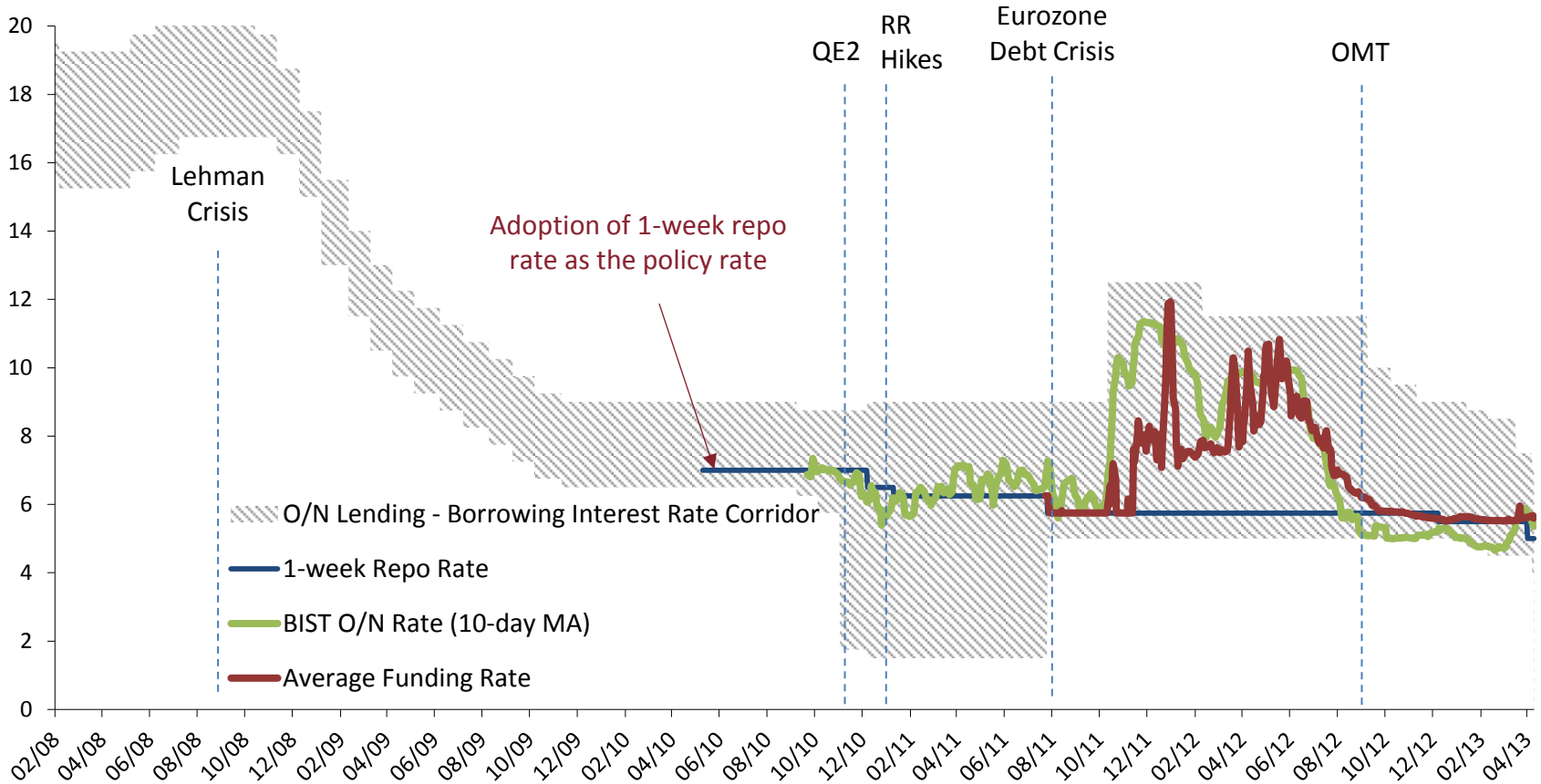
## FX Reserve Requirements



Source: CBRT.

# Liquidity Management

## Interest Rate Corridor and Average Funding Rate (Percent)

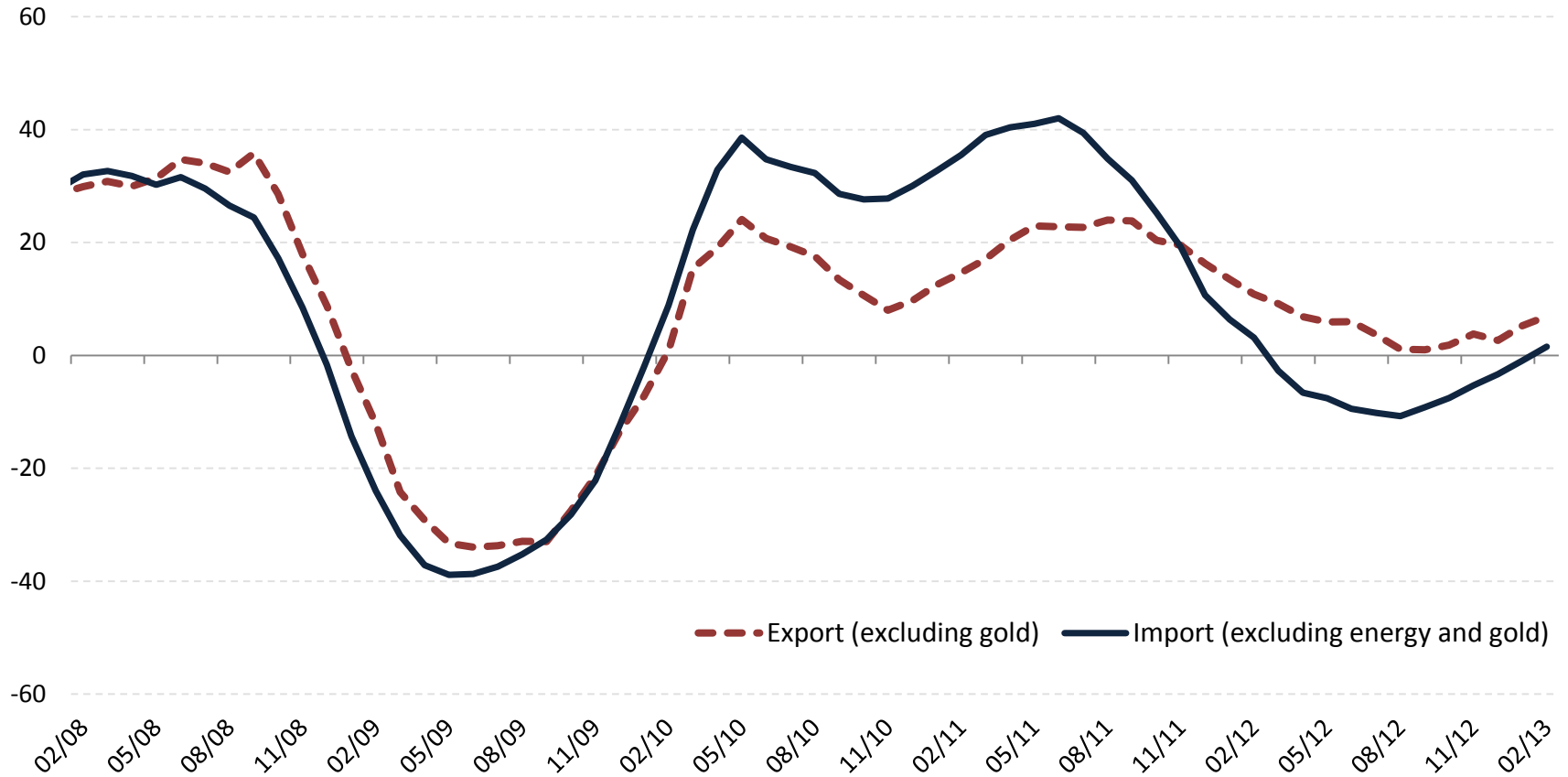


Source: BIST, CBRT.

# REBALANCING

# Rebalancing

## Exports and Imports (Nominal, 6-Month MA, YoY % Change)

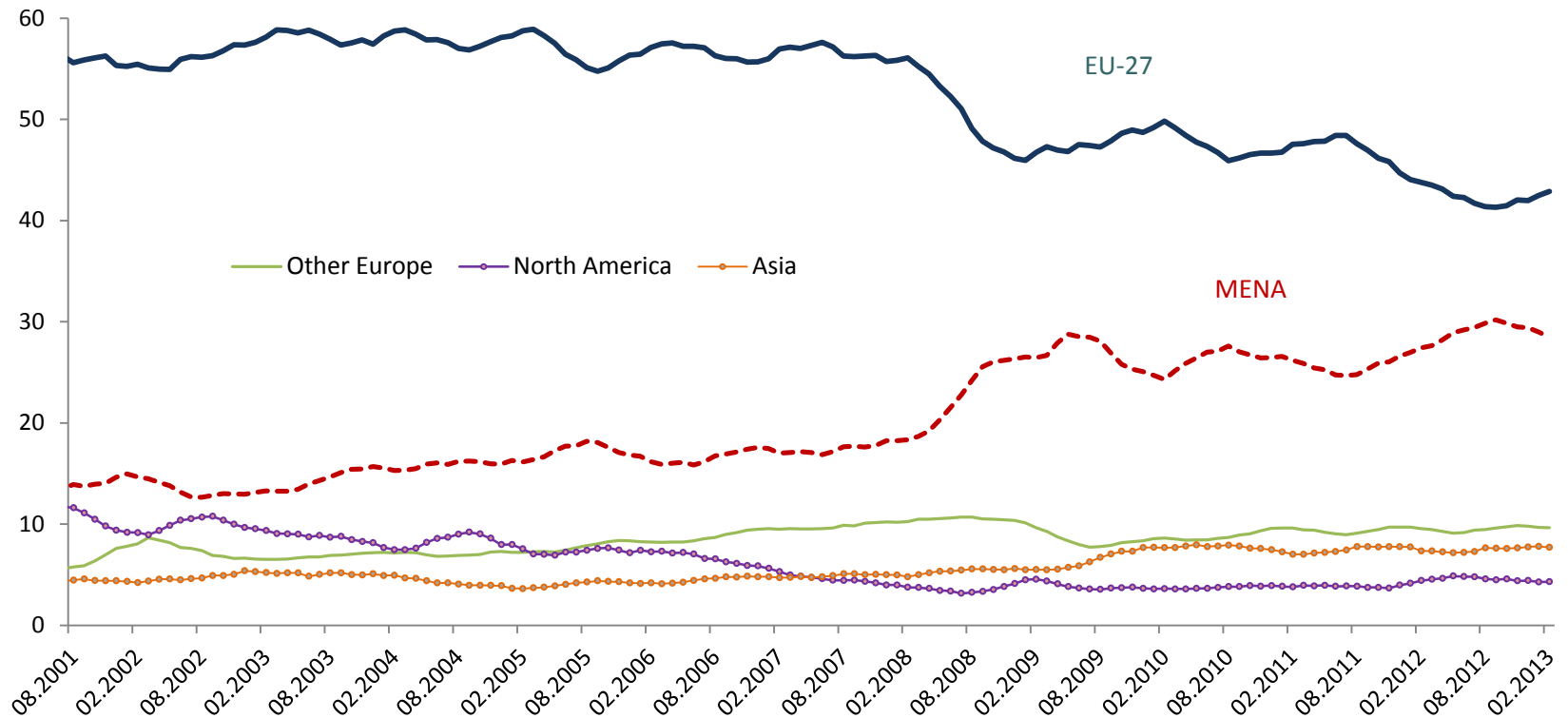


Source: TURKSTAT.



# Market Diversification

## Exports Market Share\* (6-Month Cumulative, Percent)

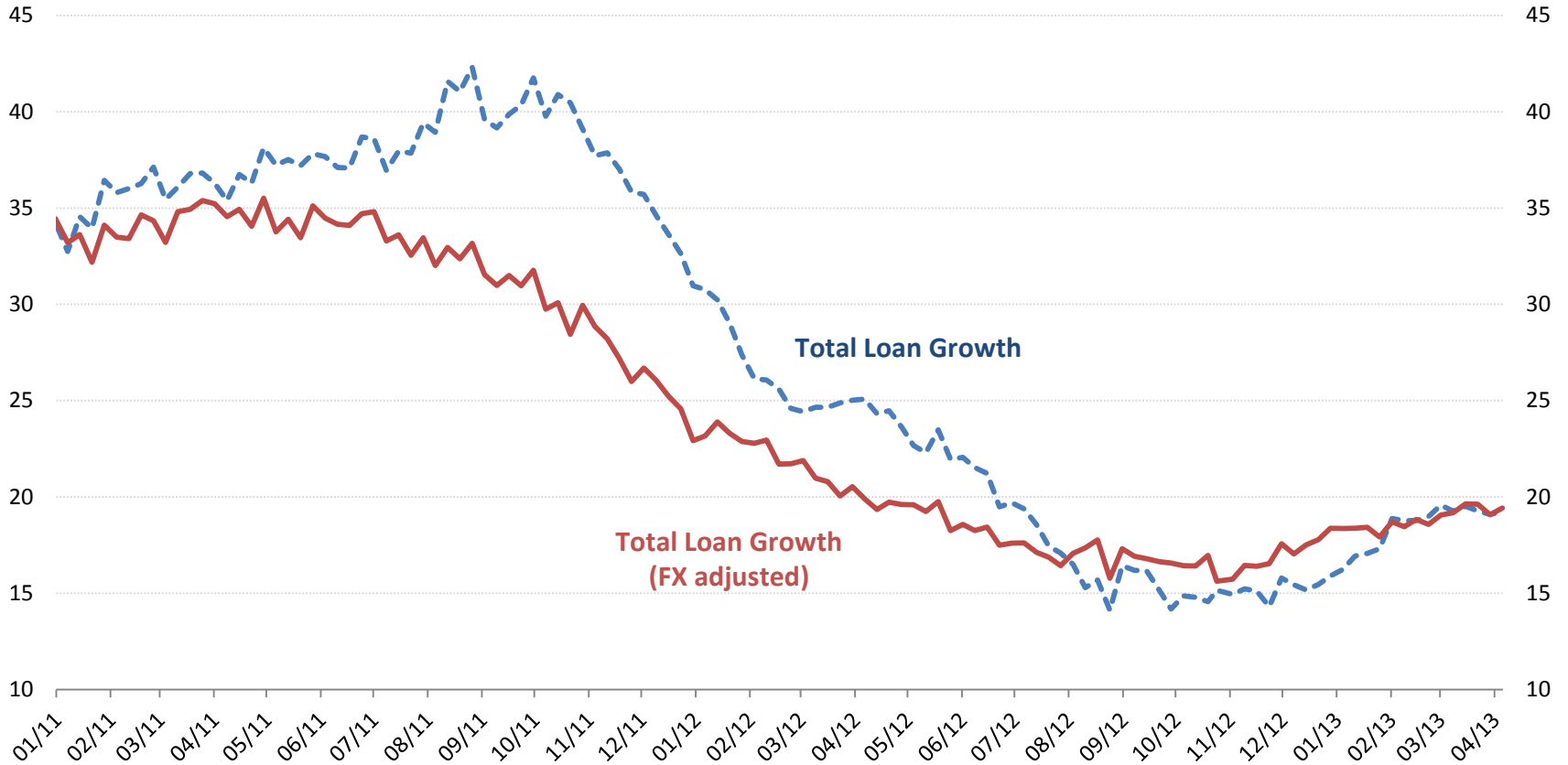


Source: TurkStat

\*Excluding gold.

# Credit Growth

## Total Loan\* Growth Rates (YoY Change, Percent)

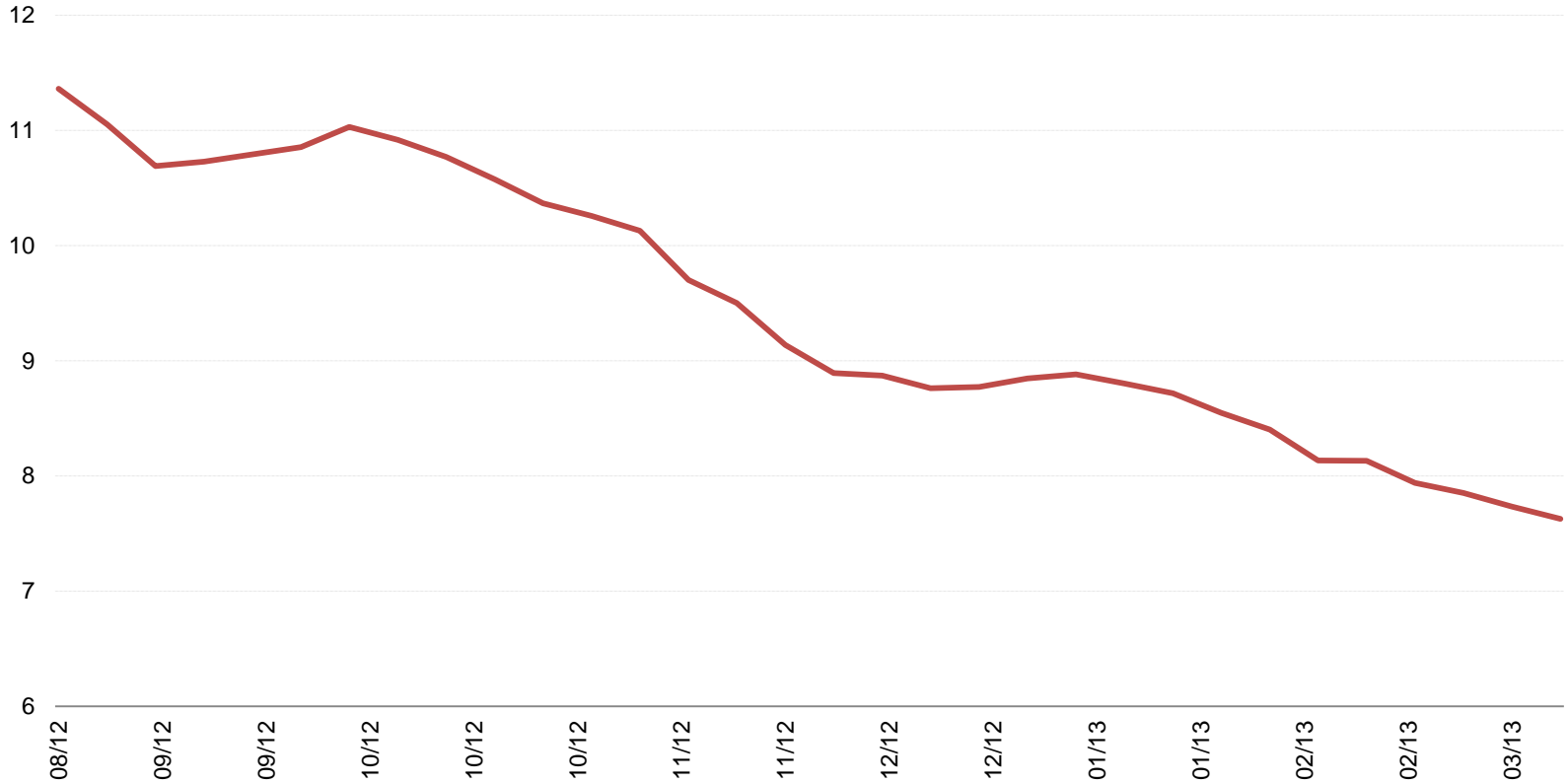


Source: BRSA.

\*Total credit is inclusive of all types of banks (deposit banks, participation banks, and development/investment banks) and credit cards.

# Commercial Loan Rates

## Commercial Loan Rates\* (4 Weeks Moving Average, Percent)

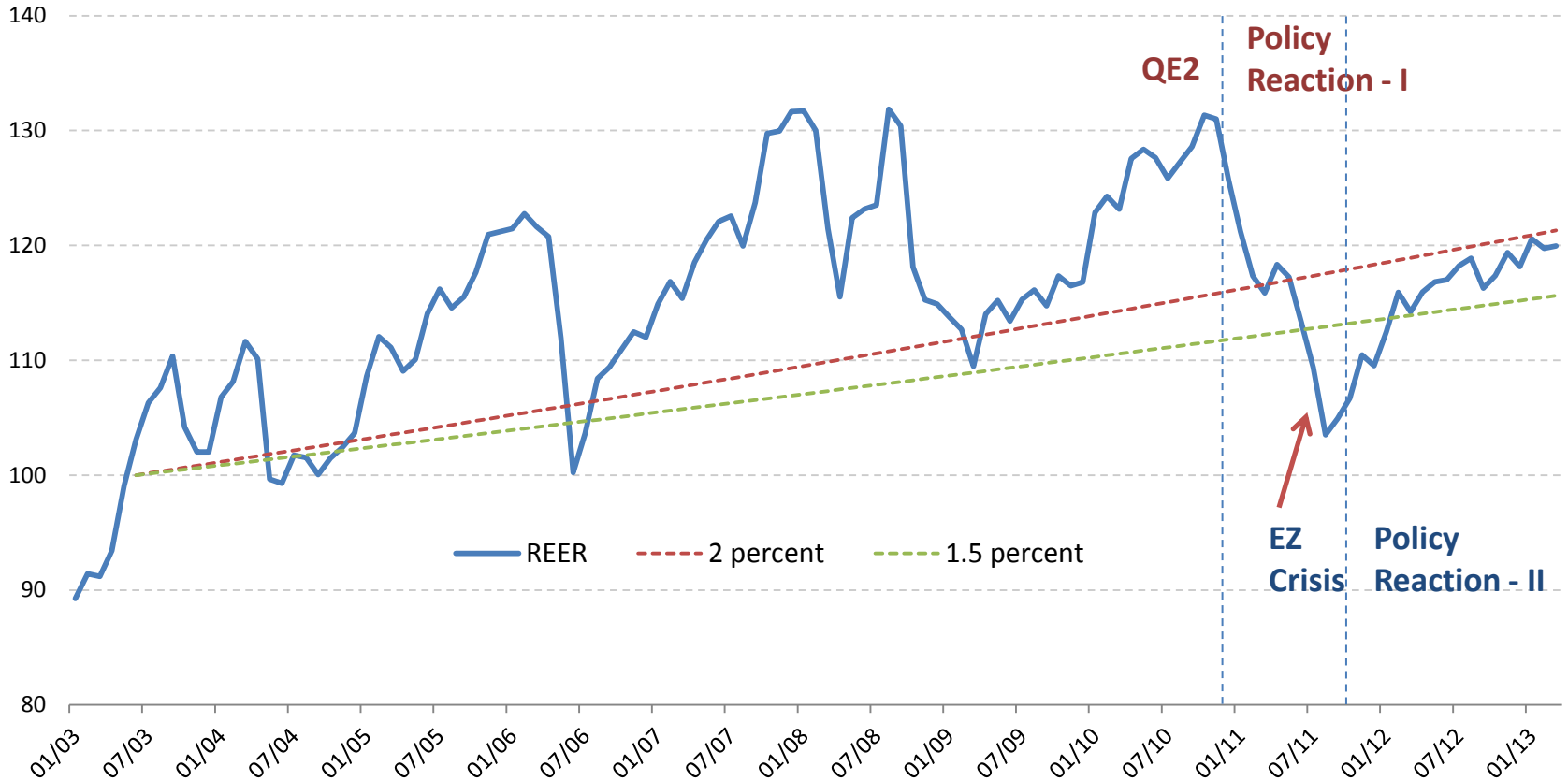


Source: CBRT.

\*Excluding Corporate Overdraft Account and Corporate Credit Cards

# Real Effective Exchange Rate (REER)

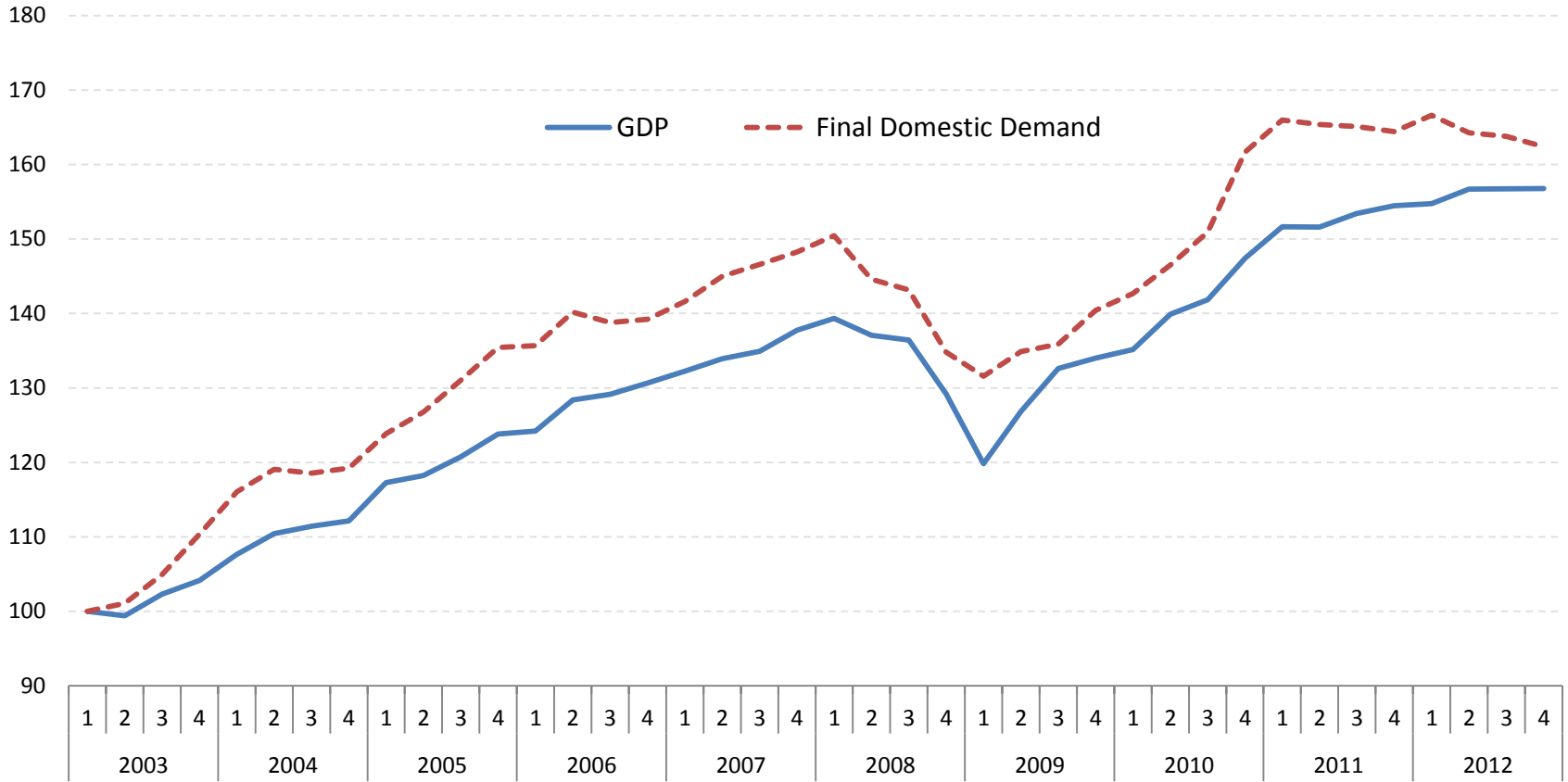
## CPI Based REER (Base year: 2003)



Source: CBRT.

# Rebalancing

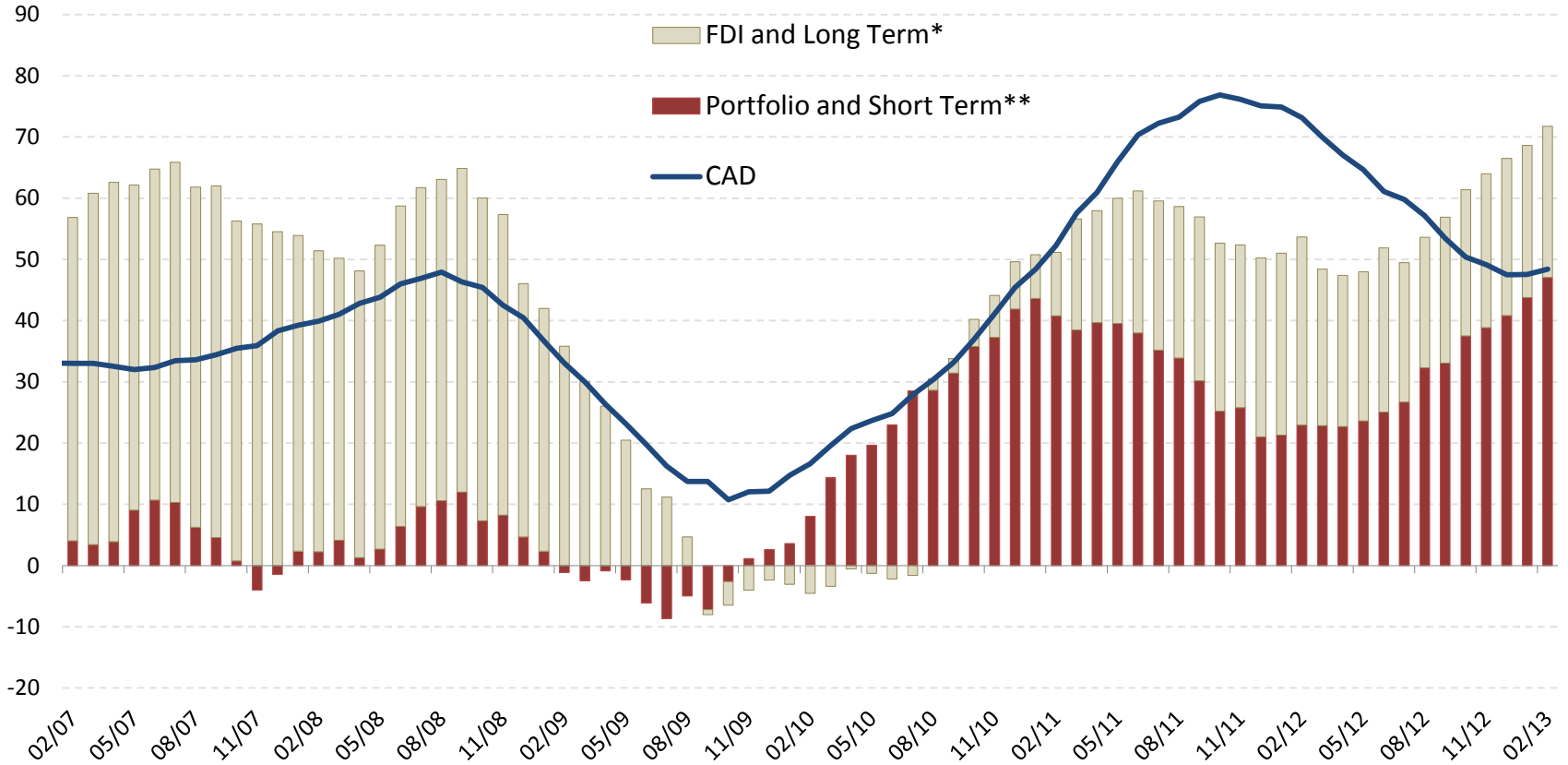
## Final Domestic Demand and GDP (Seasonally Adjusted, 2003Q1=100)



Source: TurkStat, CBRT.

# Quality of Capital Inflows

## Main Sources of Current Account Deficit Finance (12-Month Cumulative, Billion USD)



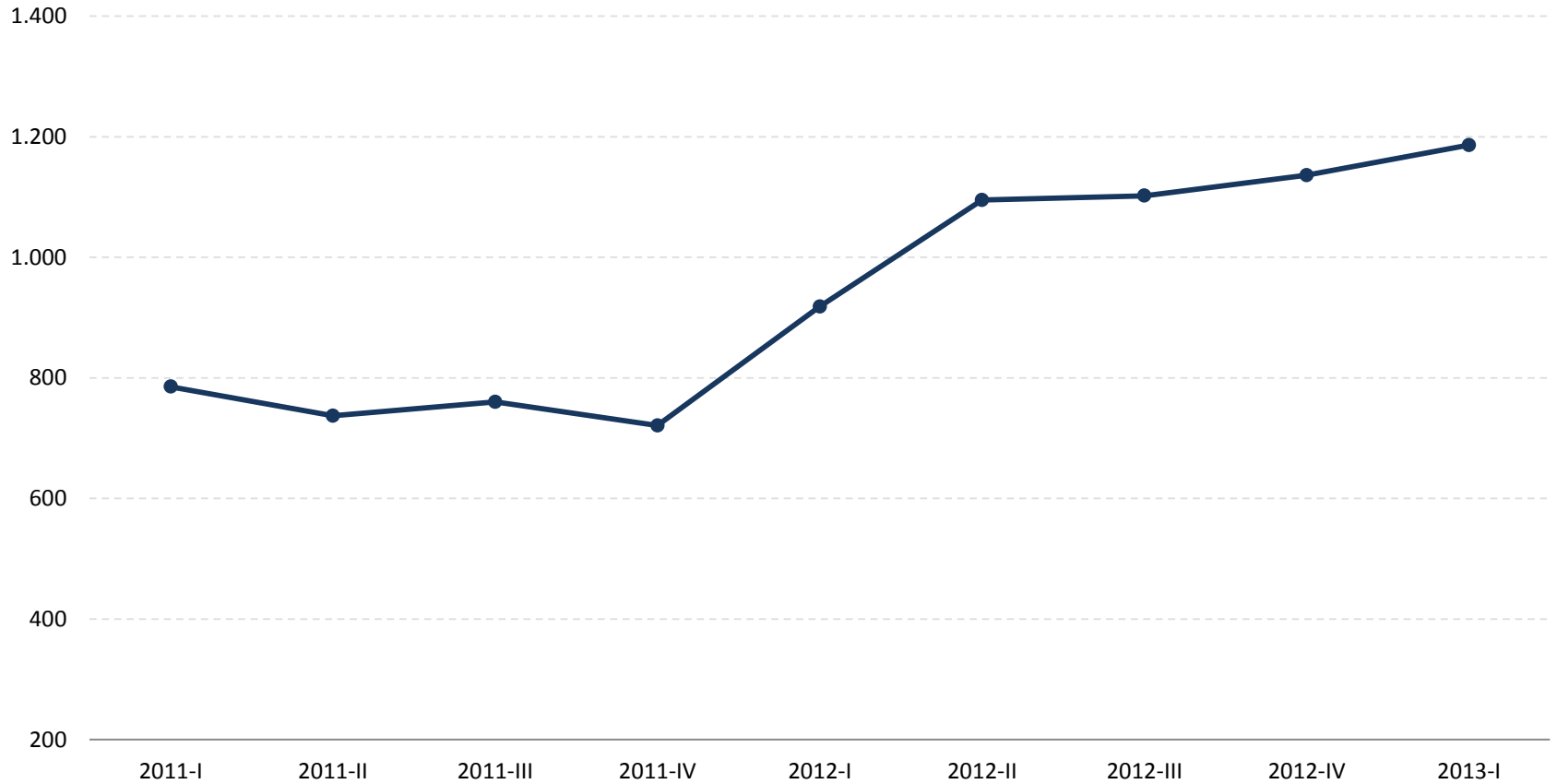
Source: CBRT.

\*Long term capital movements are sum of banking and real sectors' long term net credit and bonds issued by banks and the Treasury.

\*\*Short term capital movements are sum of banking and real sectors' short term net credit and deposits in banks.

# Maturity of Non-Residents' Bond Holdings

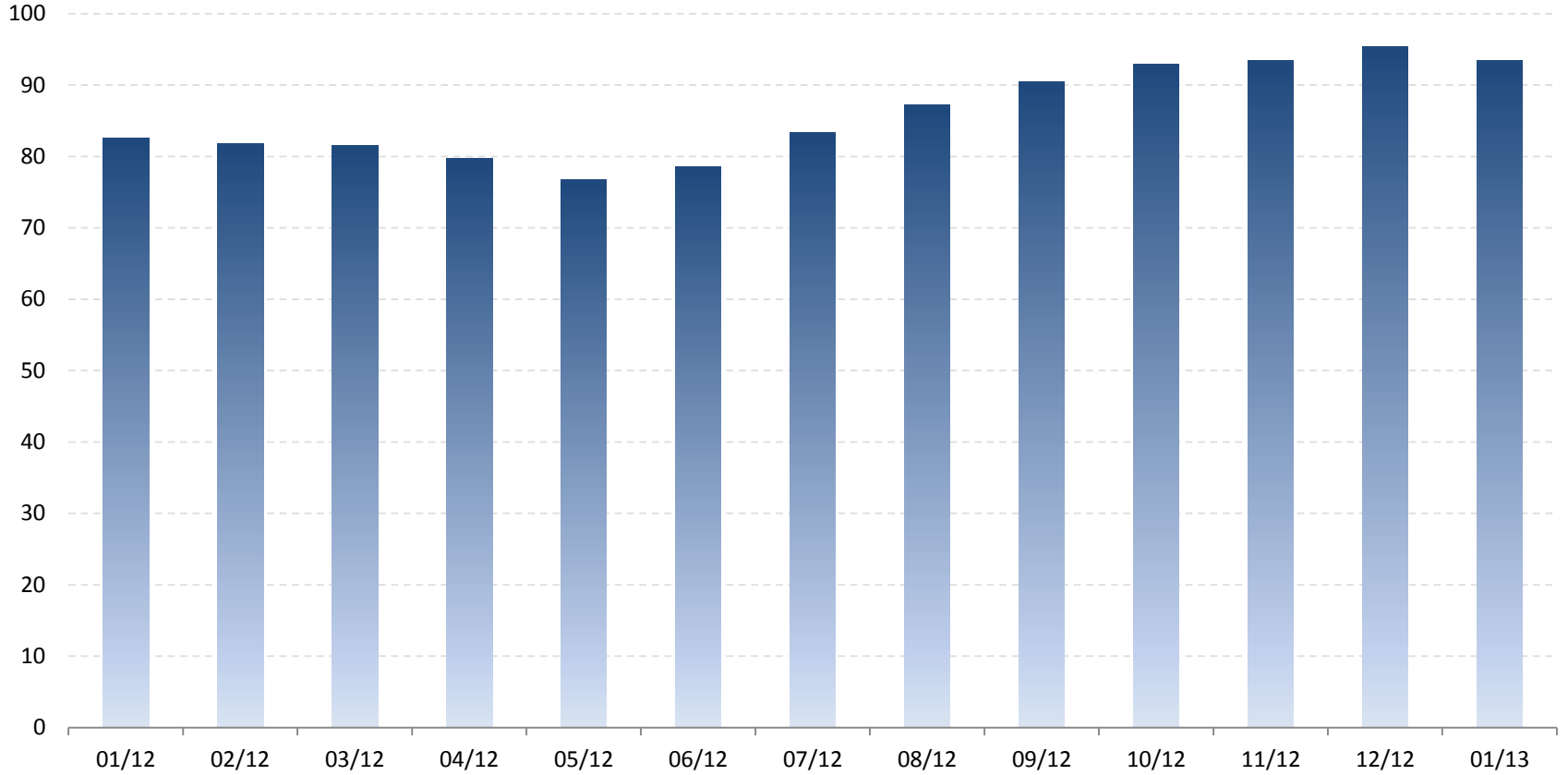
## Average Maturity (Days)



Source: CBRT.

# Greenspan-Guidotti Ratio

## Ratio of International Reserves to Short-Term Foreign Debt (Percent)



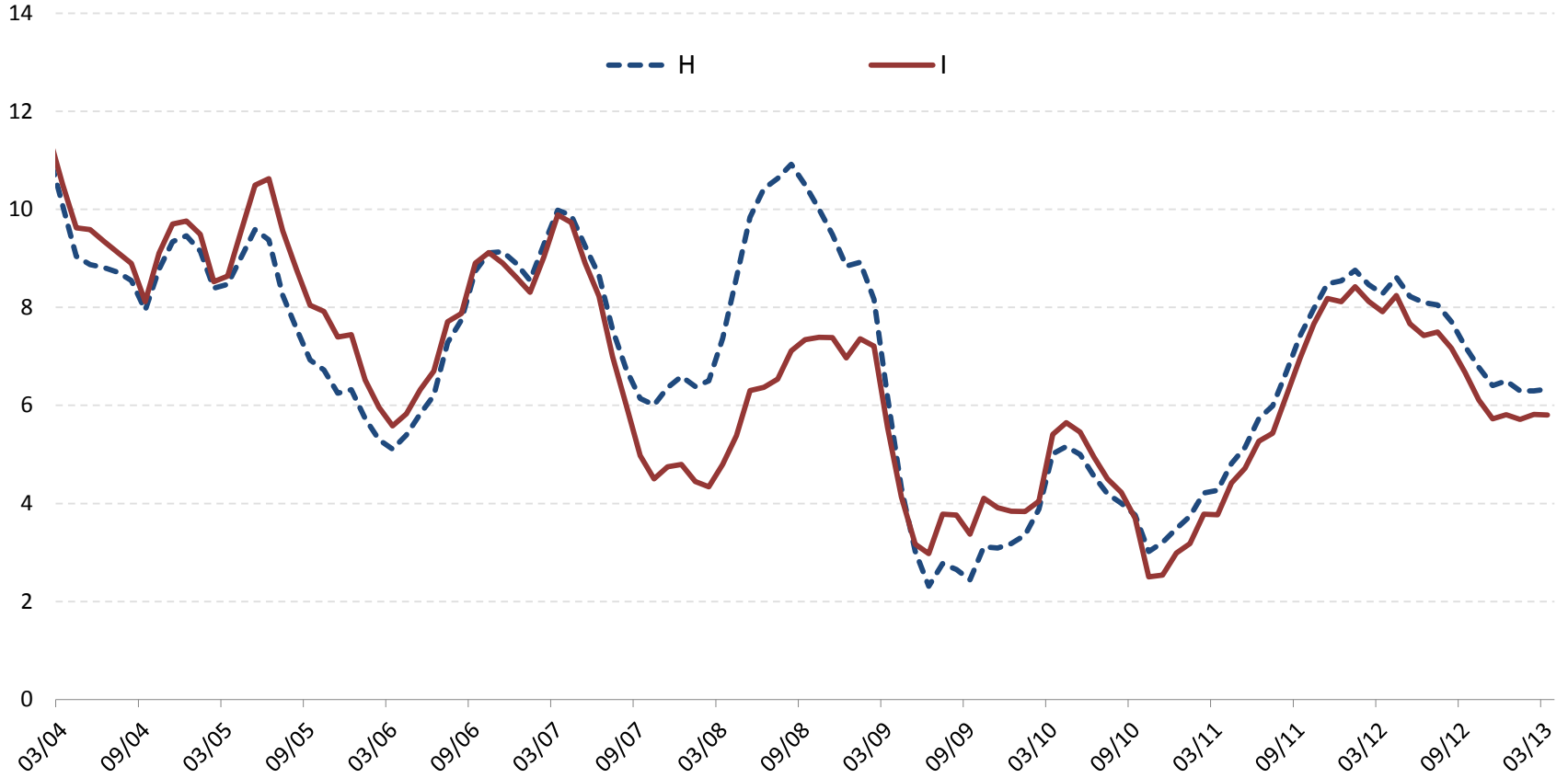
Source: CBRT



# INFLATION

# Core Inflation

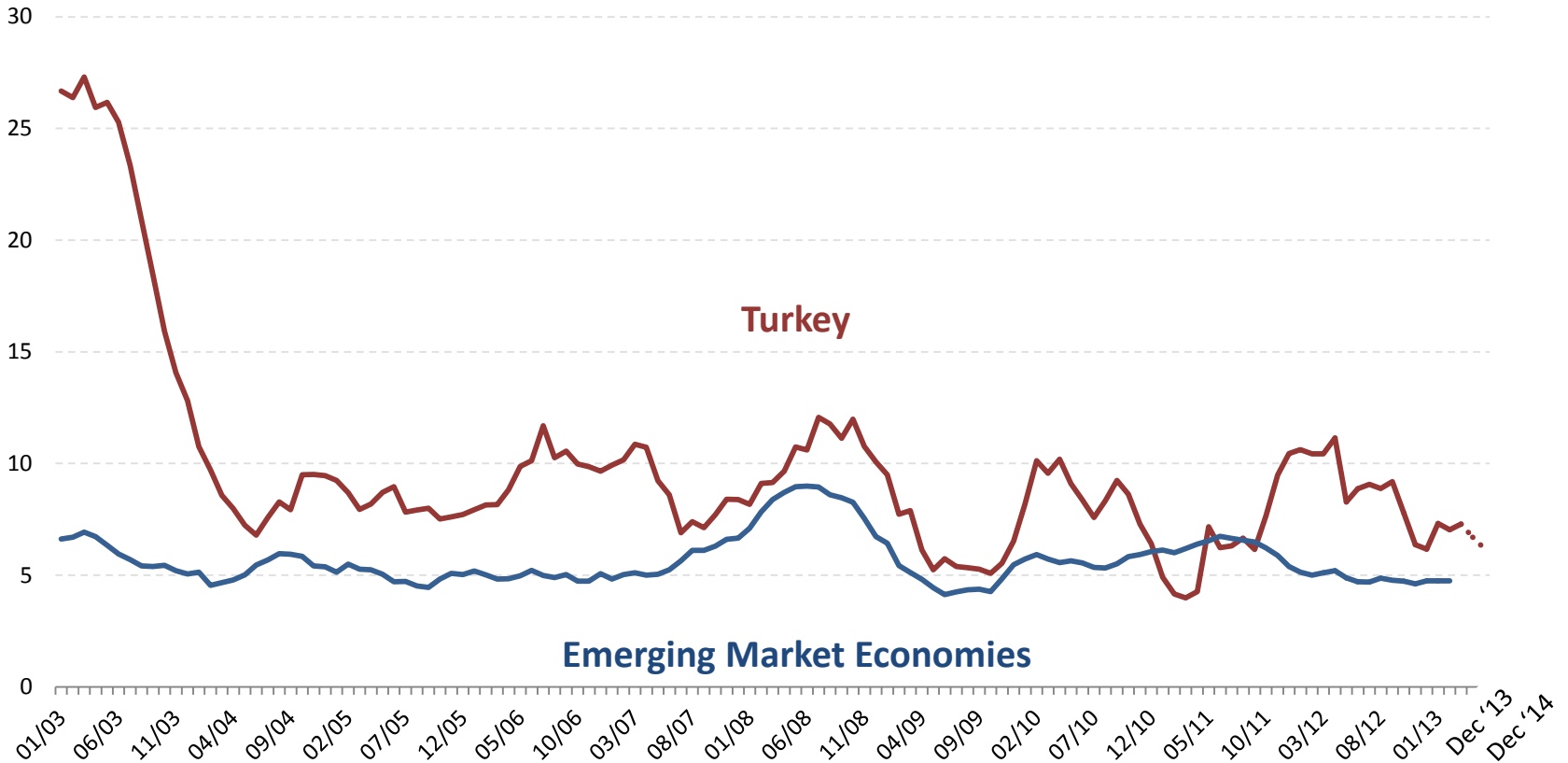
## Annual Change



Source: TURKSTAT, CBRT.

# Inflation

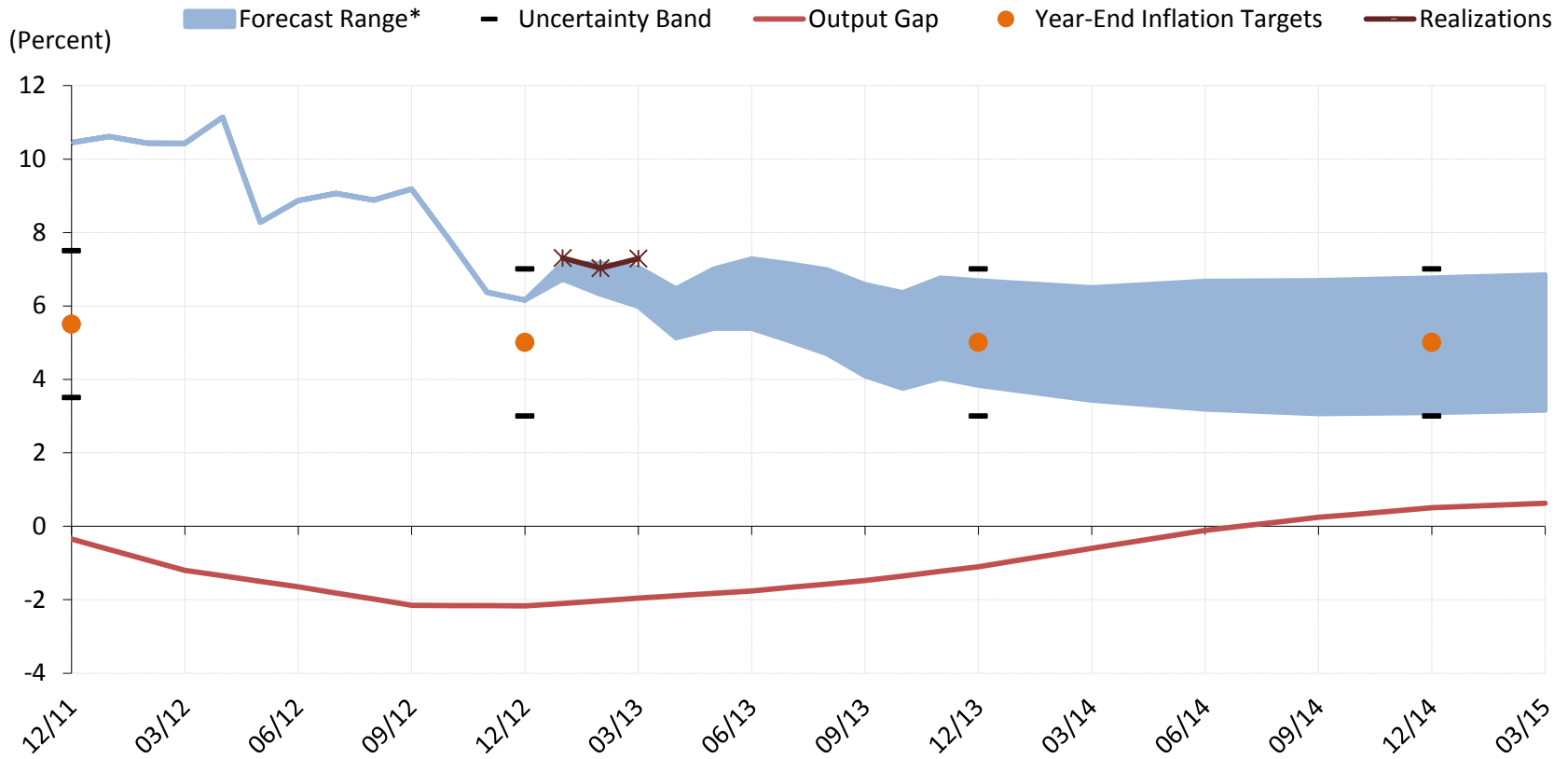
## Inflation in Turkey vs. Emerging Market Economies (Percent, Weighted Average)



Source: Bloomberg, CBRT.

Emerging Market Economies: Brazil, Mexico, Czech Rep., Hungary, Poland, S. Africa, China, India, Russia, Turkey, Indonesia, Argentina, Thailand, Malaysia, Colombia, Romania, Ukraine, Vietnam, Chile, Peru, Egypt, Morocco, Lebanon, S. Arabia . \*Forecasts for end-2013 and end-2014 are taken from "Consensus Forecasts".

# Inflation Forecasts and Realizations

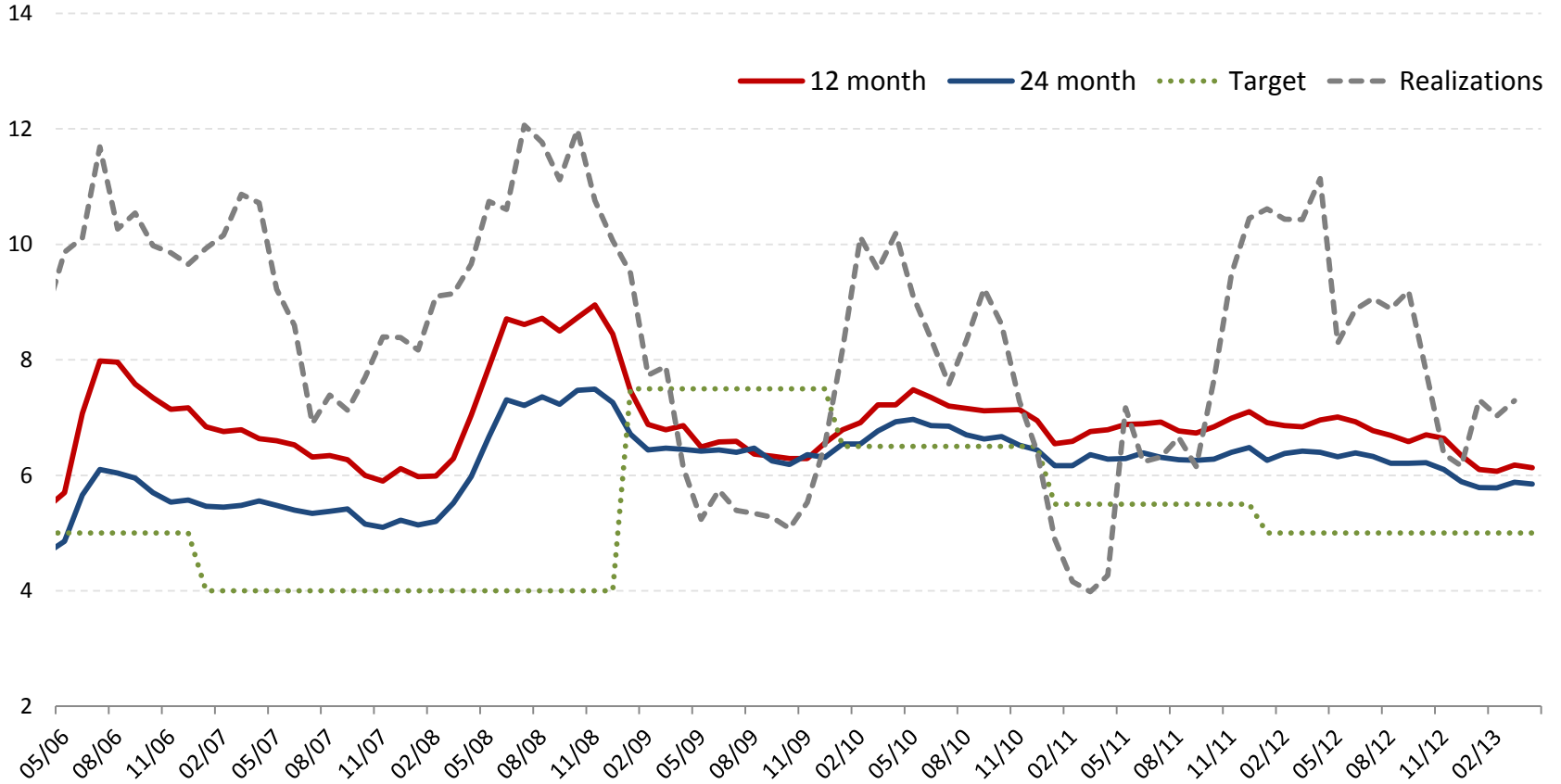


Source: CBRT.

\*Shaded region indicates the 70 percent confidence interval for the forecast.

# Inflation Expectations

## Medium Term Inflation Expectations\* (Percent)



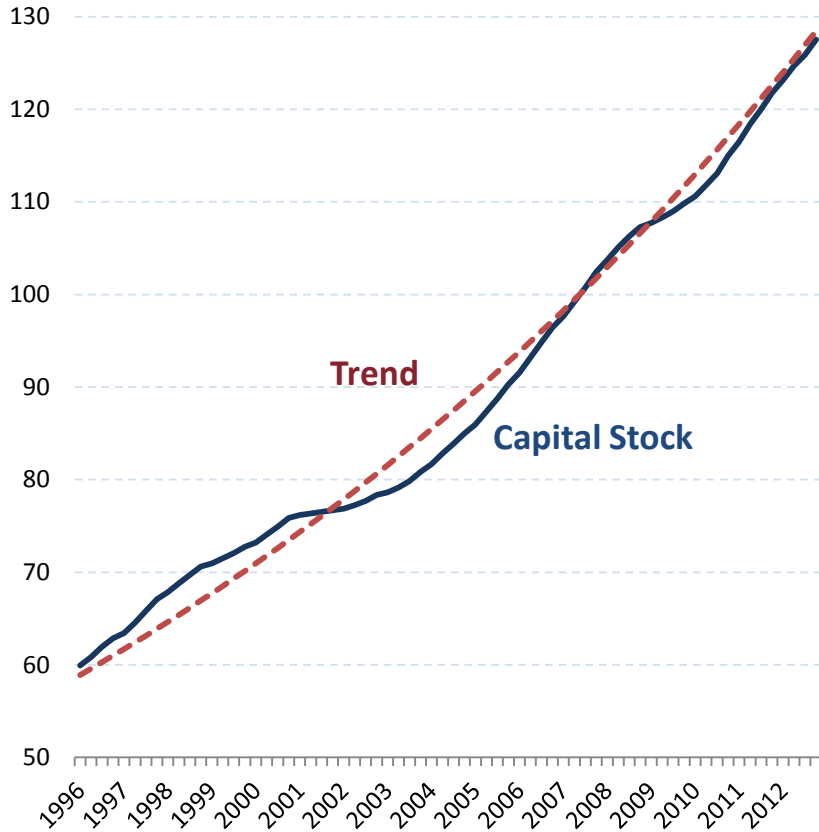
Source: CBRT.

\*CBRT Survey of Expectations.

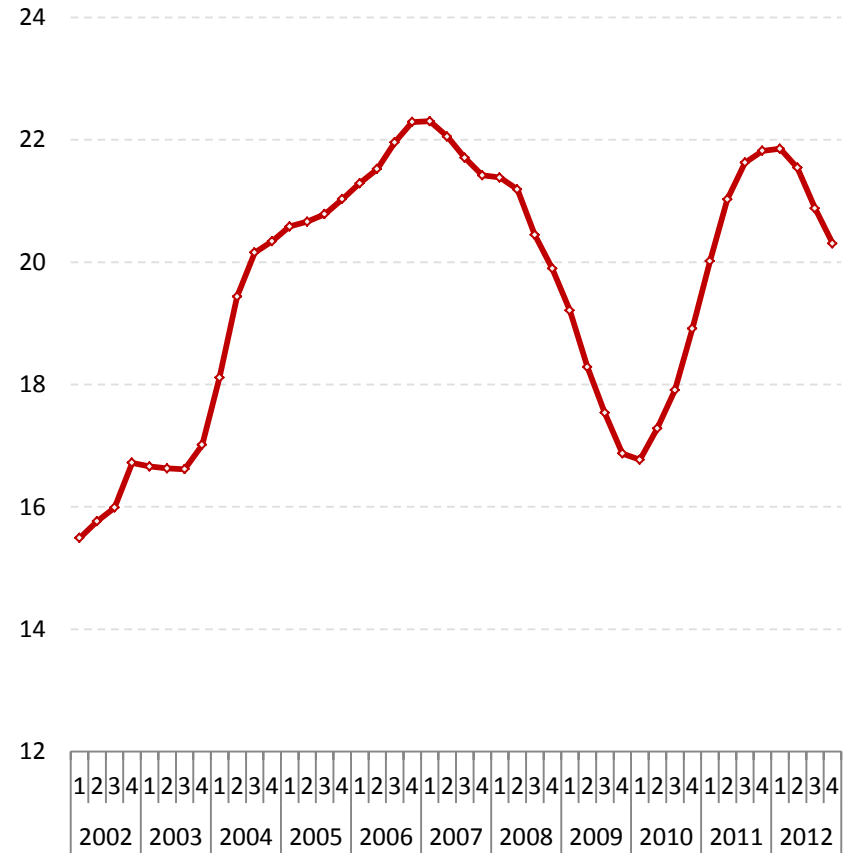
# GROWTH

# Capital

**Capital Stock**  
(Constant Prices, 2007=100)



**Fixed Capital Formation\***  
(Percent, Ratio to GDP with current prices)



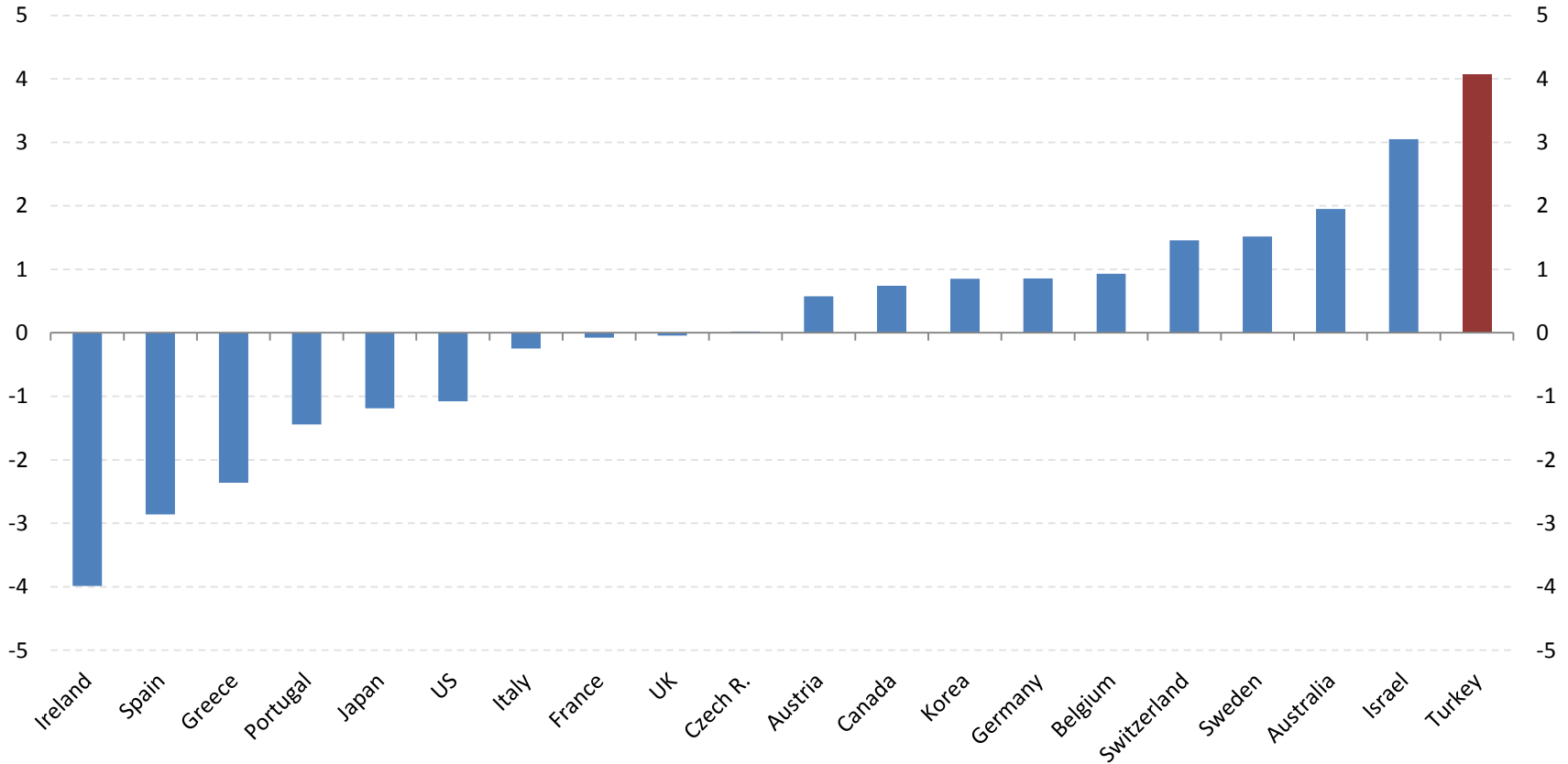
Source: TURKSTAT, CBRT.

Source: TURKSTAT, CBRT.

\*Annualized.

# Employment

## Annual Average Growth of Employment\* (Percent Growth, 2007-2011)



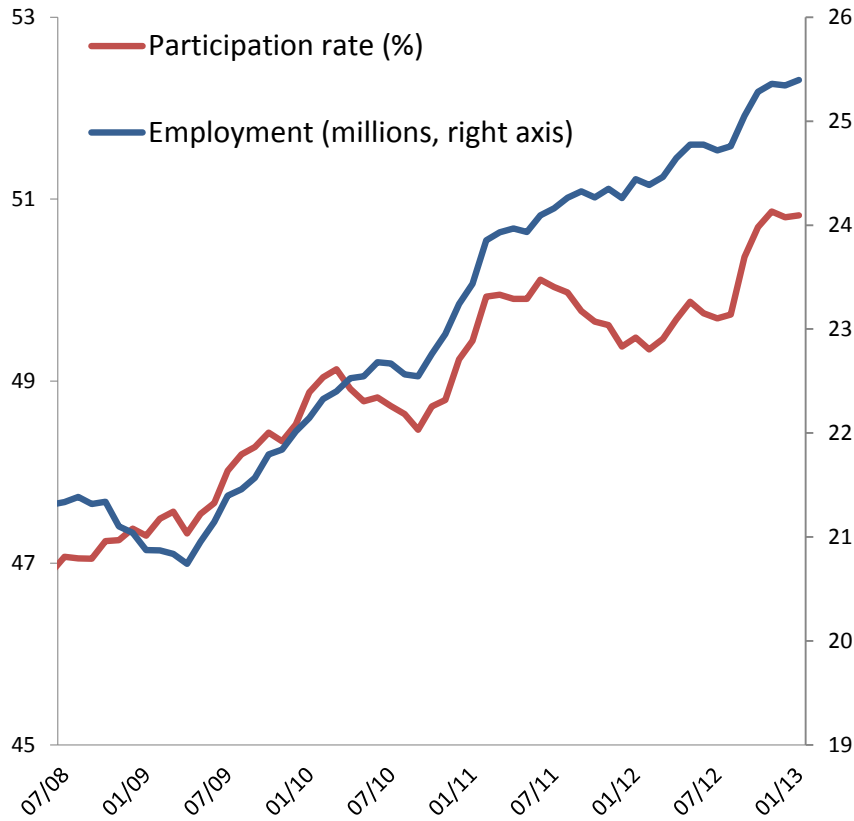
Source: IMF WEO, TURKSTAT.

\*Difference of natural logarithms

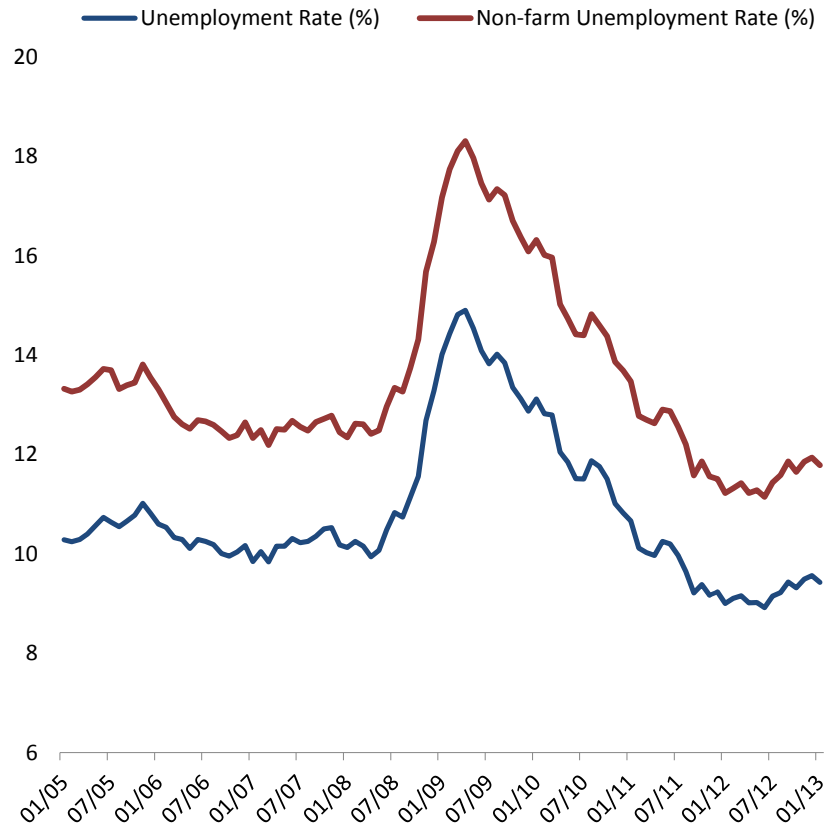


# Employment

## Employment and Participation (Millions, Percent)



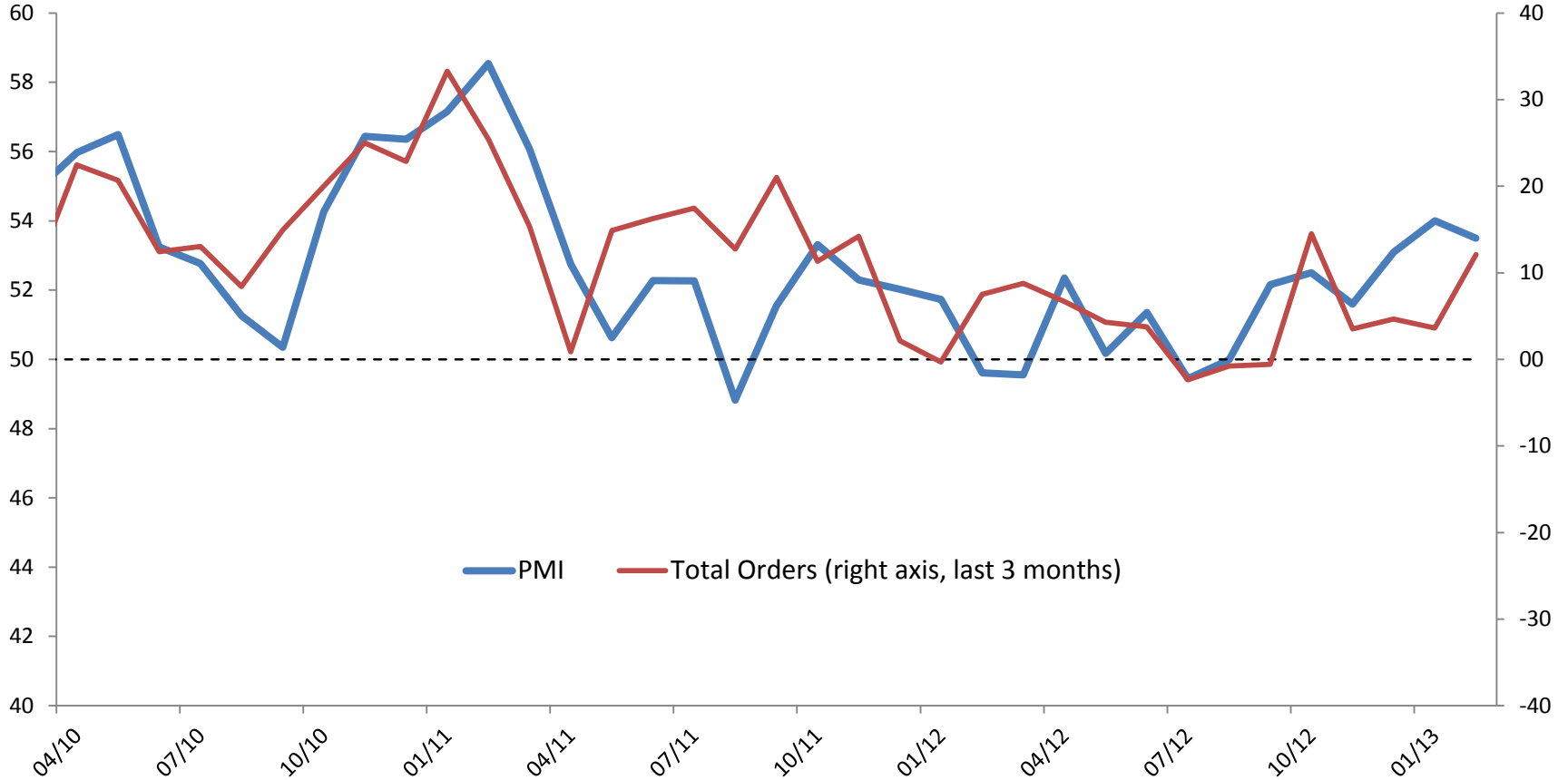
## Unemployment Rate (Percent)



Source: TURKSTAT, Household Labor Force Survey, CBRT.

# Leading Indicators

## Purchasing Managers' Index (PMI) and Total Orders\* (Seasonally Adjusted, Monthly)

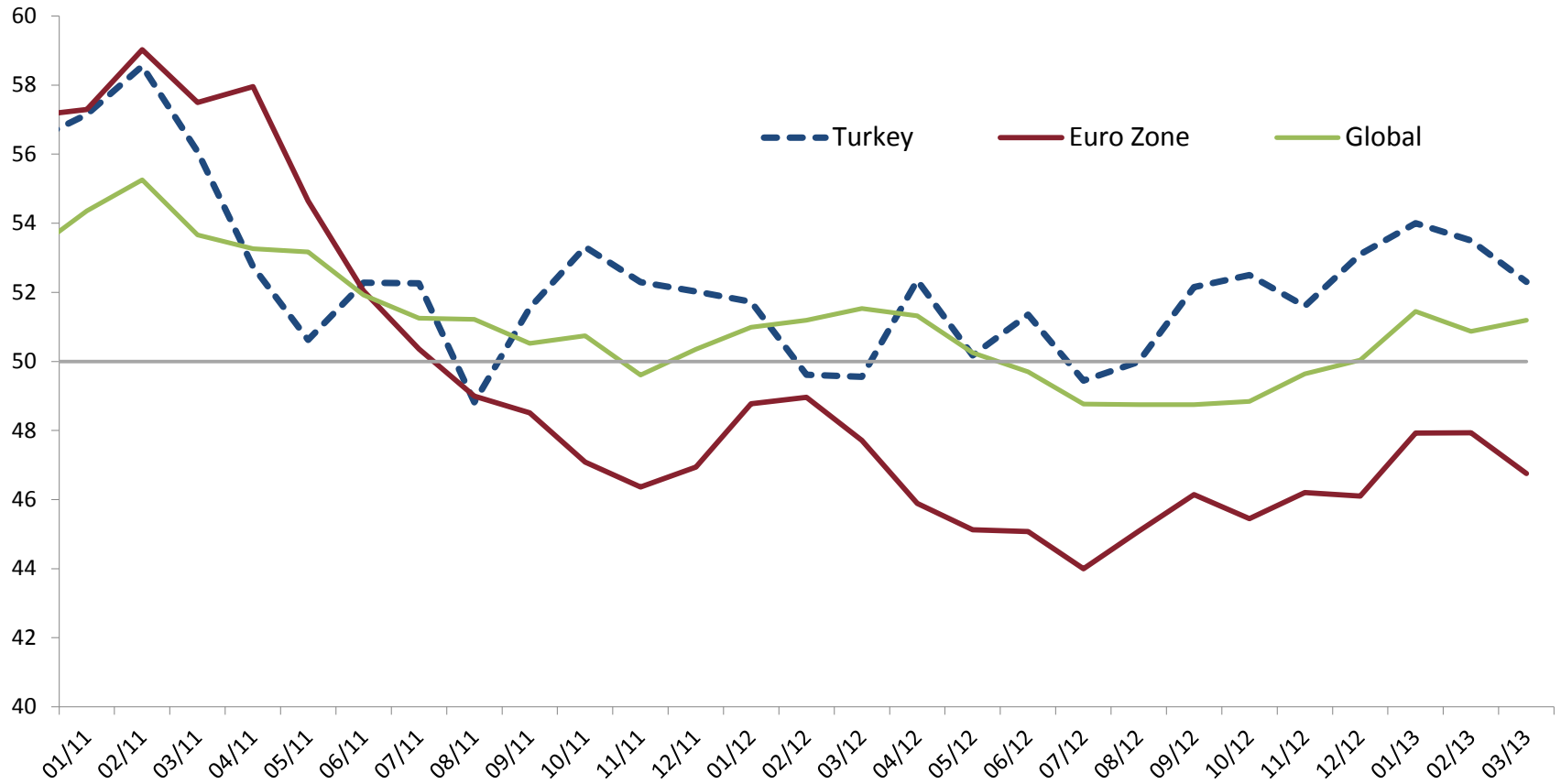


Source: TURKSTAT, MARKIT and CBRT.

\*Consumer Tendency Survey, Q.11: How have your total orders developed over the past 3 months?

# PMI: Turkey, Eurozone, and Global

## Manufacturing PMIs (Seasonally Adjusted)

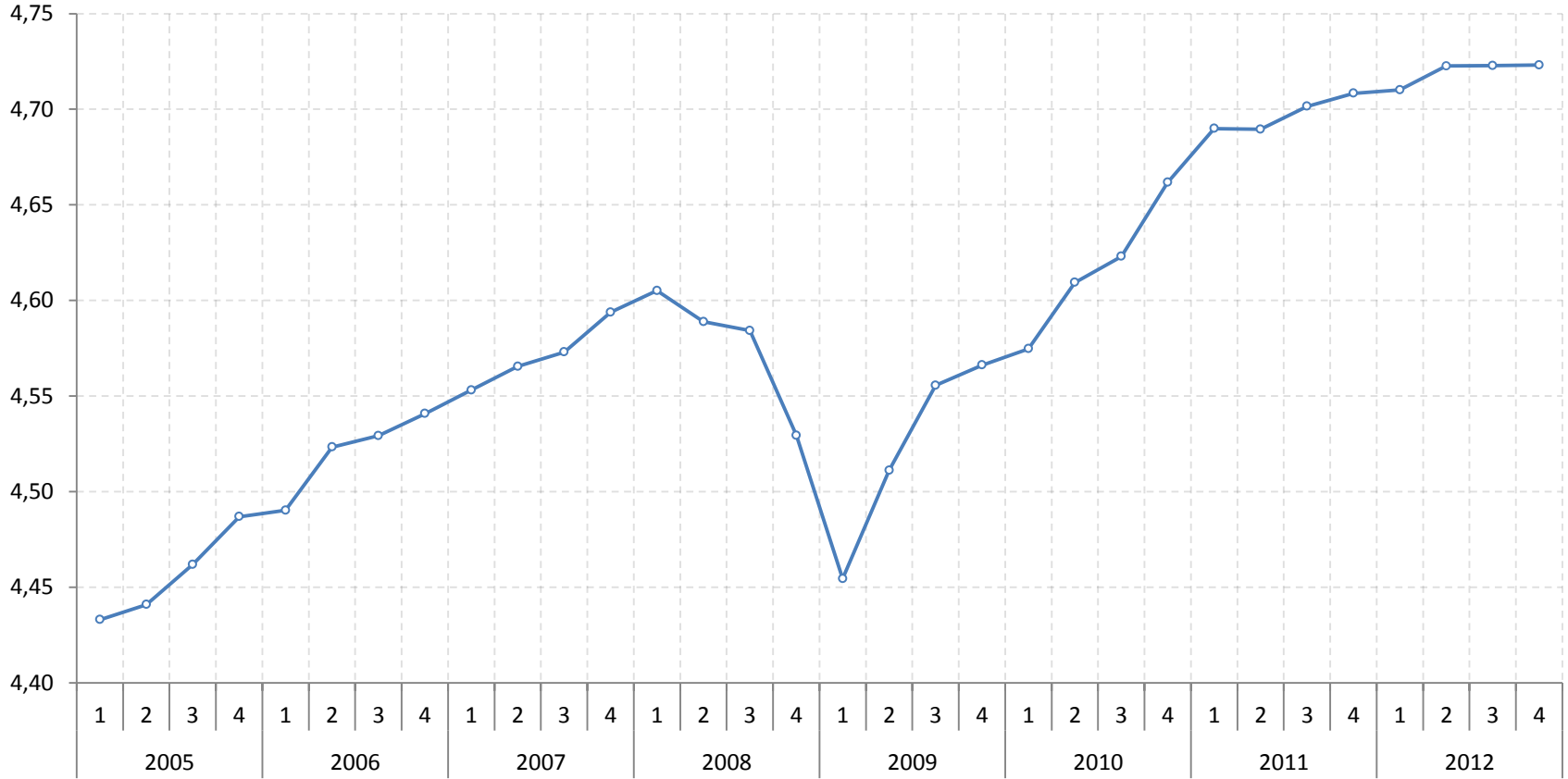


Source: MARKIT.

# Gross Domestic Product

## GDP

(Base Quarter: 2008Q1, Seasonally Adjusted, Natural Logarithms)



Source: TURKSTAT, CBRT.

# Summary

- Capital flow volatility may cause misalignments in credit and currency.
- Credit and currency misalignments hurt both price stability and financial stability in emerging market economies.
- Macroprudential policy has proven to be effective in reducing excessively high credit growth in Turkey.
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