

SEÐLABANKI ÍSLANDS

Monetary Policy in Iceland

Post-crisis framework, implementation and non-standard policy tools



CCBS, Bank of England
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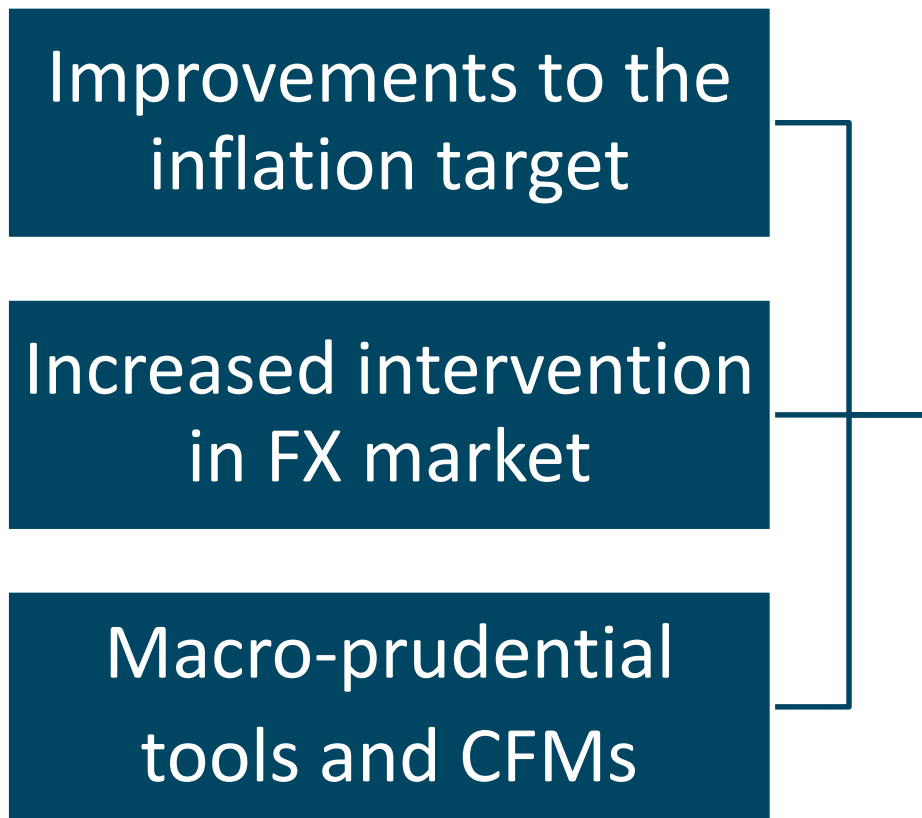
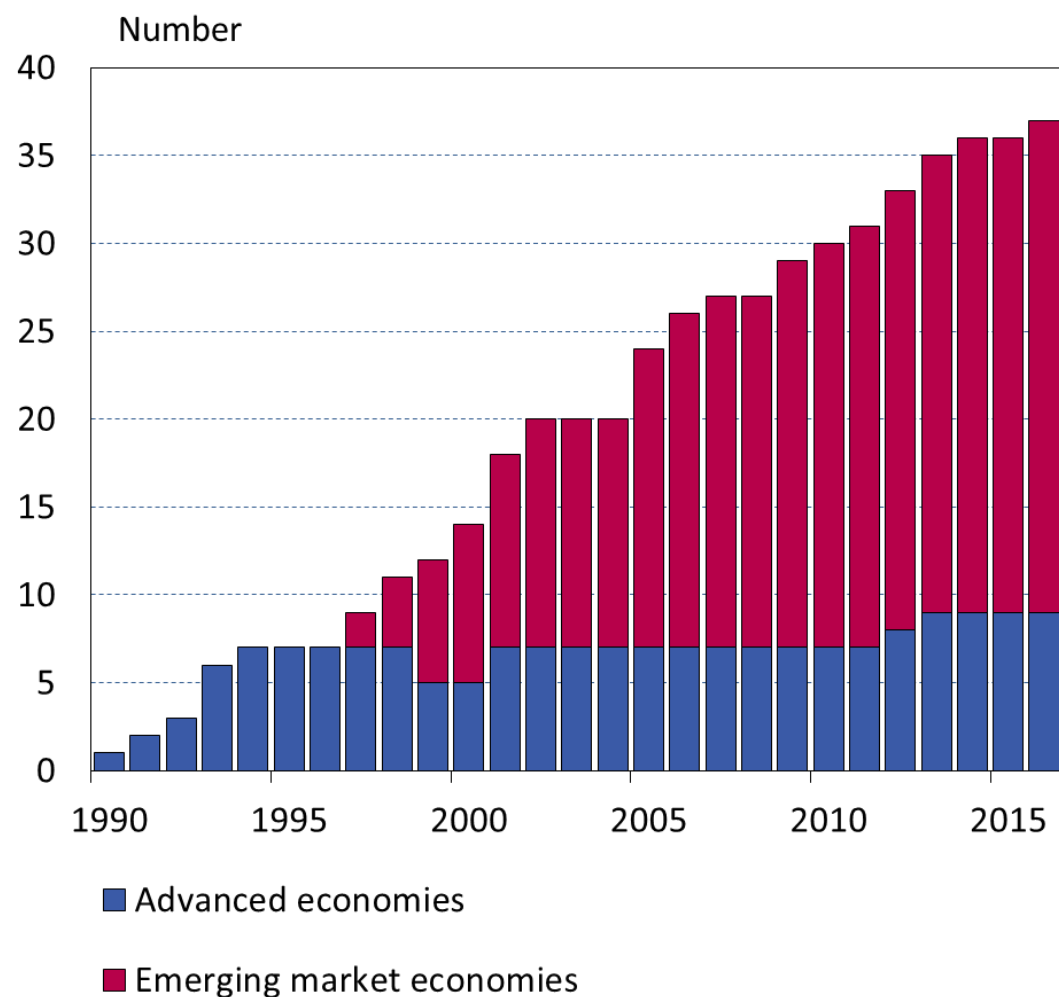


Monetary policy framework and implementation in Iceland

Monetary policy framework

- Inflation-targeting framework adopted in 2001: in line with developments internationally
- Price stability the principle objective with a numerical target of 2½% YoY rise in CPI
- Post-crisis reforms in policy formulation: MPC, enhanced transparency, „inflation targeting-plus“

Number of countries pursuing a formal inflation target 1990-2016



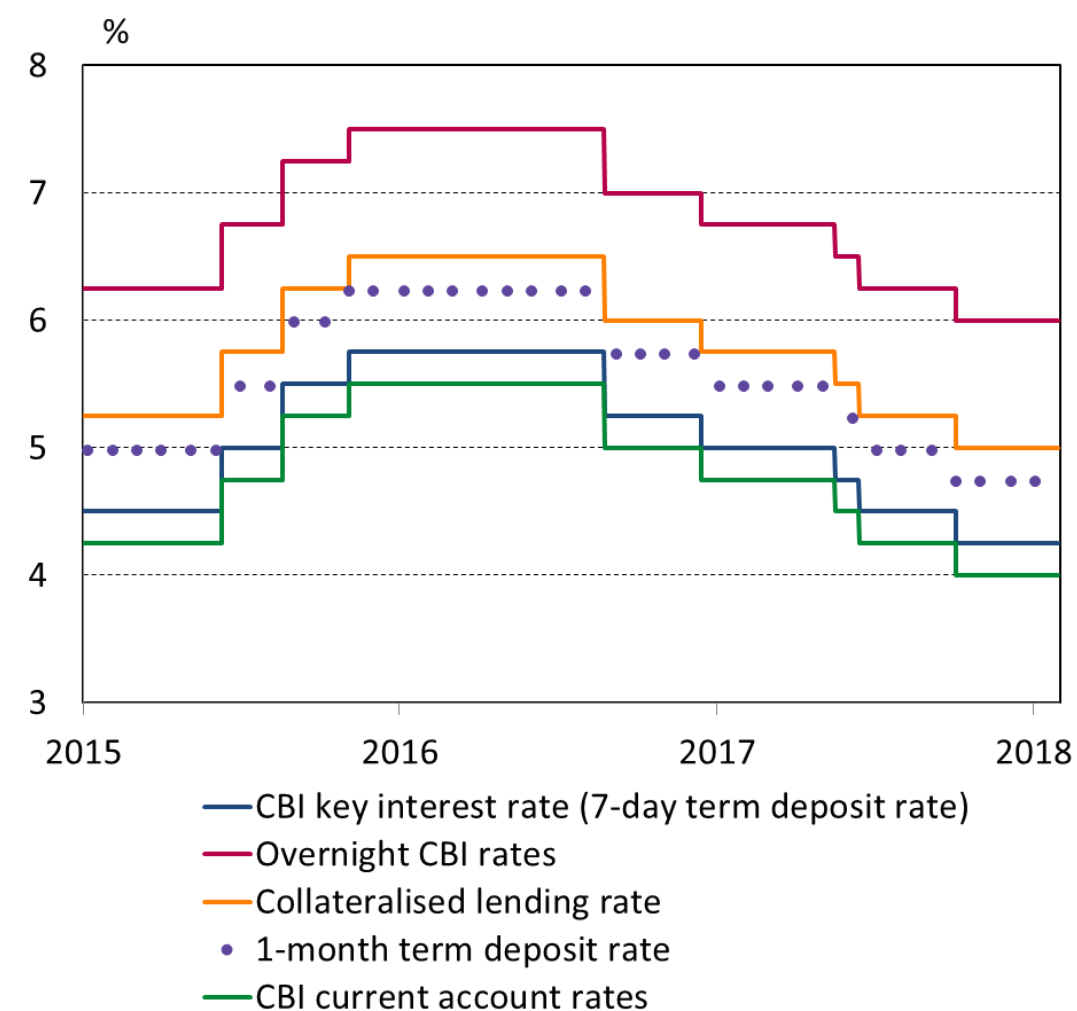
Inflation targeting-plus

Monetary policy instruments

- Monetary policy instruments
 - 7-day term deposits (policy signal)
 - 1 month term deposits
 - Reserve requirements
 - FX market transactions
- Standing facilities
 - Overnight lending
 - Current account
- Other policy instruments
 - 7 day collateralised lending (policy signal pre-crises)
 - Certificates of deposit (CDs)

Central Bank of Iceland interest rates and short-term market interest rates

Daily data 1 January 2015 - 29 January 2018

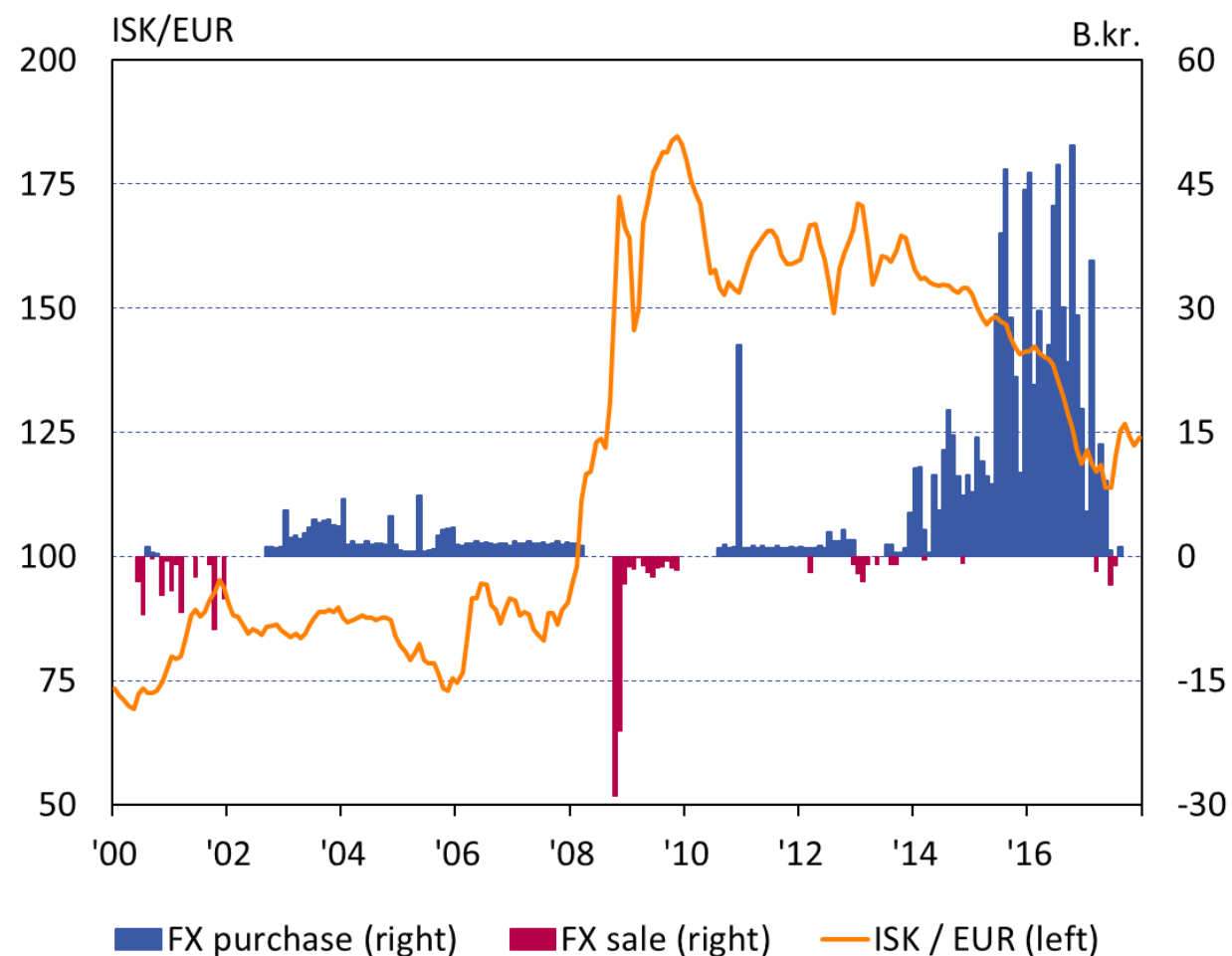


Source: Central Bank of Iceland.

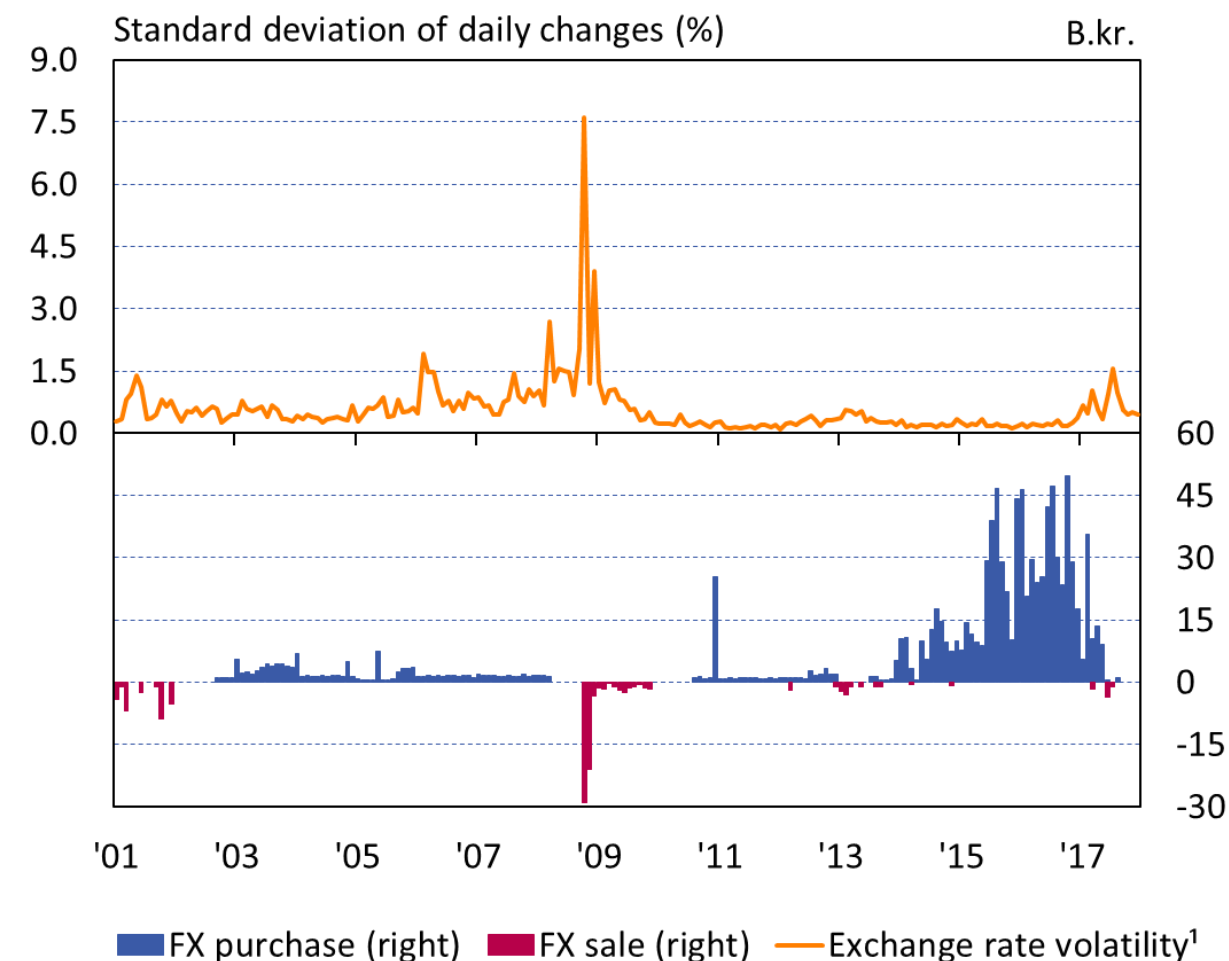
Interventions in the FX market

- From mid-2013, monetary policy increasingly used (sterilised) interventions in foreign exchange market
- Two publicly stated objectives: 1) build up FX reserves, and 2) counteract excessive short-term exchange rate volatility
- Given strong pass-through, FX intervention can be an important auxiliary tool for monetary policy

EUR/ISK exchange rate and Central Bank transactions in the foreign exchange market
January 2000 - December 2017



Exchange rate volatility and Central Bank transactions in the foreign exchange market
January 2001 - December 2017



1. 21-day standard deviation of daily changes.
Source: Central Bank of Iceland.



Post-crisis challenges and reforms in monetary policy implementation

Similar post-crisis effects on policy implementation as in other countries

Increased amount of bank reserves

Surplus liquidity in the banking system

Issues in interest rate control

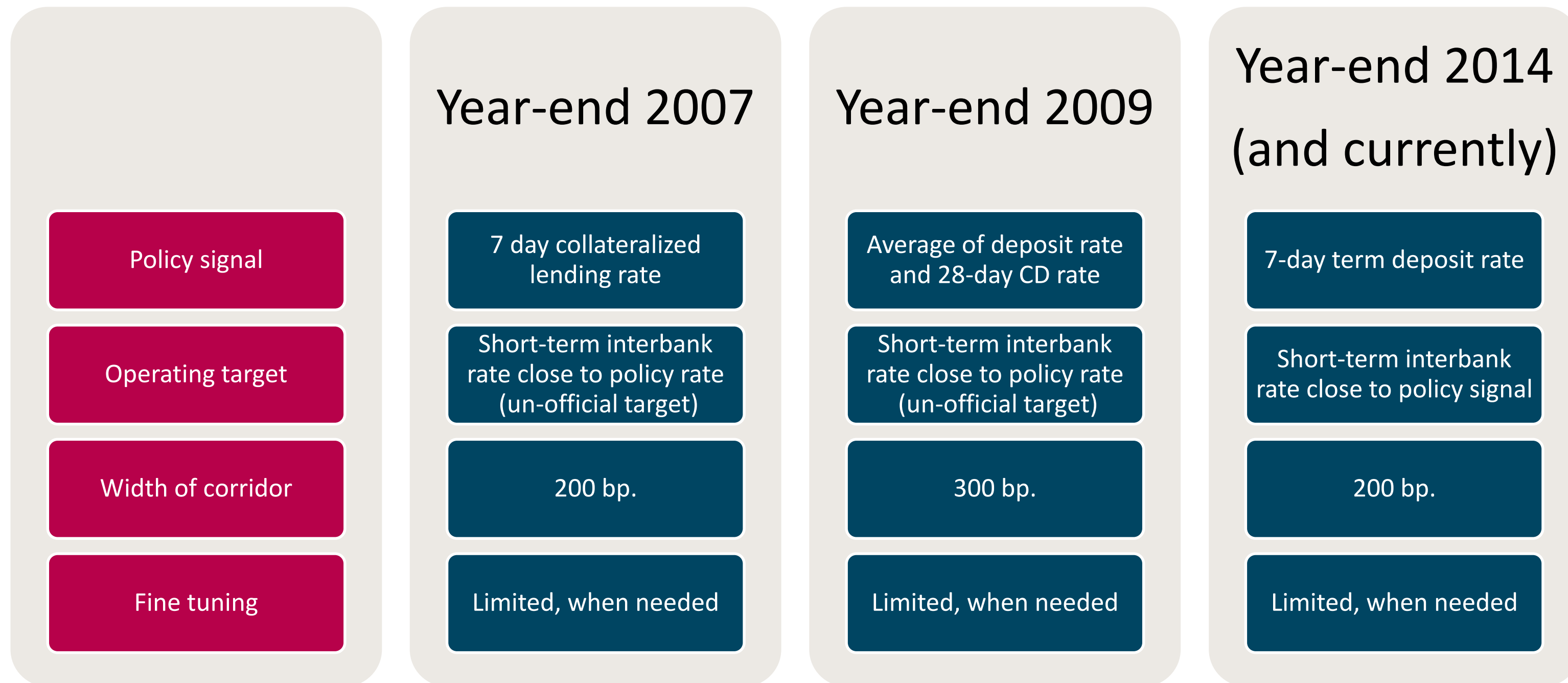
A version of a floor system

Balance sheet size and compositions

Changed circumstances called for improvements in policy implementation and operating procedures in order to increase efficiency of monetary control:

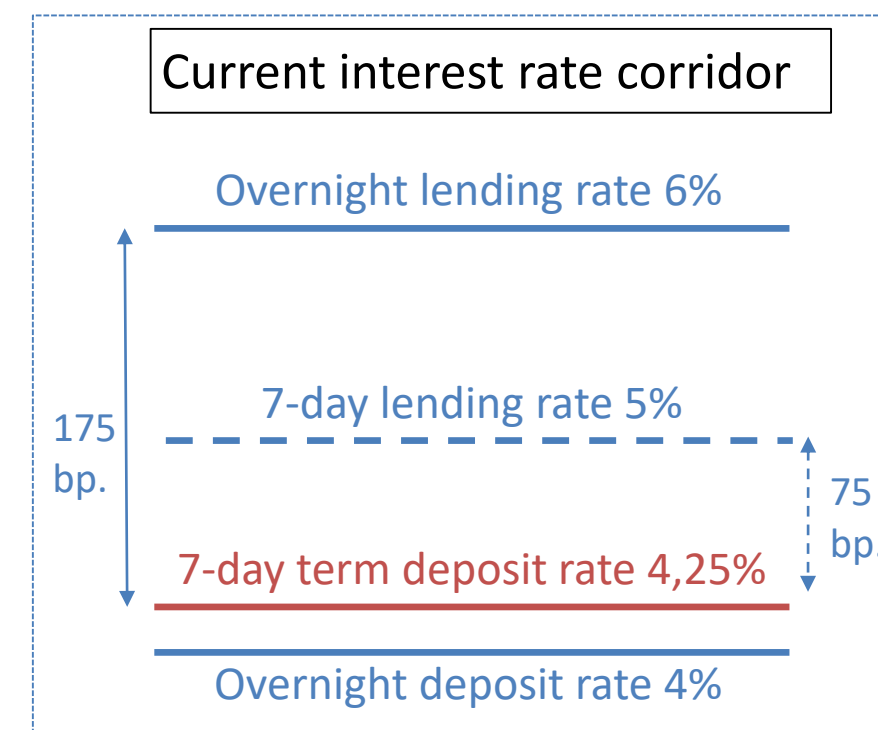
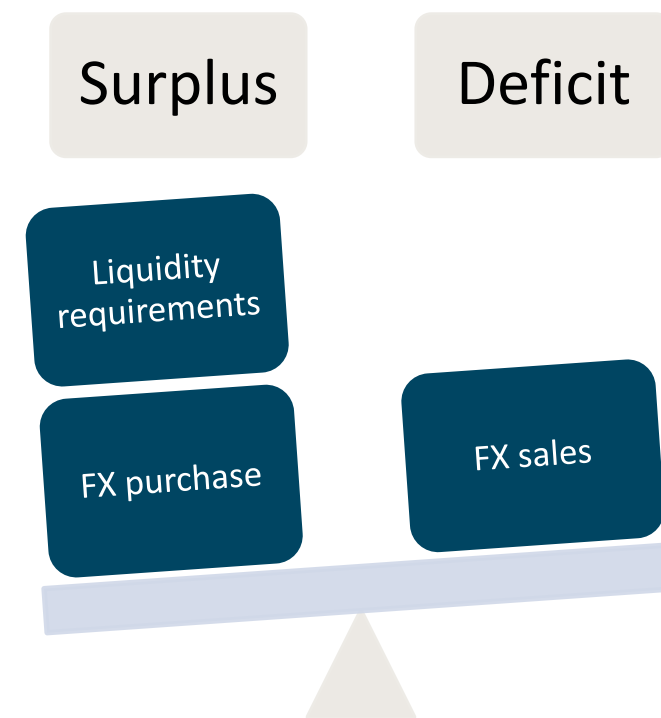
- Policy instruments
- Policy signal
- Operating target

Pre- and post-crisis policy implementation in Iceland



Possible challenges for policy implementation going forward

- Uncertainty if and for how long surplus liquidity will remain
- Challenges during a transition period => net position fluctuation
 - Policy signal and interest rate control
 - Inject and absorb liquidity at the same time?
 - Use reserve requirements or balance sheet?
- Clearly preferable that the framework for monetary policy implementation can be broadly intact regardless of banking system liquidity position
 - Refine current framework or adopt another approach
 - Effects of Treasury => difficult to forecast





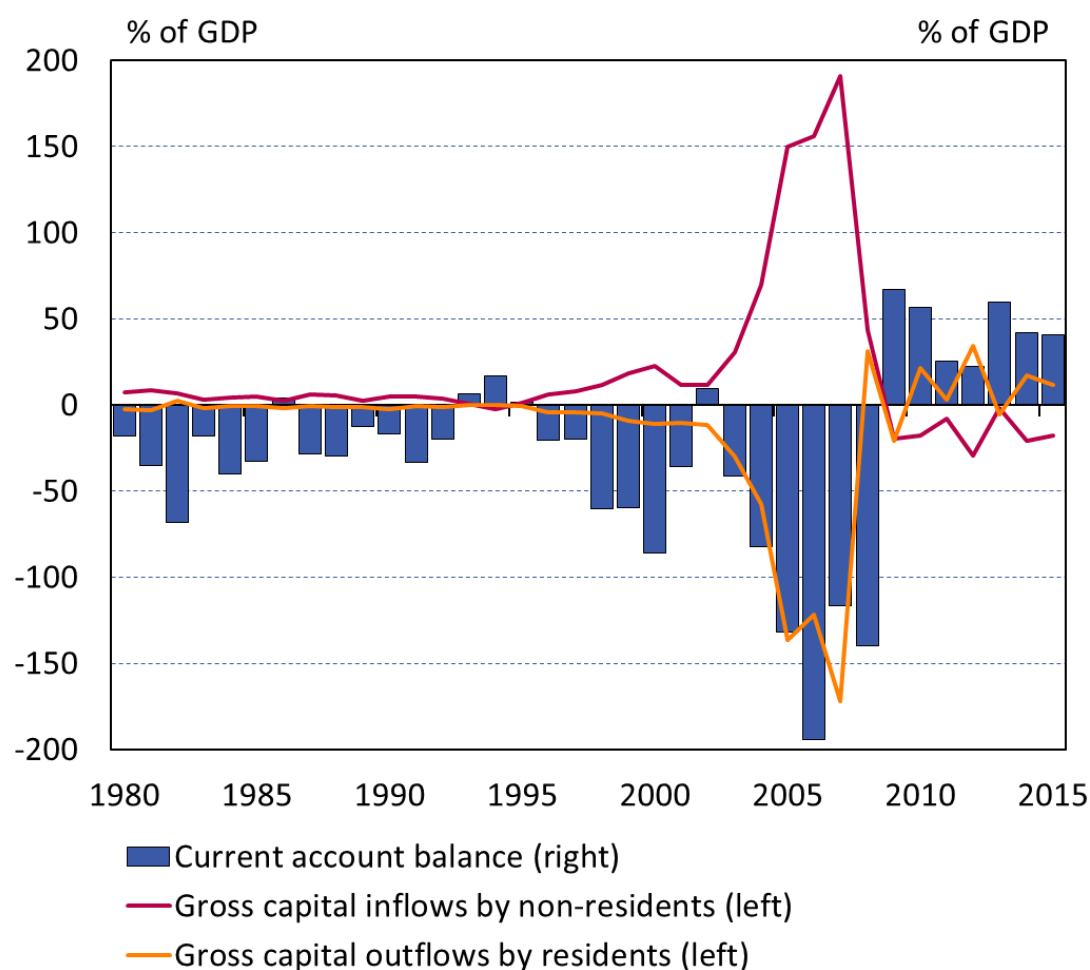
Non-standard monetary policy

Capital flow management measures (CFMs)

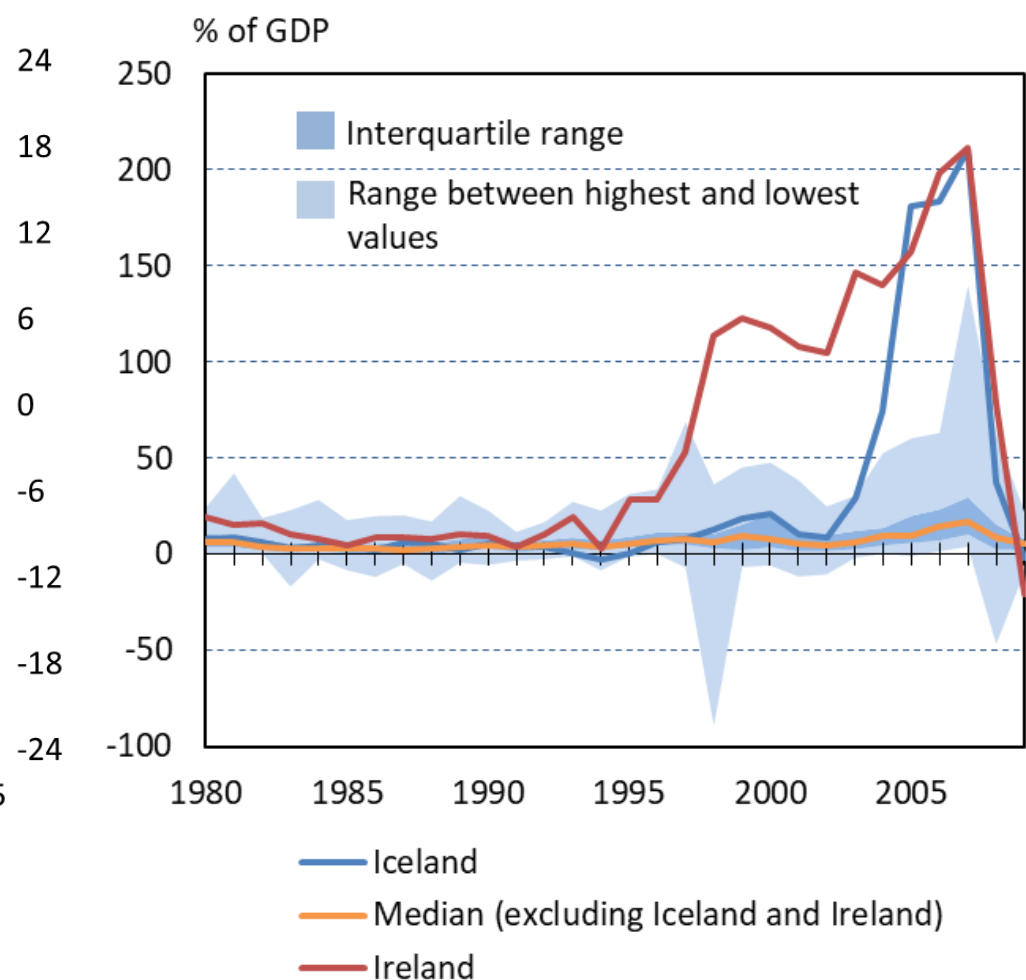
Iceland experienced virtually unprecedented capital flows

- During the run-up to the financial crisis, Iceland experienced financial flows that were virtually unprecedented in scope and fuelled significant financial and macroeconomic imbalances: unsustainable growth, currency overvaluation, current account deficit, etc. ...
- ... and, at the same time, undermined monetary policy by jamming the interest rate channel, shifting policy transmission to the more unpredictable exchange rate channel and encouraging accumulation of foreign-denominated debt

Gross capital flows and current account balance 1980-2015¹

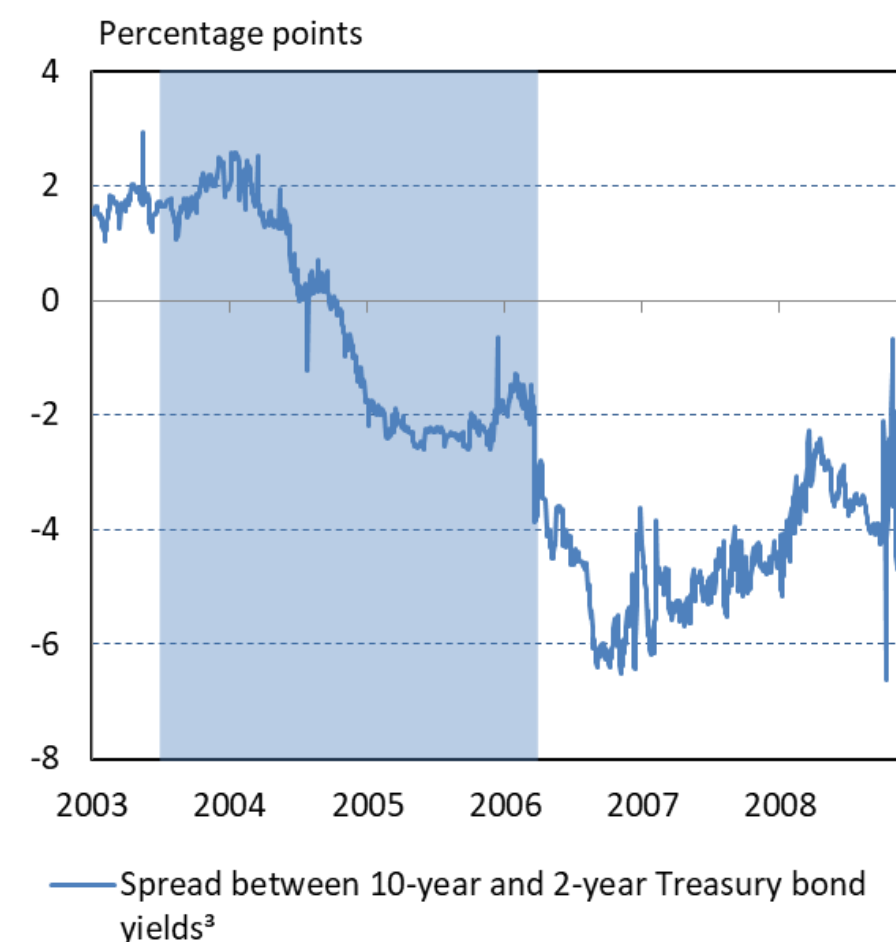


International comparison of capital inflows 1980-2009¹



Slope of the yield curve during periods of inflow surges in Iceland²

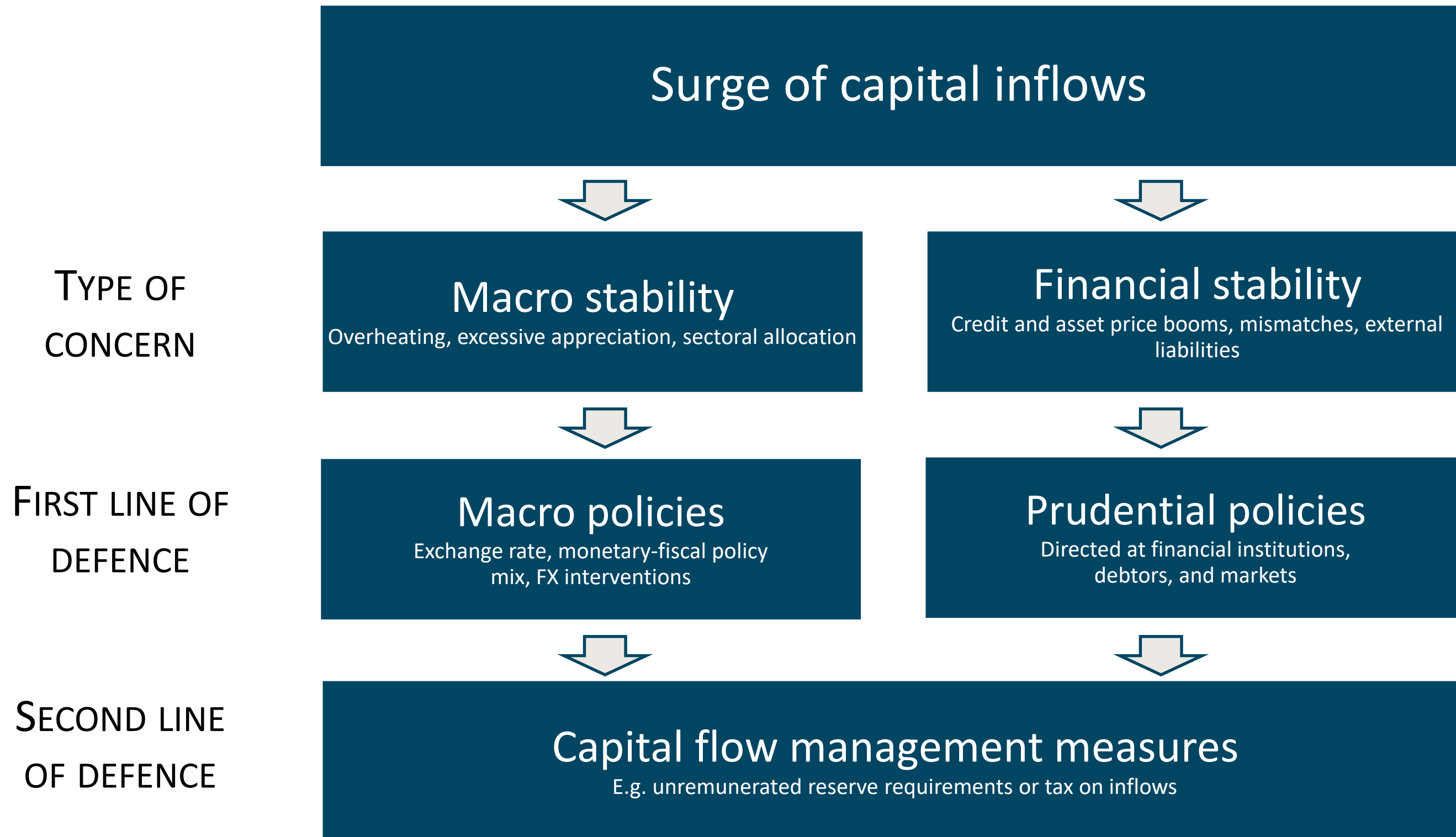
3 January 2003 - 30 December 2008



1. Gross capital inflows from non-residents represent their net purchases of domestic assets, while gross capital outflows from residents (shown as negative values) represent their net purchases of foreign assets. The current account in 2008-2015 is based on estimated underlying current account. 2. The shaded area shows periods featuring a surge in debt inflows from non-residents to Iceland. 3. Based on the estimated nominal yield curve.

Sources: Broner, F., T. Didier, A. Erce, and S. L. Schmukler (2013). "Gross capital flows: Dynamics and crises", *Journal of Monetary Economics*, 60, p.113-133., Forbes, K. J., and F. E. Warnock (2012), "Capital flow waves: Surges, stops, flight, and retrenchment", *Journal of International Economics*, 88, p.235-251, Macrobond, Statistics Iceland, Central Bank of Iceland,

CFMs: complementary when policy is constrained



Recent challenges from capital inflows

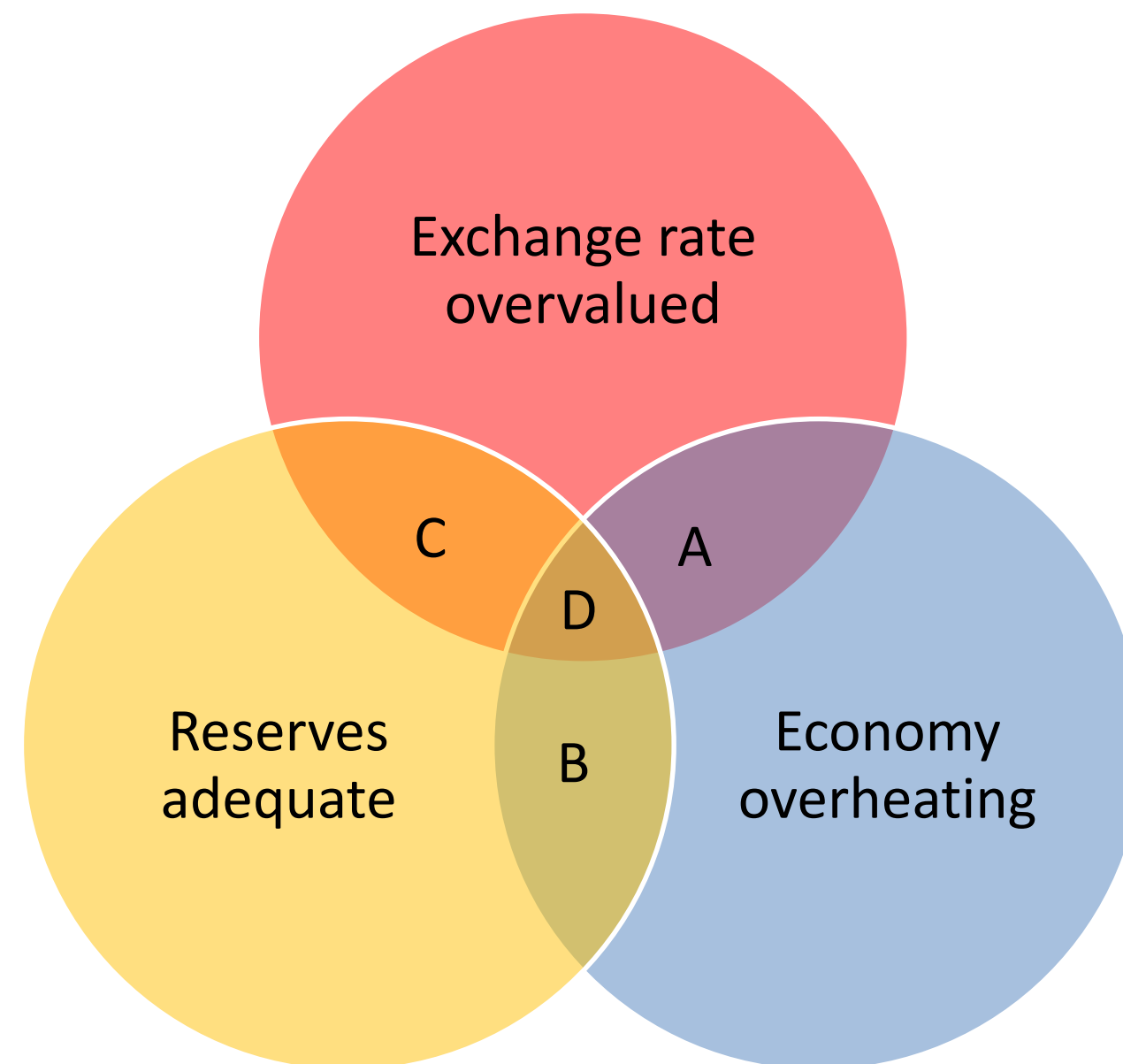
- Challenges associated with capital inflows have been macroeconomic in character, not financial stability ... reflecting more limited macro adjustment as the economy overheats, the exchange rate appreciates, and ample FX reserves
- At the same time, monetary policy is facing headwinds due to challenges in its transmission across the yield curve and the presence of a wide interest rate differential with abroad providing strong incentives for carry trade activity

Macro challenges

- Monetary policy transmission interruptions
- Monetary policy becoming more constrained

Financial stability challenges

- Limited to date but could grow as experience shows
- Scope to reinforce current prudential tools



Decreasing carry-trade profits

- By subjecting a portion of the inflow for a specified period (for example one year) in an account bearing negative, zero, or low interest reduces the returns on such transactions, particularly on short-term transactions
- Profits on long-term investments are less affected, investments in equity and FDI are exempted, as they are considered desirable and less risky capital inflows

Reserve requirement

- Price-based CFM on specific types of inflows

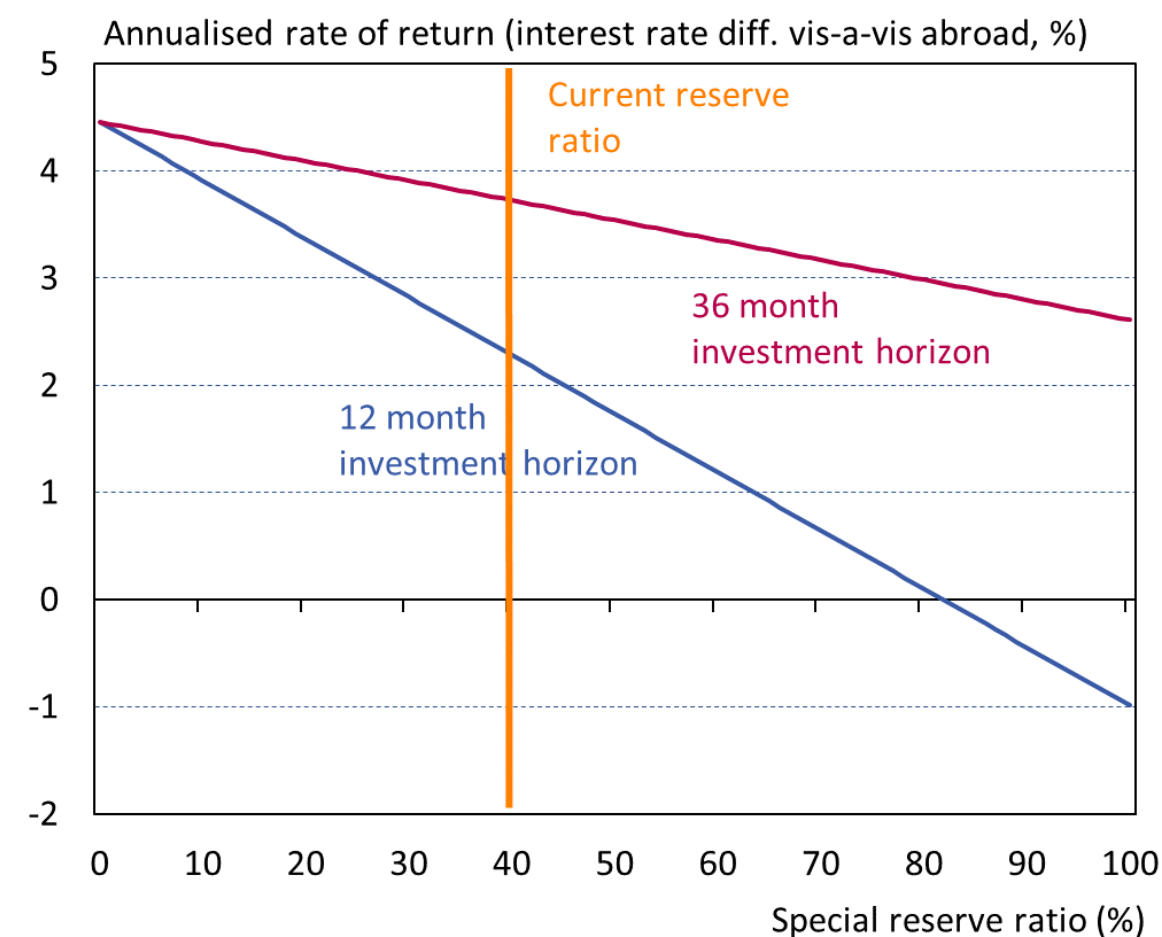
Legal framework

- Bonds, bills and deposits
- Reserve ratio may range up to 75%
- Up to 5 year holding period
- Low, zero, or negative interest rates

Current rules

- Registered bonds and bills, certain deposits
- 40% reserve ratio, 1 year holding period, 0% interest rate

Carry-trade gain for different reserve ratios and investment horizons¹



1. Assuming a holding period of one year, a domestic interest rate of 5.5%, a foreign interest rate of 1%, 0% interest rate on the Special reserve ratio, a 0% risk premium, and an unchanged exchange rate over the investment horizon. The carry-trade is assumed to be funded abroad.

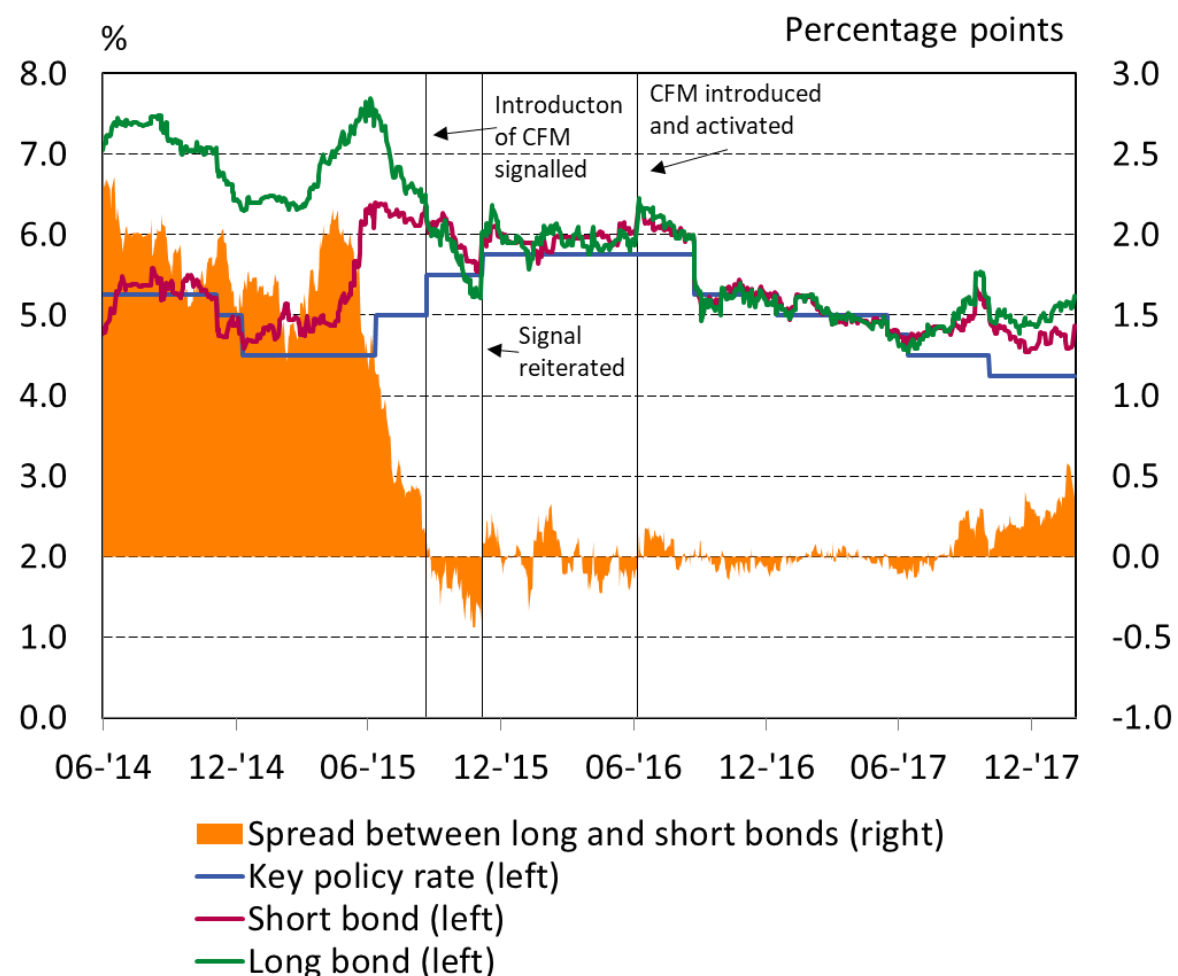
Source: Central Bank of Iceland.

Monetary policy transmission and the use of CFM

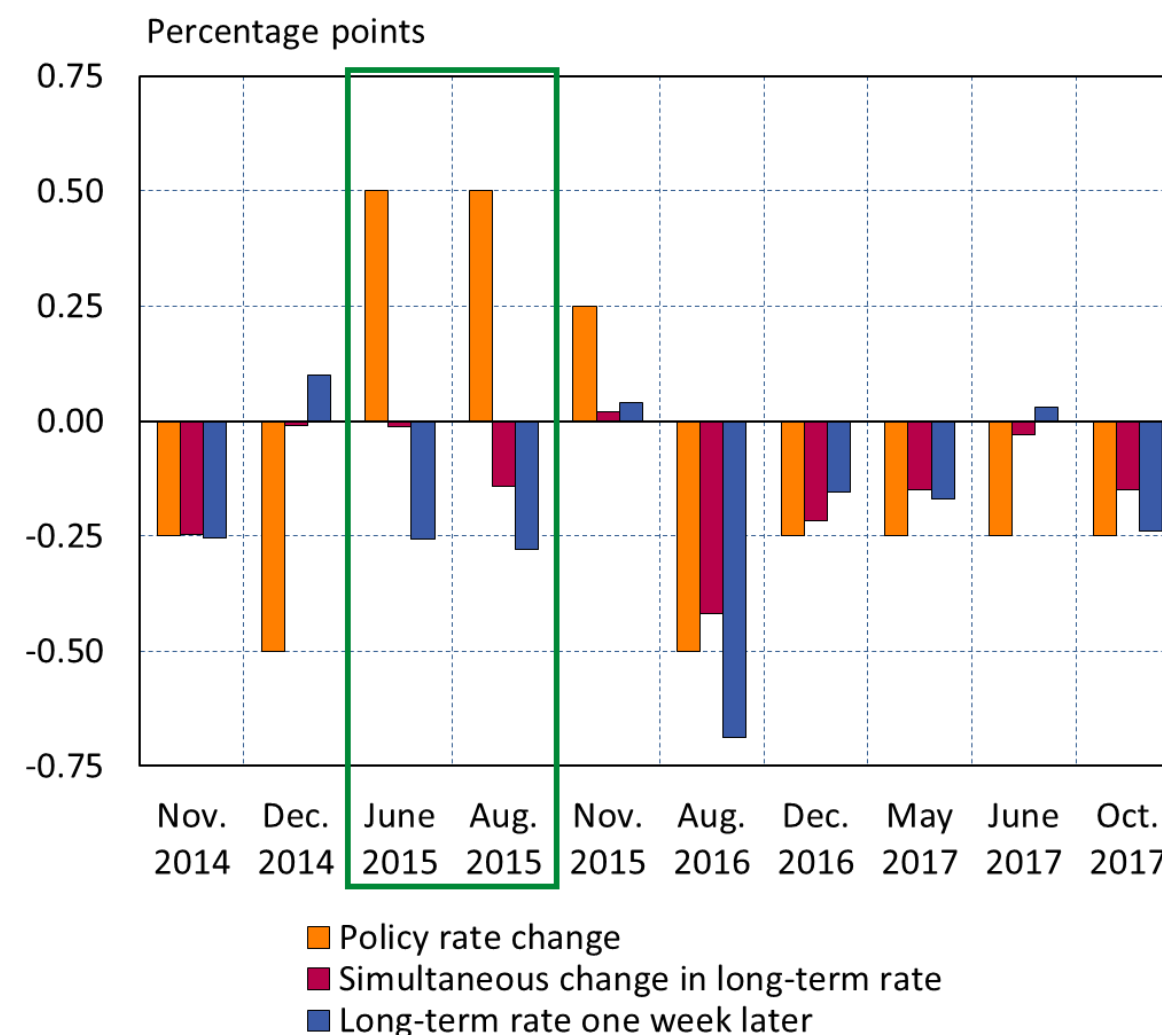
- Inflows to the domestic bond market increased in mid-2015 causing long-term interest rates to decline ...
- ... despite policy rate hikes and signal: Transmission mechanism through the interest rate channel appeared to be jammed
- CFM introduced in June 2016 to support policy effectiveness: monetary policy transmission seems to have been normalised

Central bank key rate and Treasury bond yields

1 June 2014 - 29 January 2018



Impact of changes in Central Bank interest rates on long-term Treasury bond yields



For data on short-term yields: Until April 2016, a bond maturing in 2016 is used, and from April to August 2016 a bond maturing in 2017. From August 2016, a bond maturing in 2020 is used. For data on long-term yields: a bond maturing in 2031 is used.

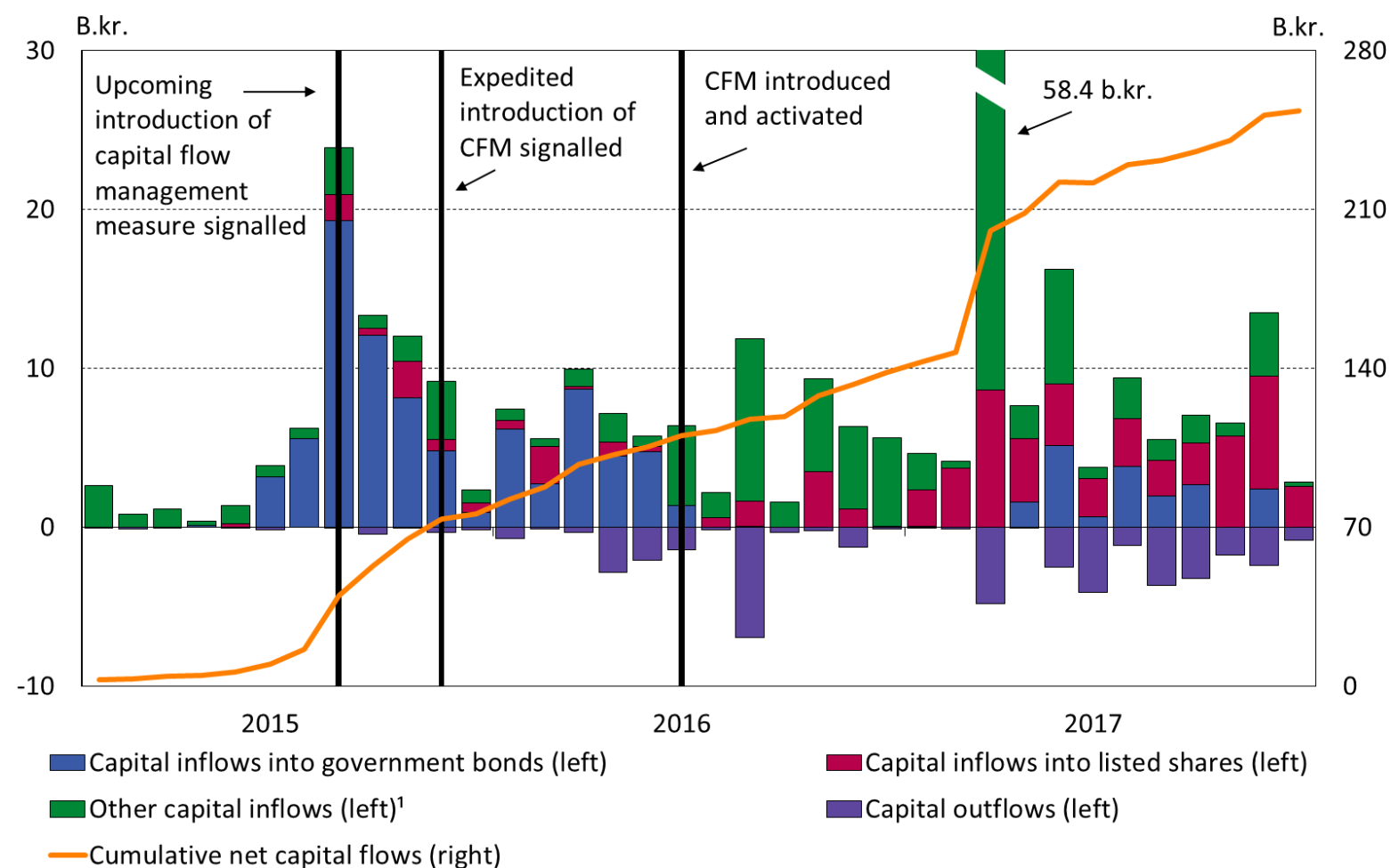
Source: Central Bank of Iceland.

Size and composition of inflows and the use of CFM

- Signals that the plan was to introduce the CFM seemed to have an effect: the large inflows into domestic bonds fell significantly ...
- ... and the introduction of the CFM in June 2016 curtailed it completely – possibly shifting inflows into equity and FDI
- Inflow into bonds resumed again in April 2017 but has remained less than before the CFM was introduced

Capital flows due to registered new investments

January 2015 - December 2017



1. Investment commencing after 31 October 2009 and based on new inflows of foreign currency that is converted to domestic currency at a financial institution in Iceland. For further information, see the Foreign Exchange Act, no. 87/1992. 2. Other inflows in March 2017 derive almost entirely from non-residents' acquisition of a holding in a domestic commercial bank. Source: Central Bank of Iceland.

Comparison with international evidence on CFMs



Size of flows and exchange rate appreciation

- Little evidence of CFMs limiting the extent of inflows and the size of the exchange rate appreciation

Monetary policy independence

- Some evidence of CFMs increasing monetary policy's effectiveness and autonomy

Composition of flows

- Evidence of changed composition of flows towards less risky flows, although credit and asset price booms have nevertheless taken place

Efficiency in implementation and follow up

- The success of the use of CFMs seems to be determined to a large extent by the authorities' ability to efficiently enforce the use of CFMs

Challenge: international recognition of the use of CFM



IMF

- Some criticism raised in the Article IV Report with regard to the CMF: why make it operational and to what extent is it a temporary measure?
- Response to macroeconomic challenges, based on a risk-management approach to support liberalisation, and temporary in the sense that it can be scaled back at any time
- Ongoing discussions with the IMF

EEA

- Some issues already as a complaint has been made to ESA, however, the CFM can be justified on the grounds that it mitigates risks associated with ongoing liberalisation
- First and foremost a problem regarding the use of CFM in the post-liberalisation regime

OECD

- Are reviewing their codes of liberalisation of capital movements