

Implementation of macroprudential instruments

Examples from Iceland



Financial Stability Department

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Ljubljana

Lúðvík Elíasson

The views expressed are those of the author and not necessarily the views of the Central Bank of Iceland

Overview

- Prudential rules following capital controls
- Financial Stability Council
- Macroprudential instruments
- Capital flow management measure
- Housing finance tools
- Discussion

Background

- Financial crisis 2008
 - Banking sector collapsed
 - Stock market index fell 96% over a few months
 - Household debt rose while house prices fell
- Special investigation commission on the fall of the banks
 - Banks grew too fast
 - Excessive foreign currency imbalances
 - Mortgage lending standards eased during the upswing

Prudential rules following capital controls

- Central Bank Special publication (2012) prepared by Financial stability department
- Concerned with regulation on capital flows and foreign exchange balances to take over once capital controls would be lifted
 - Foreign currency liquidity of the banking sector
 - Foreign currency mismatches on their balance sheets
 - Foreign currency lending to unhedged parties
 - Instruments for curbing capital inflows
 - Speed limits on pension funds' accumulation of foreign assets

Initial steps

- Measures to mitigate negative effects of foreign exchange credit and currency mismatches in the financial sector

FX liquidity

- New liquidity rules 1 December 2013 with special requirements for FX liquidity

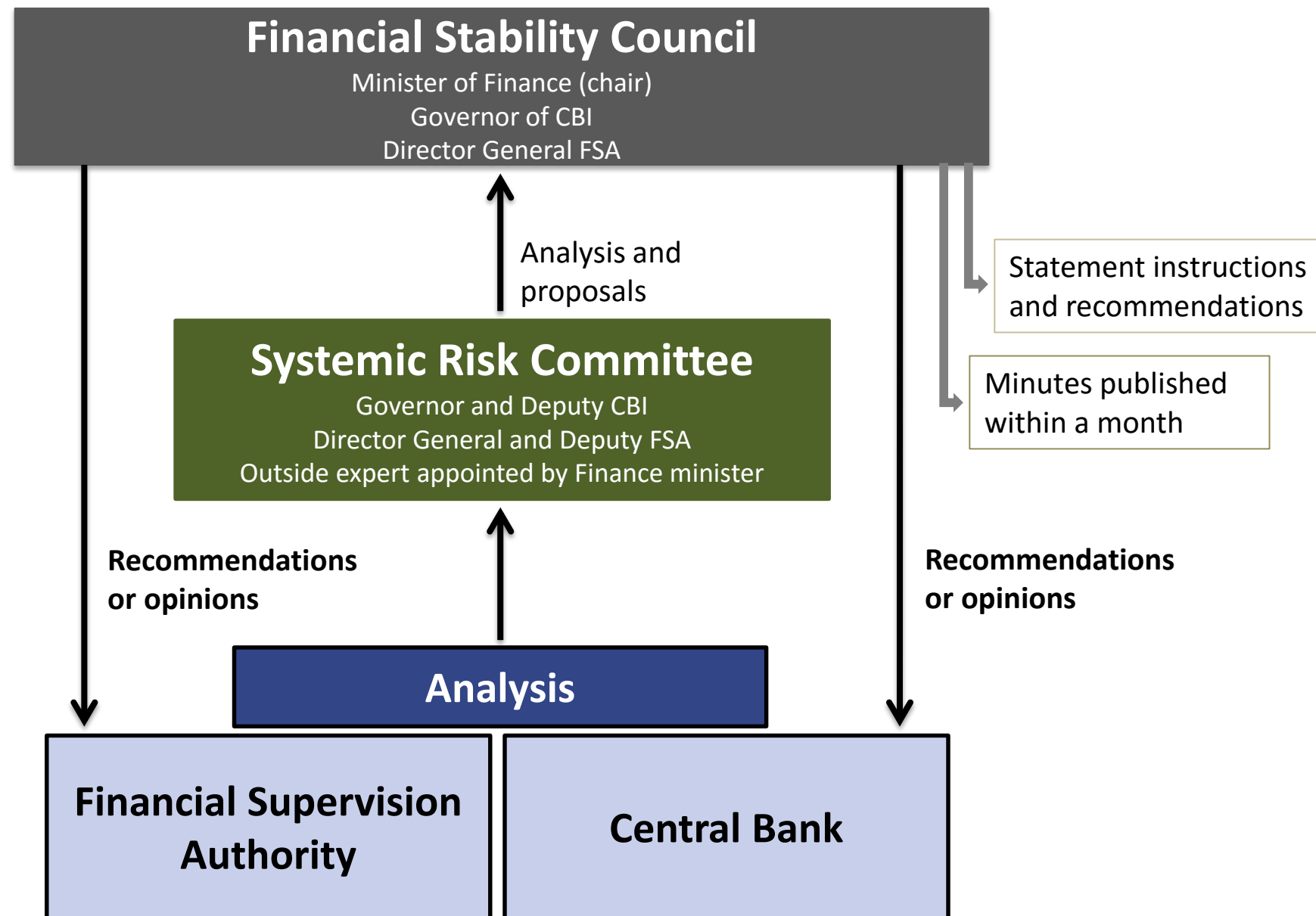
FX mismatch

- Net stable funding ratio in foreign currency
- Net foreign currency balance 15% of balance sheet

FX lending

- FX borrowing by unhedged parties made more difficult

Financial Stability Council and Systemic Risk Committee



Objectives – indices – tools

Intermediate target	Purpose	Indices (examples)	Tools (examples)
1	to mitigate and prevent excessive credit growth, leverage and imbalances in asset markets	Credit growth; Real house price inflation; Credit growth relative to GDP; Deviation of debt ratio from long-term trend	Countercyclical buffer; Sector specific capital requirements; Leverage ratio; LTV ratio; DSTI, DTI, LTI
2	to mitigate and prevent excessive maturity mismatch and market illiquidity, particularly in foreign currencies	Deposit to lending ratio; Liquid assets relative to total assets; Core financing ratio	LCR; NSFR; LTD; FX balance; collateral and haircuts
3	to limit direct and indirect exposure concentration and cross-ownership links	Counterparty concentration; Sectoral concentration; Contagion risk	Limits on large exposures; systemic risk buffer; sector specific capital requirements
4	to limit the systemic impact of misaligned incentives with a view to reducing moral hazard	Systemic importance of financial institutions (size, importance, complication, connections)	O-SII buffer
5	to mitigate and prevent the adverse impact of excessive capital in- and outflows that can amplify the business cycle	Non-FDI capital flows; foreign entity capital flows; international investment position; net inflows	CFM; limits on FX borrowing by unhedged parties; LCR; NSFR
6	to strengthen the resilience of financial infrastructure	Inter-bank transactions; banks net positions	Collateral and haircuts; information requirements

Capital buffers activated by the FSA on recommendation by the FSC

Capital buffer	FSC recommendation	FME decision	Value	Effective date
Systemic risk buffer, systemically important banks*	22.1.2016	1.3.2016	3.0%	1.1.2017
Systemic risk buffer, other deposit institutions	22.1.2016	1.3.2016	1.5%	1.1.2017
			2.0%	1.1.2018
			3.0%	1.1.2019
Capital buffer for systemic importance*	22.1.2016	1.3.2016	2.0%	1.4.2016
Countercyclical capital buffer	22.1.2016	1.3.2016	1.0%	1.3.2017
	30.9.2016	1.11.2016	1.25%	1.11.2017
Capital conservation buffer			2.5%	1.1.2017

*Systemically important banks are Landsbankinn hf., Arion Bank hf., and Íslandsbanki hf.

Source: Ministry of Finance and Economic Affairs

Curbing capital inflows

- „to provide an authorisation for a levy on financial transfers to and from the country, or for increasing reserve requirements on capital flows, with the aim of preventing immoderate capital inflows“ (Central Bank 2012)
- Central Bank should apply rules on foreign currency financing at the banks or introduce special reserve requirements on their foreign lending (Special investigation commission 2010)

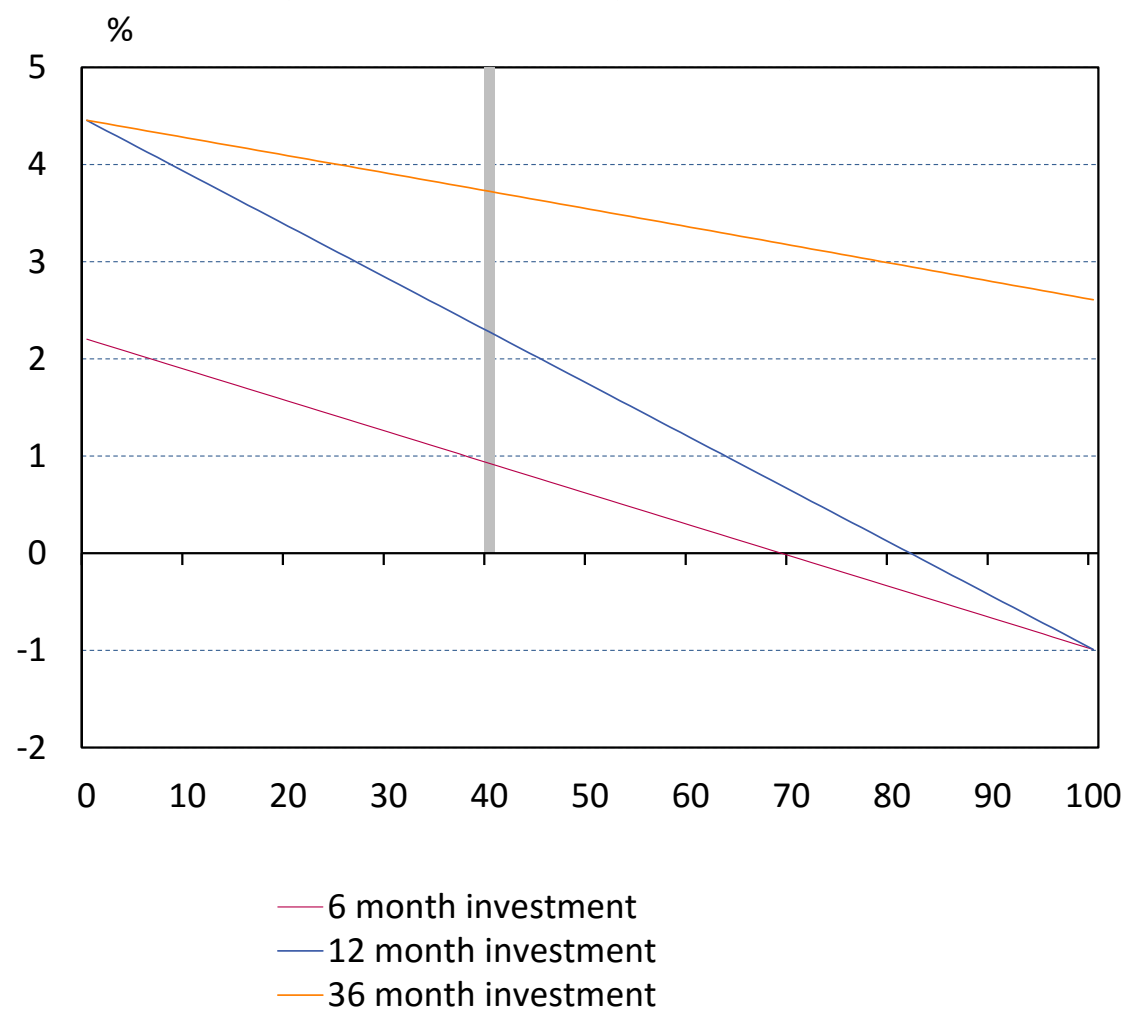
Purpose of capital flow measure according to Central Bank's announcement 4 June 2016:

- to temper inflows of foreign currency and to affect the composition of such inflows.
- to reduce the risk that could accompany excessive capital inflows under the current regulatory framework for foreign exchange,
- to support other aspects of domestic economic policy, and contribute to macroeconomic and financial stability.
- to reduce the risk potentially accompanying strong capital inflows by directly affecting the incentives for carry trade.
- to support effective monetary policy transmission.

Implementation of the CFM

Carry trade gain for various reserve ratios and investment duration

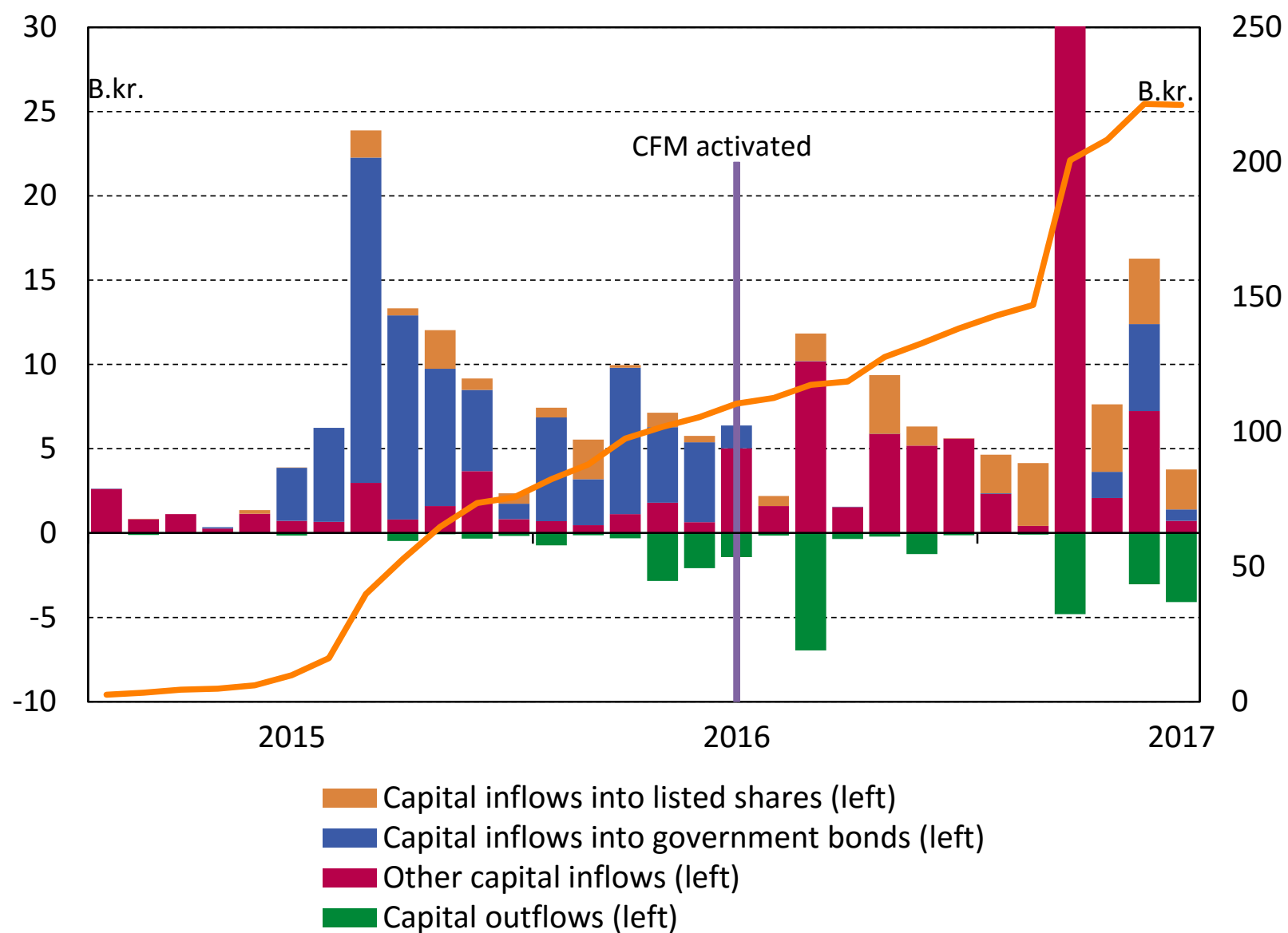
Assumption: Holding period 1 year, domestic interest rates 5,5%, foreign interest rate 1%, interest rate on special reserve ratio 0%, risk premium 0%, unchanged exchange rate



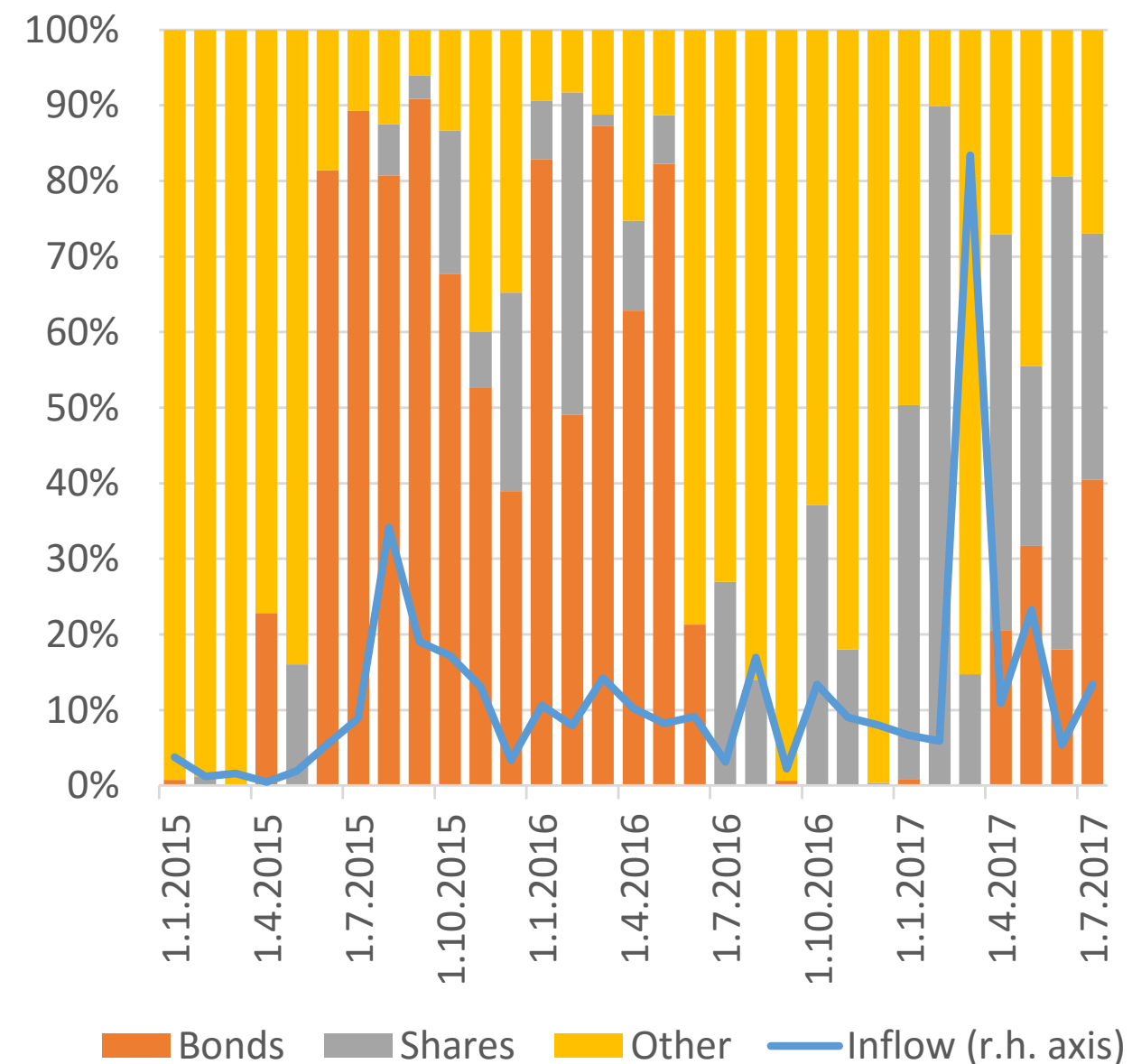
- Capital inflows into government bonds started to increase in 2015
- CFM announced on 4 June 2016
- Final auction of off-shore krónur held in June 2016
- Reserve ratio set at 40% for 12 months at 0% interest
 - Legal frame allows for 75% for 5 years max

Effectiveness of the CFM

Capital flows due to registered new investments



Composition of inflows

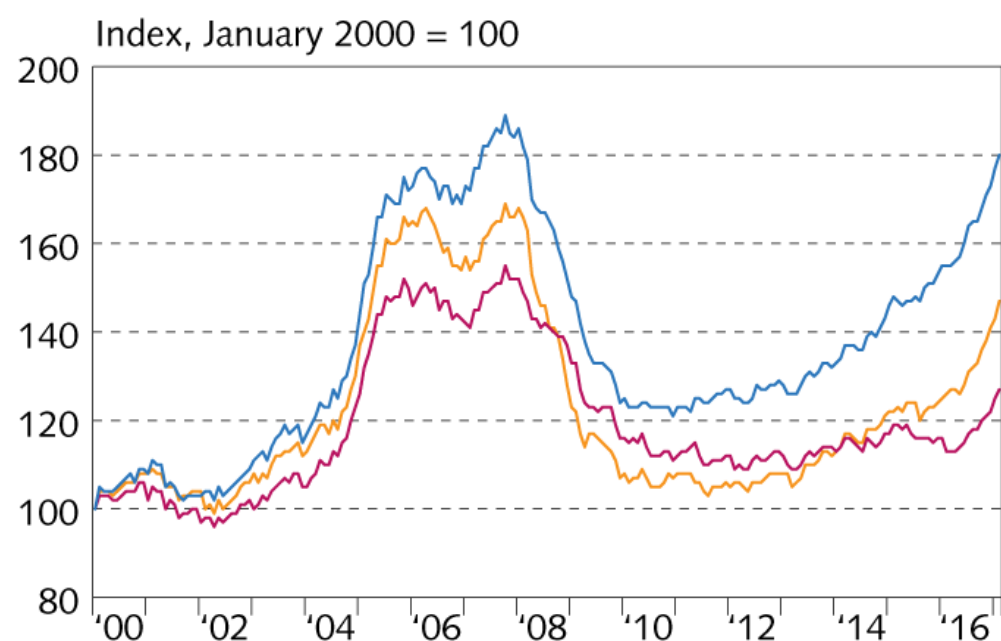


Regulating mortgage borrowers

- Special investigation commission on the fall of the banks in 2008 suggested that tools should be implemented that would be useful in stemming excessive growth in mortgage lending
- The commission in particular mentioned regulating loan-to-value ratios for mortgages, making them countercyclical

Housing market developments

House prices¹

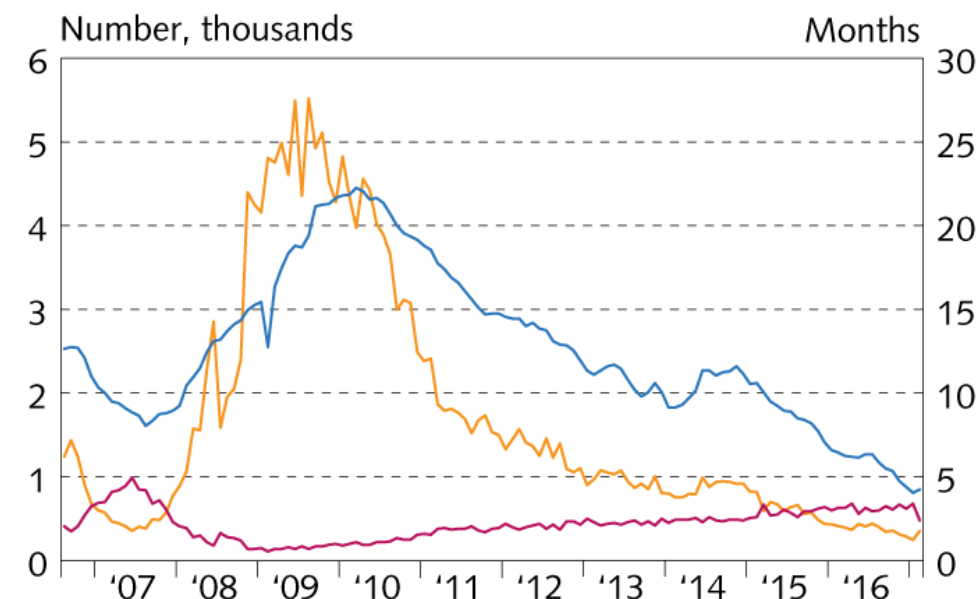


- Real house prices
- House prices to wages
- House prices to building costs

1. House price index relative to CPI, wage index, and building cost index.

Sources: Statistics Iceland, Register Iceland, Central Bank of Iceland.

Residential property sales



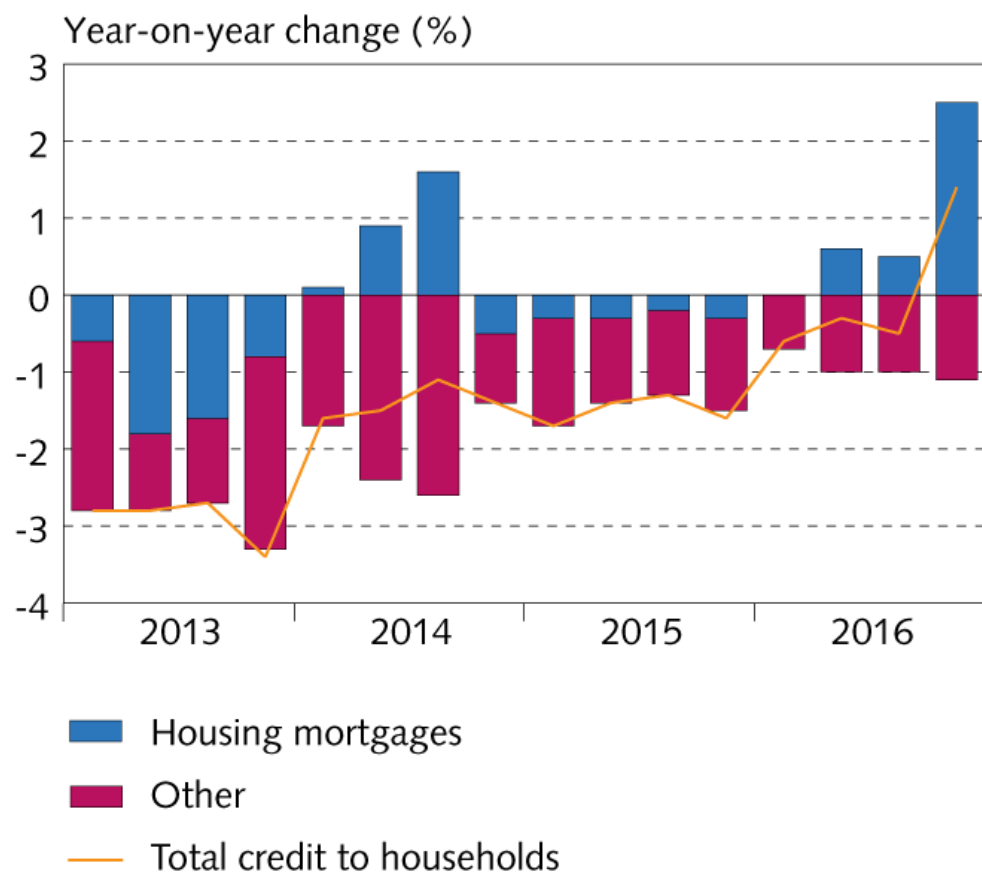
- Advertised property¹ (left)
- Purchase agreements² (left)
- Average time to sale³ (right)

1. Monthly average of advertisements on Morgunbladid real estate website. The count is carried out by property code to avoid a repeat count of the same property. 2. Based on the date of purchase. Seasonally adjusted. 3. The average time to sale is the length of time (in months) that it takes to sell advertised property divided by the turnover for the month in question.

Sources: Morgunbladid Real Estate Website (mbl.is), Registers Iceland, Central Bank of Iceland.

Household debt

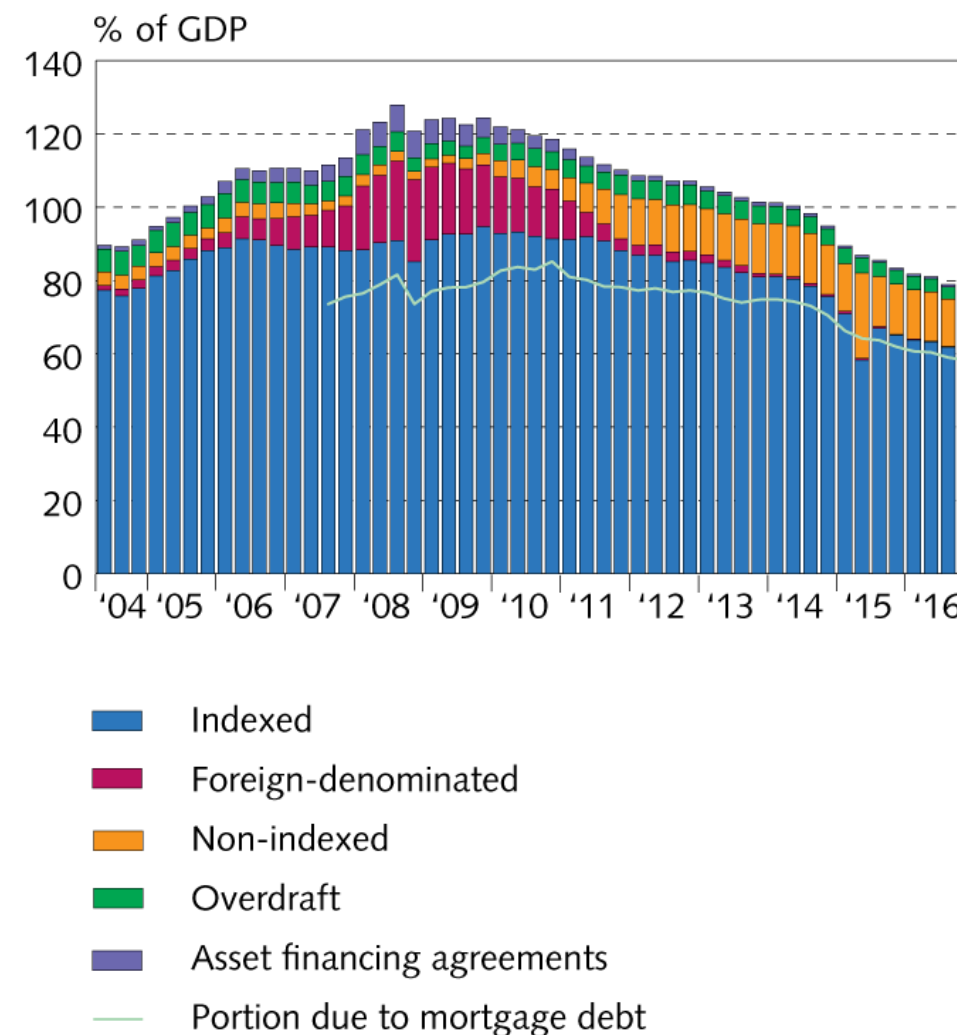
Credit to households, real growth^{1,2}
Contribution from residential mortgages



1. Claim value, adjusted for Government debt relief measures.
 2. Percentages signify total credit growth due to growth in each subcategory.

Sources: Statistics Iceland, Central Bank of Iceland.

Households: Debt as % of GDP
Q2/2004 - Q4/2016



Sources: Statistics Iceland, Central Bank of Iceland.

FSA limits LTVs in 2017

- On 20 July 2017 the FSA set maximum for LTV on new mortgages at 85% (90% for first time buyers)
- To preserve financial stability and strengthen the resilience of lenders and borrowers against falling house prices
- House prices development has recently departed from fundamentals such as wages and building cost
- Rules are intended to halt further easing of lending standards

Discussion

- Financial Stability Council oversees systemic financial risk and decides on the use of macro prudential policies
- Except when the Central Bank decides on the use of macro prudential policies
 - Particularly when they serve a monetary policy function
- Or when the Financial Supervisory Authority decides on their use
 - In order to decrease the probability of default of borrowers and loss-given default at banks