



Seðlabanki Íslands

Quantification of troubled debt and policy responses

Lessons from Iceland

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Overview of the presentation

Scope and nature of distress

- Aim of analysis of borrowers' financial position
- Data availability and benefits of micro data
- Examples of results from analyses in Iceland

Policy measures

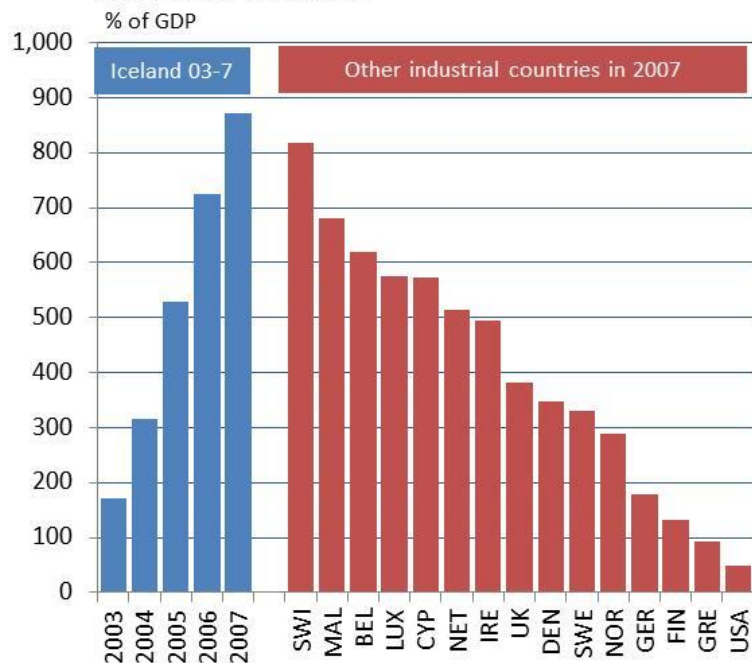
- Approaches to debt restructuring
- Setting up a beneficial framework for private sector debt restructuring
- Iceland's experience

Cyprus and Iceland: Challenging crises



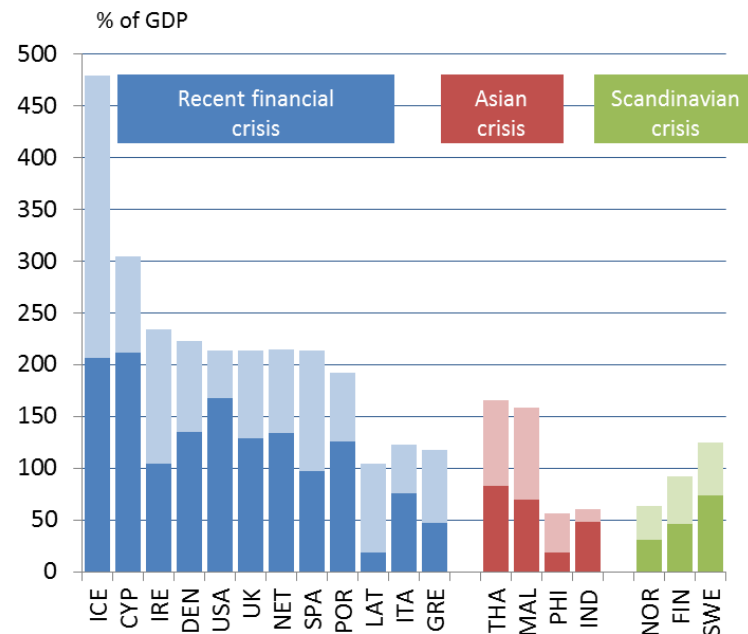
- The crises in Cyprus and Iceland have many similarities but also important distinctions
- Both are systemic banking crises of exceptional magnitude due to the size of the banking system and private sector indebtedness ...
- ... creating exceptional challenges regarding deleveraging and debt restructuring

Banking system size in the run-up to the international financial crisis in selected industrial countries¹



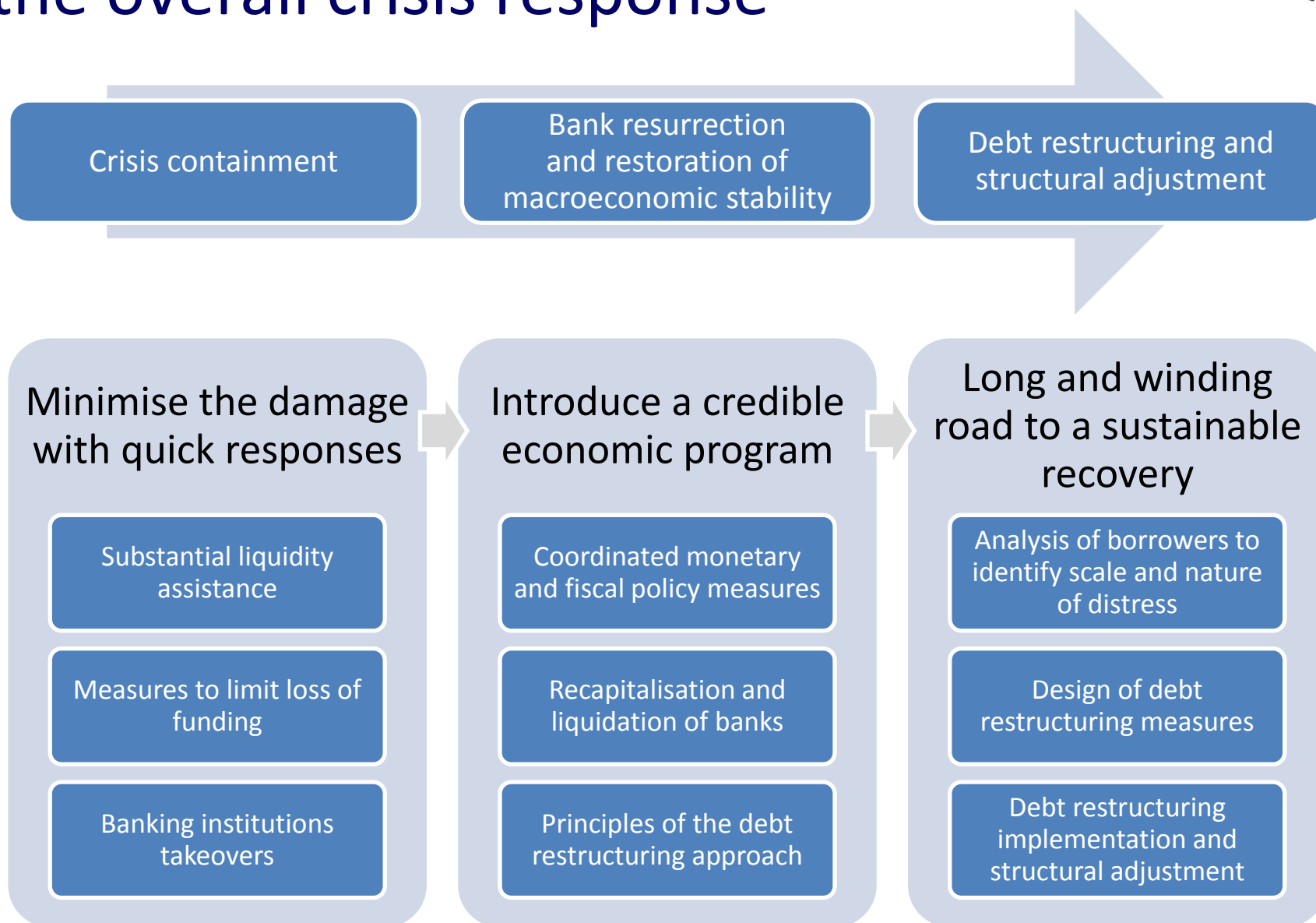
1. The figure shows the development in Iceland in 2003-2007 but the position in 2007 in other countries. Sources: Central Bank of Iceland, Thorvarður Tjörvi Ólafsson and Thórarinn G. Pétursson (2011). *Weathering the financial storm: The importance of fundamentals and flexibility. In The Euro Area and the Financial Crisis*. Editors M. Bablavý, D. Cobham and L. Ódor. Cambridge University Press.

Domestic credit to the private sector in the run-up to three financial crises¹



1. Darker-shaded bars show the debt level of the non-financial private sector in 2000 in the current crisis, 1990 in the Asian crisis, and 1980 in the Scandinavian crisis. Lighter-shaded bars show the increase in debt to the peak level during the crisis. Sources: Macrobond, Central Bank of Iceland.

Debt analyses and restructuring within the overall crisis response



Importance of access to data



In the run-up to the crisis

- The Central Bank of Iceland had mainly access to aggregate data
- Incomplete samples of household-level data were only available with a 2-year lag and firm-level data was limited to a few listed companies
- The balance sheet expansion was clear from the available data, but the build-up of vulnerabilities and increased risk were only partly observable

When the crisis hit

- Serious lack of data to assess the effects of the crisis on borrowers' financial position and advice policy makers
- Shocks to private sector balance sheets described as “the perfect storm”

Post-crisis

- Nationwide household-level database and an extensive firm-level database built in 2009 by the Central Bank in response to the crisis
- Preliminary results of the analysis available 9 months after the crisis hit
- I will mostly focus on the household sector analysis in this presentation

Issues of interest in the analysis



Financial distress

- Extent and evolution of financial distress among households
- Households are defined to be in financial distress if they have a negative financial margin such that their disposable income is insufficient to cover both debt service payments and necessary minimum living expenses



Underwater mortgages

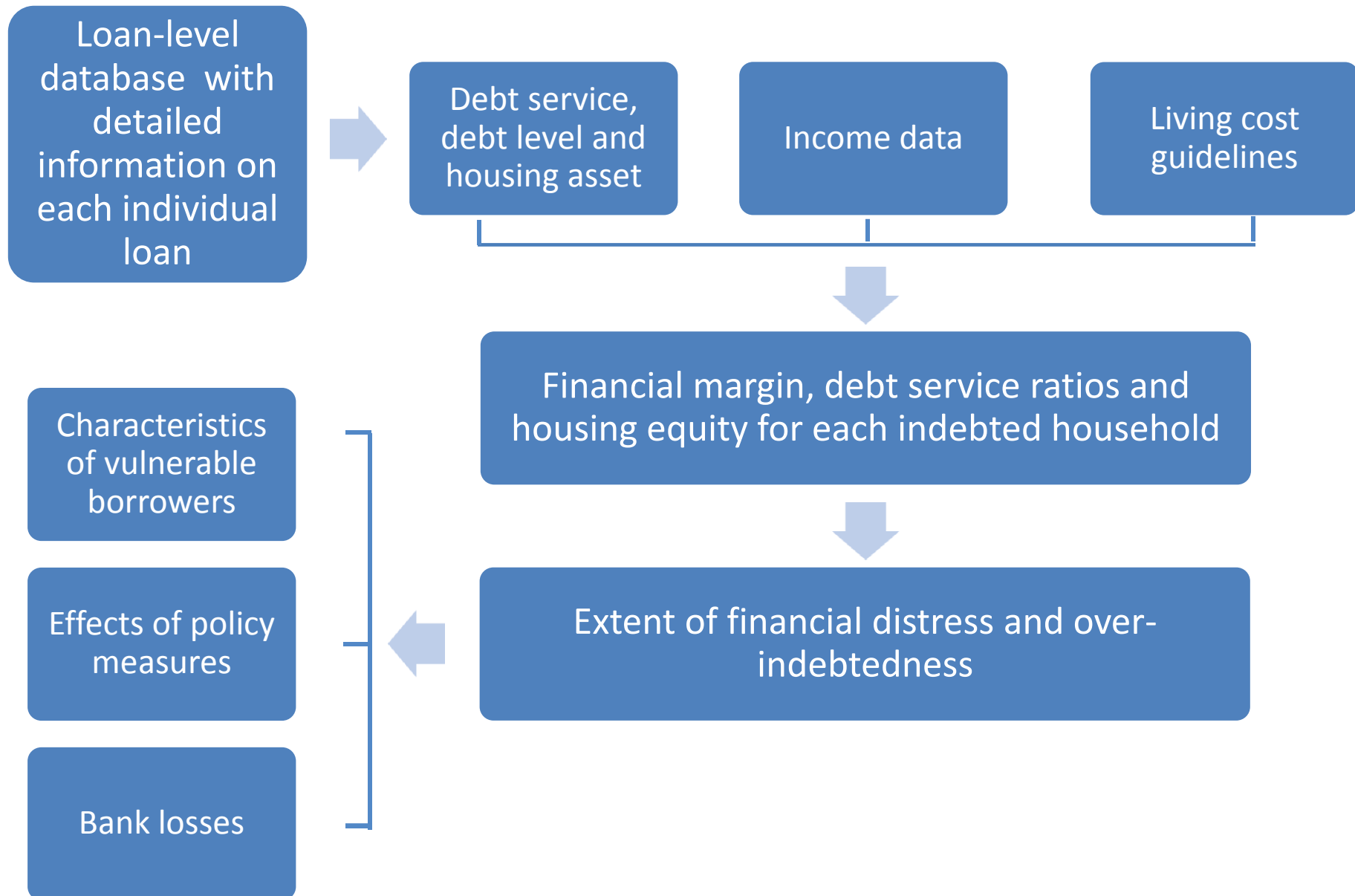
- Degree and development of over-indebtedness among homeowners
- Special interest in assessing the share of households simultaneously in financial distress and negative housing equity as they face the greatest bankruptcy risk



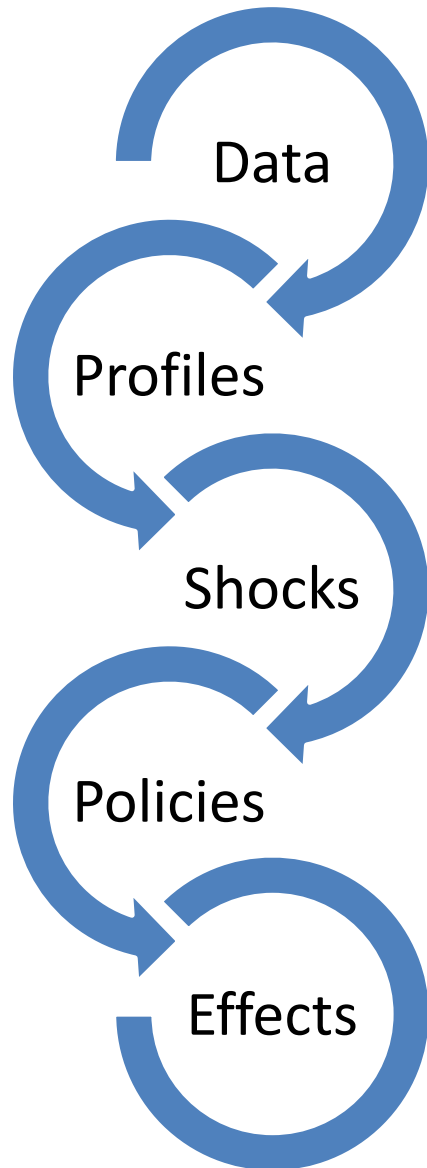
Guide debt restructuring

- Determine the key characteristics of households in a vulnerable position
- Assess the effects of debt restructuring measures and other interventions, both those already implemented and hypothetical ones

Structure of household sector analysis



Benefits of our approach



Provides an assessment of the effects of the crisis on borrowers' position

Supports policy making regarding financial stability, debt restructuring and possibly other policy areas

Supports financial institutions' loan restructuring and arrears management

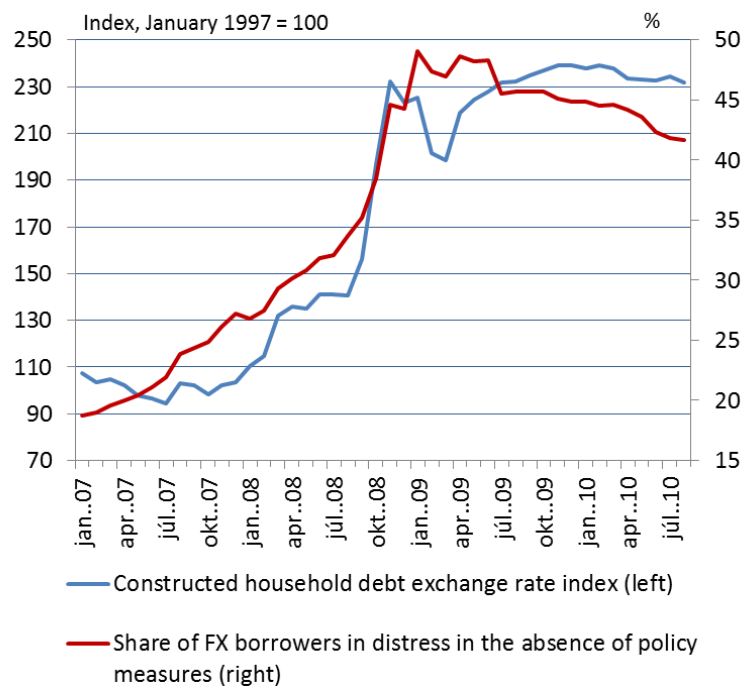
Size of the shocks to households



- From peak-to-trough, the currency depreciation measured 60%, inflation peaked at close to 20%, real wages declined by 13½%, unemployment rose by 8½ pp., real house prices fell by 1/3, stock prices collapsed and financial income decreased by 81%
- As expected, households' financial position deteriorated considerably as a result

Figure 5.1a

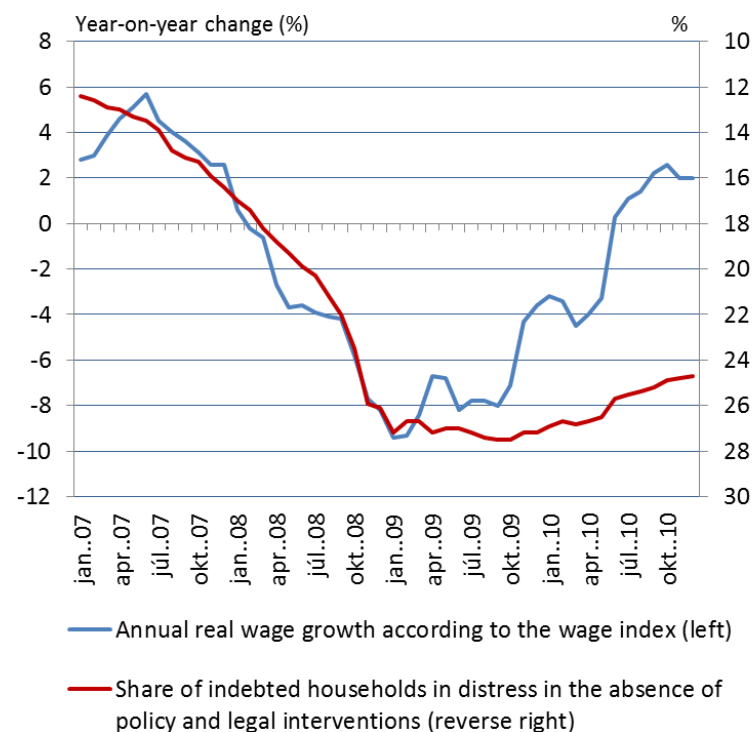
Exchange rate developments and the share of FX borrowers in distress in the alternative scenario¹



1. Constructed exchange rate index reflecting each currency's share of households foreign currency-denominated debt according to constructed payment profiles.
Source: Central Bank of Iceland Household Sector Database.

Figure 5.1c

Real wage developments and share of households in distress in the absence of policy and legal interventions¹



Sources: Statistics Iceland, Central Bank of Iceland Household Sector Database.

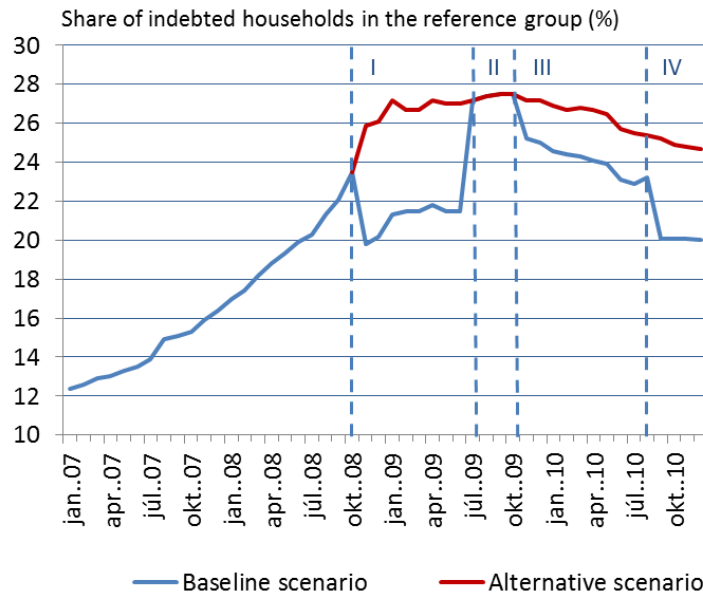
Financial distress and underwater mortgages



- Share of indebted households in distress nearly doubled in the run-up to the banking collapse and the share of households with underwater mortgages rose rapidly
- The share in distress peaked at 27½% but decreased thereafter to 20% due to debt restructuring measures, wage increases and recalculation of illegal FX-linked loans

Figure 4.1a

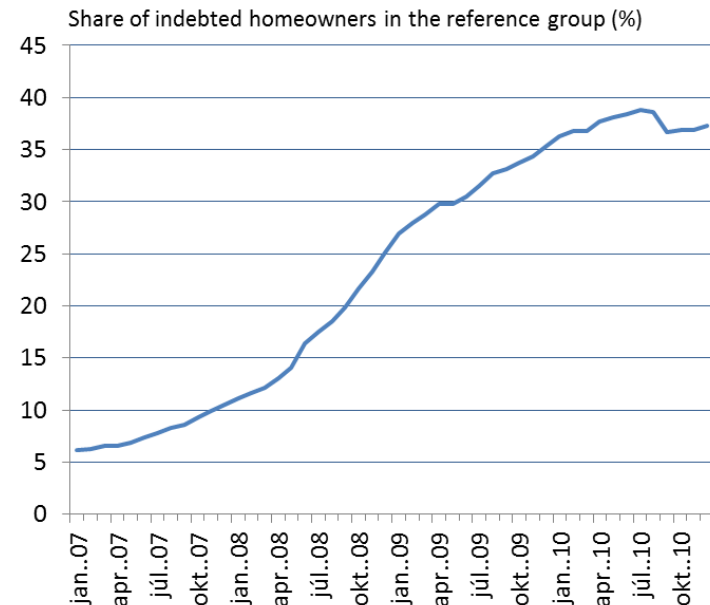
Share of indebted households in distress in the baseline and alternative scenario¹



1. Share of households in the reference group with negative margin taking the 60 per cent buffer on the minimum living expenses into account. I: Freezing of many foreign-denominated loans begins, II: freezing ends and payment smoothing of foreign-denominated mortgages begins, III: payment smoothing of indexed ISK mortgages begins, IV: recalculation of foreign-denominated loans takes place. Source: Central Bank of Iceland Household Sector Database.

Figure 4.6a

Share of indebted homeowners in negative housing equity in the baseline scenario¹



1. Share of homeowners in the reference group in negative housing equity, i.e. with outstanding balance on their mortgages according to constructed payment profiles for the baseline scenario exceeding the value of their dwellings according to constructed housing wealth. The baseline scenario allows for recalculation of foreign-currency denominated mortgages in August 2010. Source: Central Bank of Iceland Household Sector Database.

Distress by type of debt and family form



- Most households in distress were low income households and distress was more widespread among FX borrowers than ISK borrowers
- Financial distress was more widespread among families with children than childless households, young families who bought late in the housing boom exceptionally vulnerable

Figure 4.1d

Share of indebted households in distress by currency-denomination of debt in the baseline scenario¹

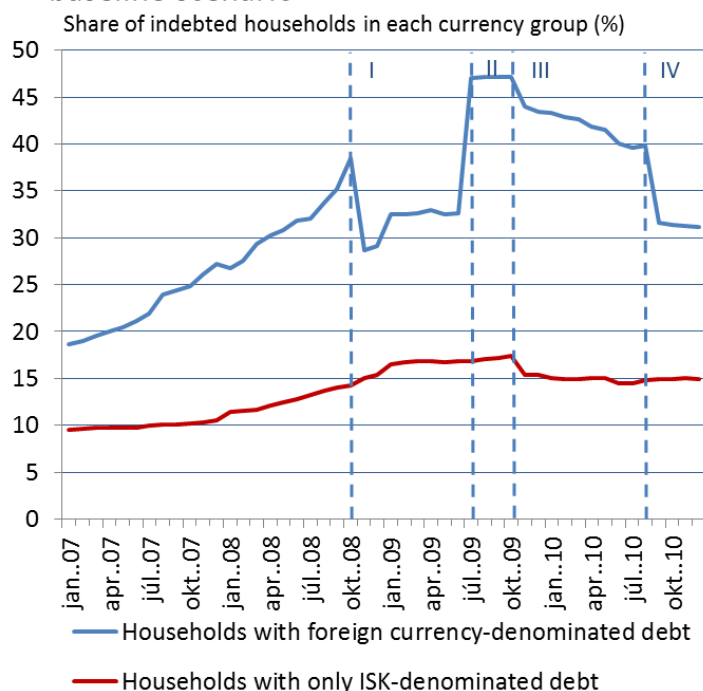
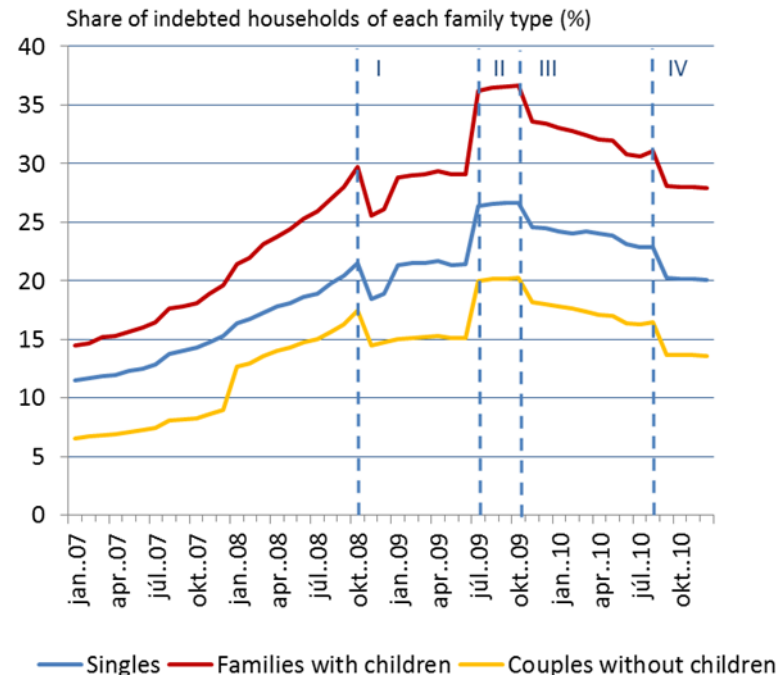


Figure 4.2a

Share of indebted households in distress by family type in the baseline scenario¹



1. I: Freezing of many foreign-denominated loans begins, II: freezing ends and payment smoothing of foreign-denominated mortgages begins, III: payment smoothing of indexed ISK mortgages begins, IV: recalculation of foreign-denominated loans takes place.

Source: Central Bank of Iceland Household Sector Database.

1. I: Freezing of many foreign-denominated loans begins, II: freezing ends and payment smoothing of foreign-denominated mortgages begins, III: payment smoothing of indexed ISK mortgages begins, IV: recalculation of foreign-denominated loans takes place.

Source: Central Bank of Iceland Household Sector Database.

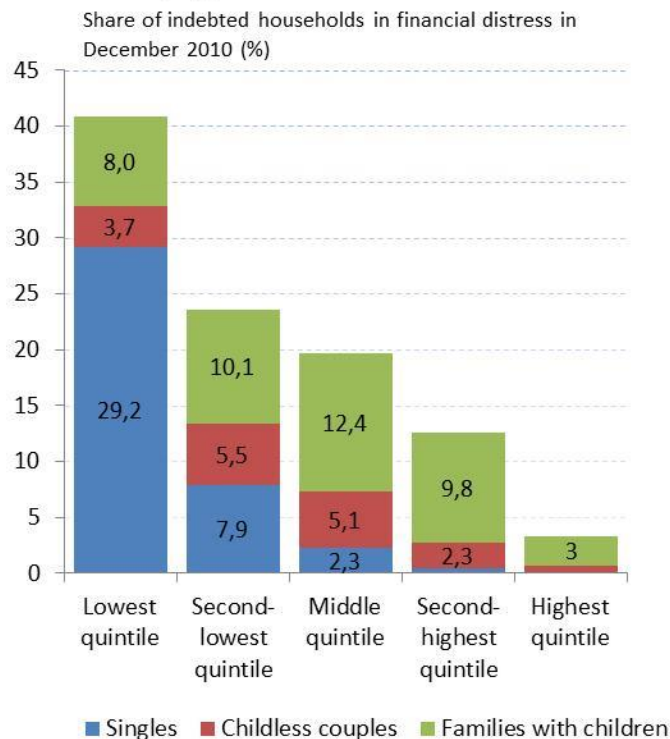
Characteristics of vulnerable households



- Roughly a third of households in distress at year-end 2010 were middle-income families with children, while 37% were low-income singles
- Almost half of households in negative housing equity were high-income families while one-in-six were low-income singles

Figure 5.3a

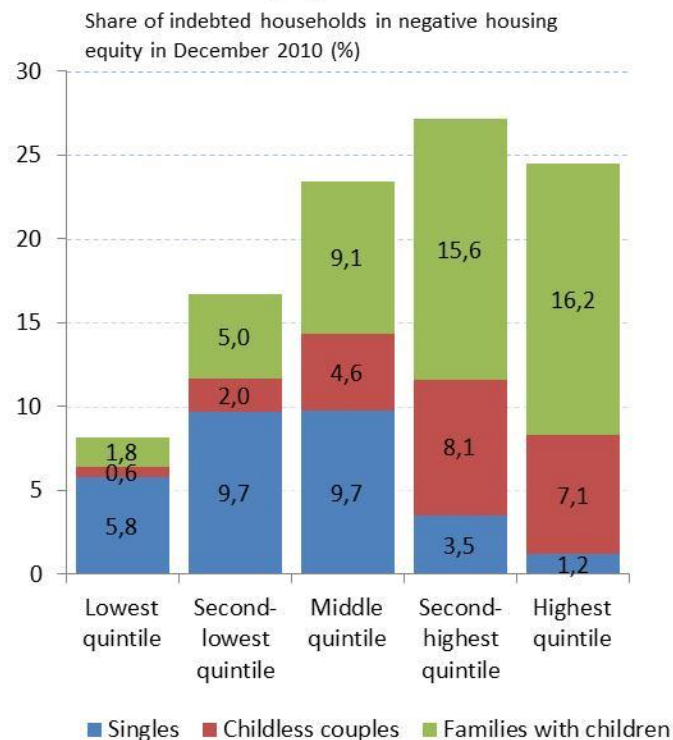
Composition of households in financial distress in December 2010 by income and family type¹



Source: Central Bank of Iceland Household Sector Database.

Figure 5.3b

Composition of homeowners in negative housing equity in December 2010 by income and family type¹



Source: Central Bank of Iceland Household Sector Database.

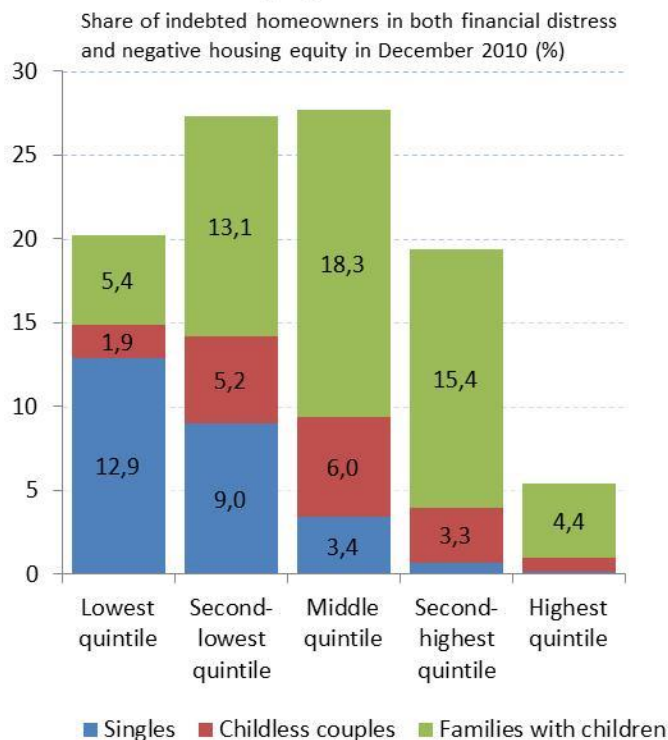
Characteristics of vulnerable households



- Just shy of 47% of households in simultaneous payment and debt problems were middle-income families with children, of which 2/3 were FX borrowers
- Roughly 22% of households in this highly vulnerable position were low-income singles, split evenly between being FX and ISK borrowers

Figure 5.3c

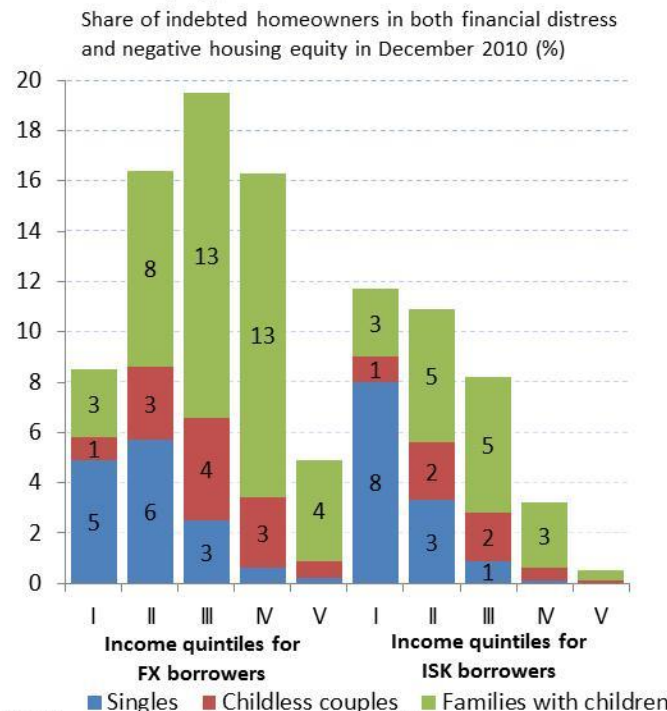
Composition of homeowners in financial distress and negative housing equity by income and family type¹



Source: Central Bank of Iceland Household Sector Database.

Figure 5.3d

Composition of homeowners in financial distress and negative housing equity by currency-denomination of debt, income and family type¹



1. I-V represents the income quintiles within each borrower group, from the lowest (I) to the highest (V).

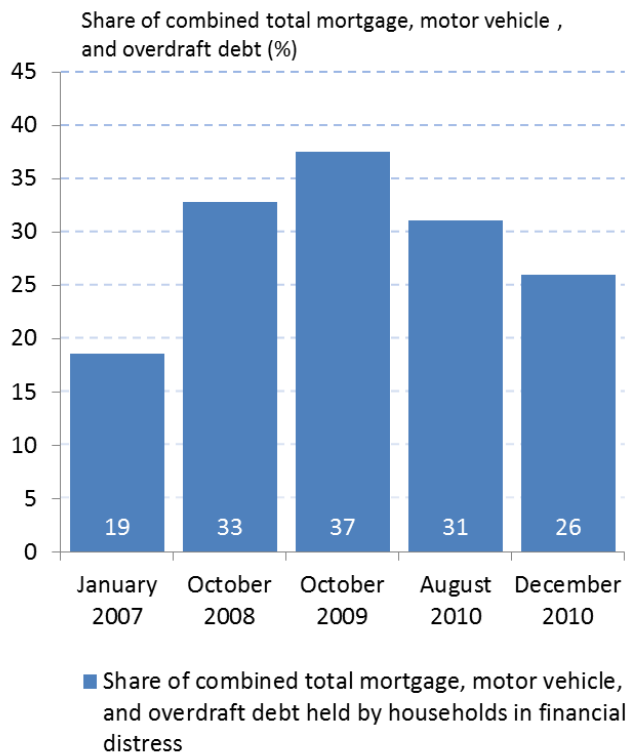
Source: Central Bank of Iceland Household Sector Database.

Comparison to NPL statistics



- Comparison of results from our analysis to non-performing loan (NPL) statistics is not straightforward, but the two measures nevertheless seem to portray a similar development
- The household analysis is, however, capable of providing a more comprehensive picture of the crisis dynamics, effects of policy interventions and the composition of distressed groups

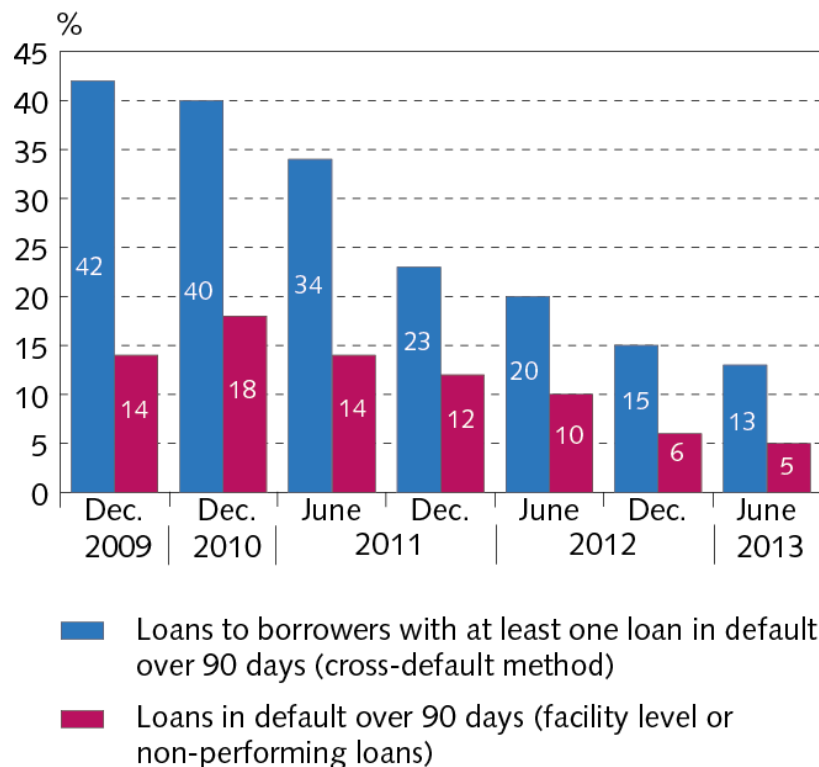
Figure 5.4d
Debt-at-risk ¹



1. Debt-at-risk is defined as debt held by households in financial distress.

Source: Central Bank of Iceland Household Sector Database.

Default ratios of the three largest commercial banks¹



1. Parent companies, book value.

Sources: Financial Supervisory Authority, Central Bank of Iceland.

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Three approaches to debt restructuring



Centralised approach

- The government plays a key role in private sector debt restructuring
- Possible implementations: across-the-board or conditional measures, state-owned AMC

Decentralised approach

- Debt restructuring takes place via direct collaboration between debtors and creditors
- The government nevertheless creates the framework and provides support

Hybrid approach

- Limited general/conditional support from the government but with debt restructuring taking place mostly through direct collaboration between borrowers and lenders

Choice of approach depends on circumstances, e.g. scope of debt problems, fiscal space, ownership and size of banks, and other institutional factors

Beneficial debt restructuring framework



- Debt restructuring involves deciding how to distribute the burden from a systemic crisis
- This is a daunting task and the tendency is often to wait and hope that it will self-correct
- Experience shows that there are some key factors important for the success of debt restructuring involving direct collaboration between borrowers and lenders:

Capital position of banks

- The most common mistake is to inject too little capital into the banking system during recapitalisation, resulting in cosmetic restructuring

Incentives provided by the institutional framework

- Bankruptcy laws, accounting rules and out-of-court schemes

Relationship between creditor and debtor

- It is important to ensure that links between the borrower and the lender – whether these are business connections, ownership ties, or family or friendship ties – do not have a detrimental effect on debt restructuring

Hybrid debt restructuring strategy



- A hybrid debt restructuring strategy was gradually introduced in Iceland and efforts made to manage expectations and take moral hazard issues seriously
- The strategy was derailed by the Supreme Court ruling in 2010 finding widely-used FX-linked loans illegal, leading to write-offs amounting to roughly 11% of GDP for households

General measures

Payment rescheduling
(payment smoothing)

Changes to benefit schemes

3rd pillar pension fund pay-outs

Aimed at rather lightly
distressed households

De-centralised measures

Bank-administered out-of-court
voluntary debt restructuring

Ombudsman-administered
in-court debt restructuring

Banks' own initiatives

Aimed at households in
serious bankruptcy risk

Public outcry in the autumn of 2010



Two measures introduced at year-end 2010



The 110% option

- Allowing households with mortgages exceeding 110% of their underlying property value to apply for write-offs
- Resulted in write-offs corresponding to approximately 3% of GDP



Special interest rebate

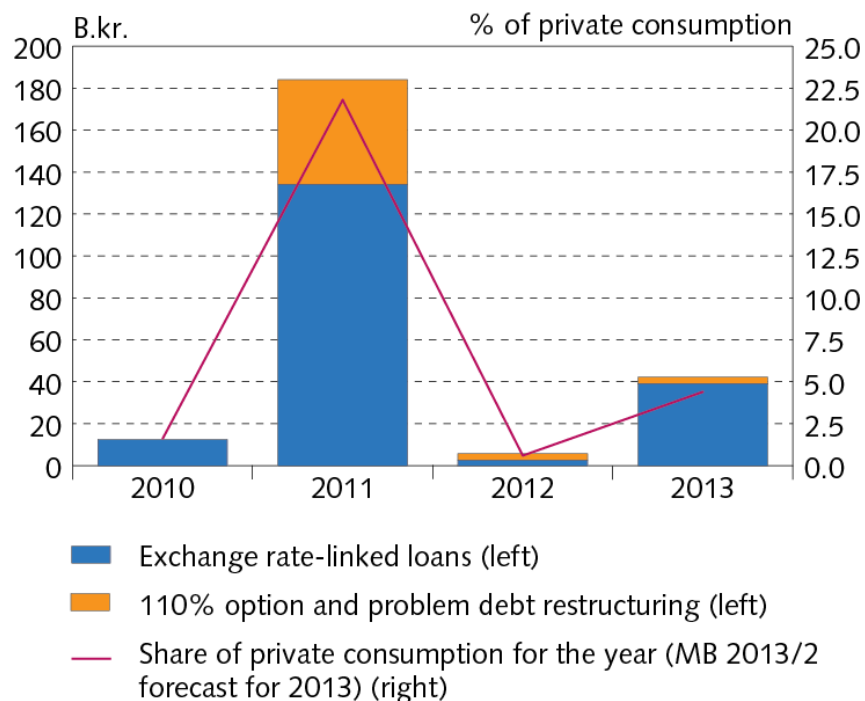
- General measure, dependent on mortgage indebtedness and independent on income
- Financed by a tax levied on financial institutions
- Amounted to close to 1% of GDP

Extent of measures in 2009-2013



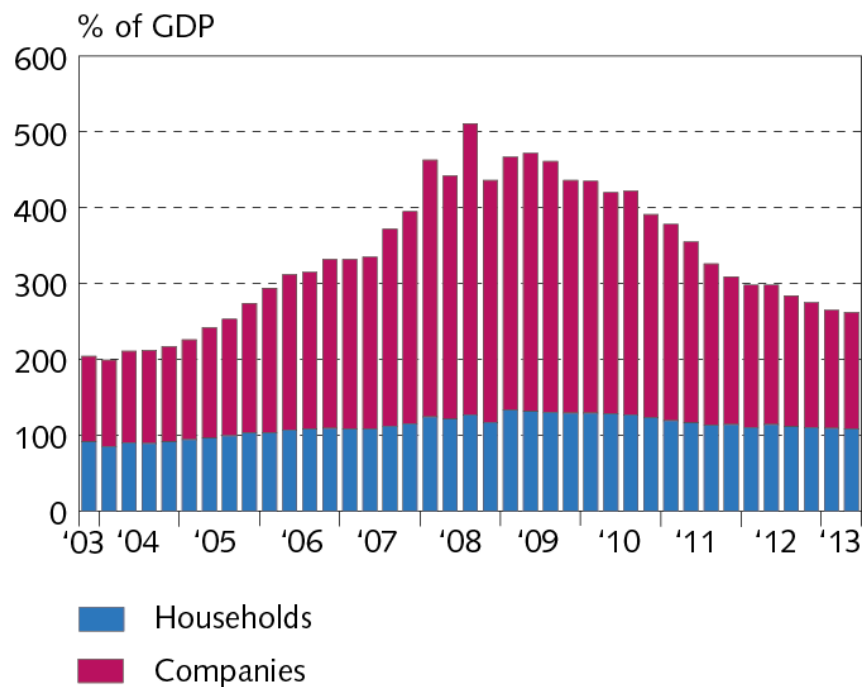
- The policy and legal interventions, which were implemented in 2009-2013, led to substantial write-offs for households and firms
- Some of the policy measures, e.g. the special interest rebate and the 110% option, are, however, likely to have caused only a small reduction in the extent of financial distress

Post-crisis write-downs of household debt



Sources: Icelandic Financial Services Association, Statistics Iceland, Central Bank of Iceland.

Corporate and household debt¹ Q4/2003 - Q2/2013



1. According to seasonally adjusted GDP figures from the Central Bank of Iceland.

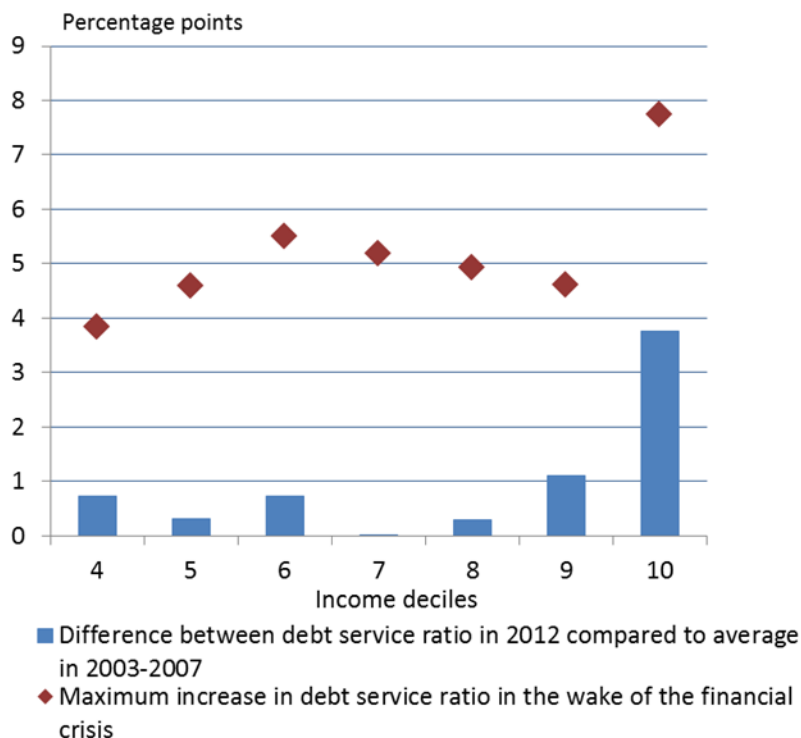
Sources: Statistics Iceland, Central Bank of Iceland.

Household debt still a major political issue



- New data indicates that a large share of the crisis-related increase in debt service has been unwound, but household continue to be more heavily indebted than before the crisis
- Households' position was the major theme of last year's Parliamentary elections
- Reduction measures amounting to 8% of household debt will be implemented in 2014-2018

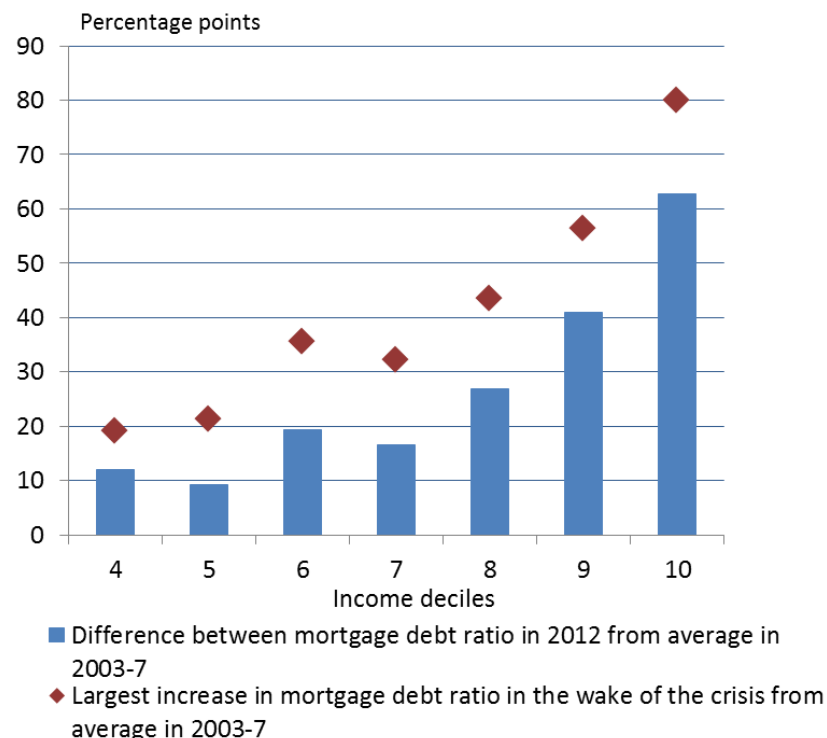
Figure 11
Average debt service ratio in 2012 compared to 2003-7 by income deciles¹



1. Based on data on average interest payments on all loans and average disposable income for different income deciles. Income deciles 1-3 are excluded as they only hold a small share of total debt.

Sources: Statistics Iceland, Central Bank of Iceland.

Average mortgage debt ratio in 2012 compared to 2003-2007¹



1. Income deciles 1-3 are excluded as they only have 8% of total mortgage debt.

Sources: Statistics Iceland, Central Bank of Iceland

Concluding remarks: Some lessons



Sequence and consistency

- Bank resurrection, restoration of reasonable macro-economic stability, choice of debt restructuring strategy
- Analysis and design of debt restructuring measures



Data and analysis

- Reliable and detailed-enough data to conduct an analysis providing a fairly accurate assessment of the scope and nature of financial distress, valuable guidance for policy makers, and allowing for monitoring of success



Challenges to implementation

- Debt restructuring is a daunting yet critical task
- Management of expectations with regard to measures
- Trade-off between general reduction of debt and distress?