

Mortgage contract design, monetary policy, and financial stability

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Mortgage Contract Design:

Implications for Households, Monetary Policy, and Financial Stability

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The views expressed in this presentation are those of the author and do not necessarily represent those of the IMF or IMF policy.

1

Outline

- Co-ownership: Princeton University Tenancy-in-Common Program
- Variable vs. fixed mortgage rates
- Transmission mechanism of monetary policy
- Financial stability considerations

2

Example of co-ownership:

Princeton University Tenancy-in-Common Program

- PU website: “[An] arrangement, in which the University pays for and owns up to one-third of the property, leverages buying power and enhances flexibility to help eligible individuals purchase homes that meet their needs and family circumstances.”
- Low tax on benefit; sizable subsidy
- Buy 50% larger house
- Risk sharing of capital gains and losses
- Appraisal
- Negotiations about extensions and remodeling

3

Variable- vs. fixed-rate mortgages

- Sweden: 73% of new mortgages are ARMs (57% of stock of mortgages)
- Monetary policy more effective with ARMs
 - Very good in Sweden and Norway during recent crisis
- Individual incentives for ARMs
 - Lower average rate but more risk
 - Penalty for getting out of FRMs

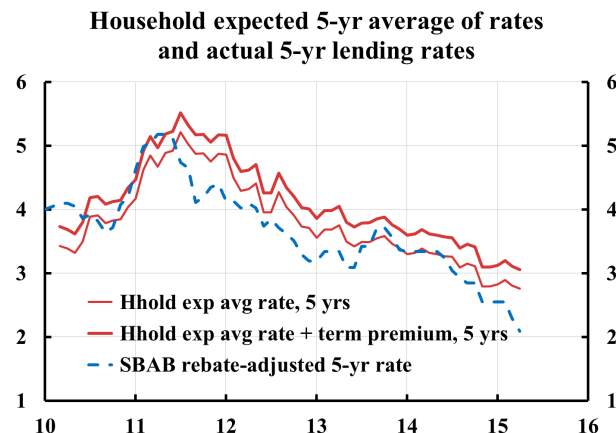
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Variable- vs. fixed-rate mortgages

- Do ARMs make households more vulnerable?
 - Variable rates provide business cycle insurance (reduces risk!)
 - Do households have too optimistic mortgage-rate expectations?
 - Stress tests of households' repayment capacity and resilience towards disturbances!
 - Tests of house prices in line with fundamentals

5

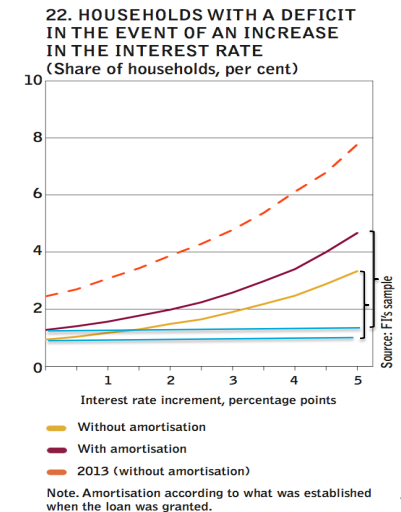
Swedish household mortgage-rate expectations are **higher** than actual rates



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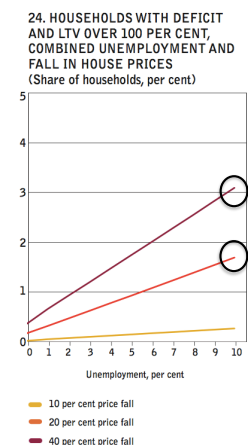
Swedish FSA's Mortgage Market Report 2015: Example of a stress test

- For a given increase in mortgage rates, what share of new borrowers would then have a deficit in a left-to-live-on analysis (may have to sell)?
- Modest increase in share
- New borrowers are quite resilient
- Old borrowers are likely to be even more resilient



7

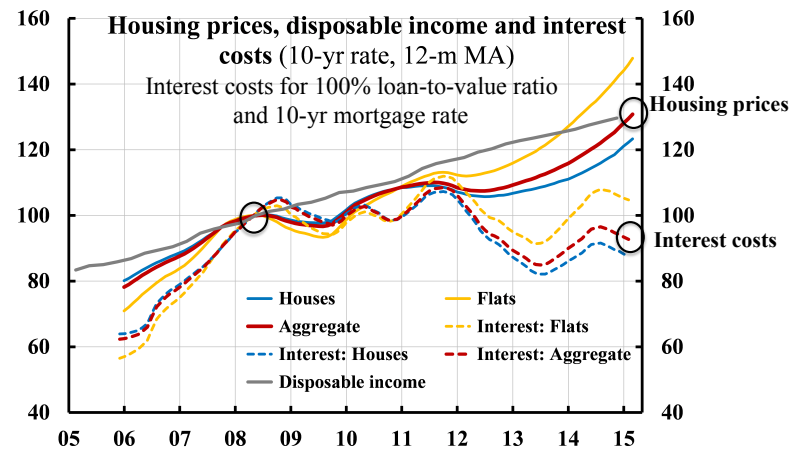
Swedish FSA's Mortgage Market Report 2015: Example 2 of stress test



- Assume: (1) 10 pp increase in the unemployment rate and (2) 20% housing price fall
- Q: What share of new borrowers do then have (1) a deficit in a LTLO analysis (may have to sell) and (2) an LTV ratio > 100% (must realize a loss)?
- A: Less than 2%
- Q: What if housing prices fall by 40%?
- A: About 3%
- New borrowers are *very* resilient
- Old borrowers are likely to be even more resilient

8

Swedish housing prices have increased as much as disposable income; 10-yr interest costs have fallen much below



9

Extra slides

Cost-benefit analysis 1

- Riksbank estimates MPR Feb 2014, Schularick-Taylor 2012, Flodén 2014
- Consider cost and benefit in terms of unemployment of 1 pp higher policy rate for 4 quarters
- Cost: **0.5 pp higher unemployment next few years**

10

11

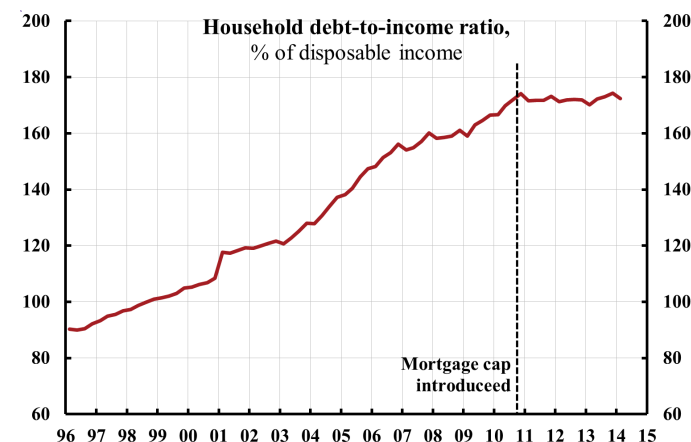
Cost-benefit analysis 2

- Benefit 1: Lower probability of crisis
 - 0.25% lower real debt in 5 years (RB)
 - 0.02 pp lower probability of a crisis (ST), 5 pp higher unemployment in crisis (RB)
 - 0.001 pp lower expected future unemployment
- Benefit 2: Lower increase in unemployment in crisis
 - 0.44 pp lower DTI in 5 years (RB)
 - 0.009 pp lower increase in unemployment in crisis (Flodén)
 - Assume high probability 10% of crisis (ST 4%)
 - 0.0009 pp lower expected future unemployment
- Total benefit: 0.0019 pp lower expected future unemployment

13

Household debt-to-income ratio

(% of disposable income)



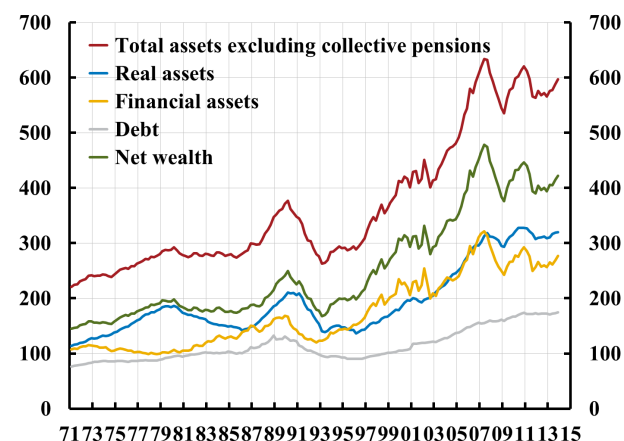
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Cost-benefit analysis 3

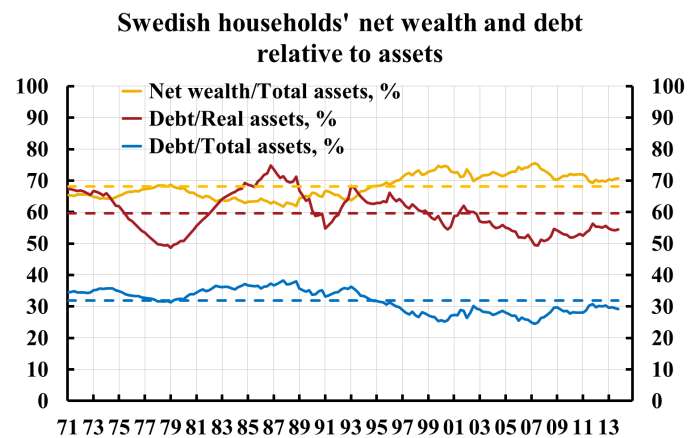
- Benefit: 0.0019 pp lower expected future unemployment
- Cost: 0.5 pp higher unemployment next few years
- Benefit/Cost $\approx 0.4\%$
- Cost/Benefit ≈ 250
- Additional cost: Inflation below households' expectations increases real debt burden
- The real value of a given nominal debt taken out in Nov 2011 is now more than 6 percent lower than if inflation had been 2%

14

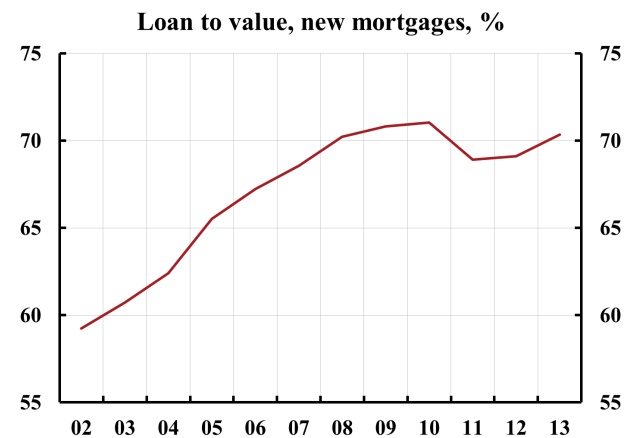
Household debt and assets (excluding collective pensions), % of disposable income



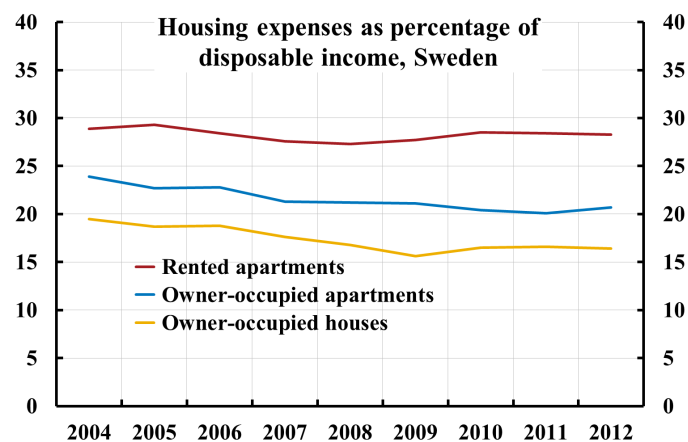
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17

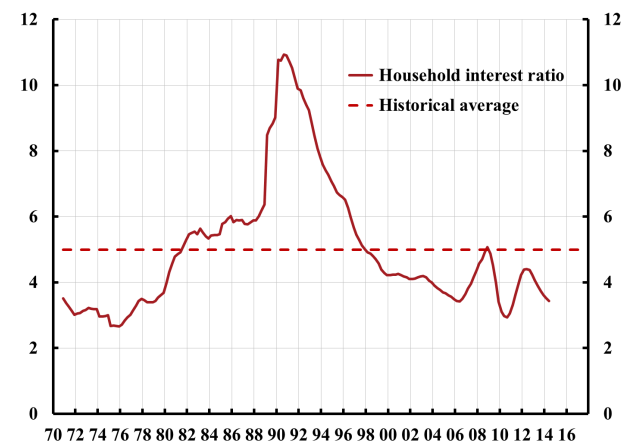


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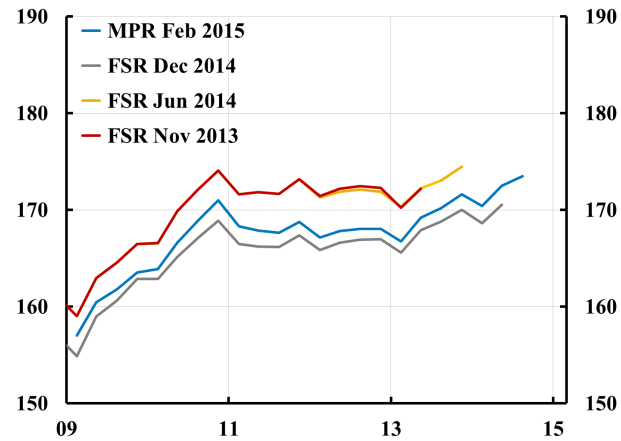
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Household interest payments, % of disposable income



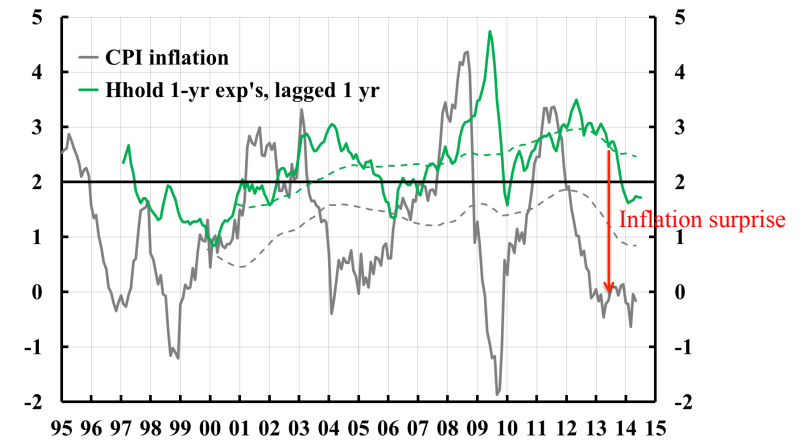
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Household debt ratio, data revisions



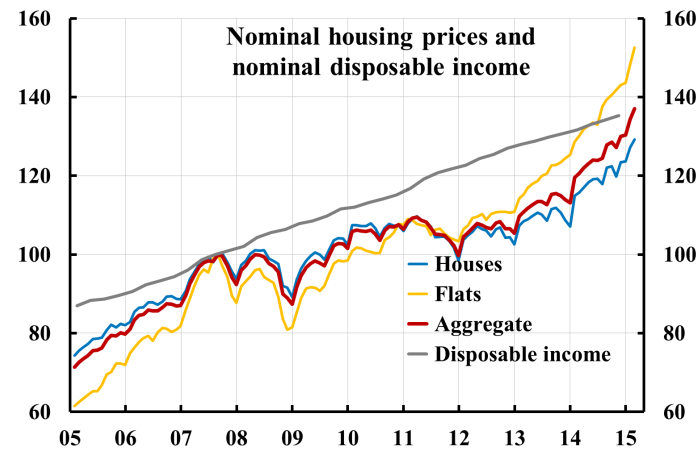
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Inflation below household's expectations



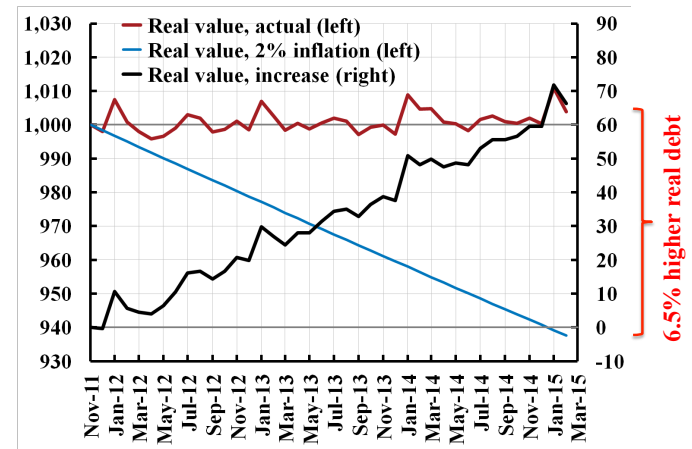
Note: Dashed lines are 5-year trailing moving averages

23



22

The real value of an SEK 1 million loan taken out in Nov 2011, actual and for 2 percent inflation



24

Percent increase to February 2015 in the real value of a given loan, compared to if inflation had been 2 percent
(depending on when the loan was taken out)

