



Debt, housing prices, and monetary policy

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1



Overview

- The monetary policy mandate
- The monetary policy outcome in recent years
- Monetary policy and household indebtedness
- My conclusions

2

The monetary policy mandate

- Sveriges Riksbank Act
 - "The objective for monetary policy shall be to **maintain price stability**"
- Government bill
 - "In addition, as an authority under the Riksdag, the Riksbank, without prejudice to the price stability target, is to support the goals of general economic policy with the aim to achieve sustainable growth and **high employment**".
 - High employment = highest sustainable rate of employment
- Price stability and the highest sustainable rate of employment
 - Highest sustainable rate of employment = the lowest sustainable rate of unemployment
 - Stabilize inflation around the inflation target and unemployment around a long-run sustainable rate



3



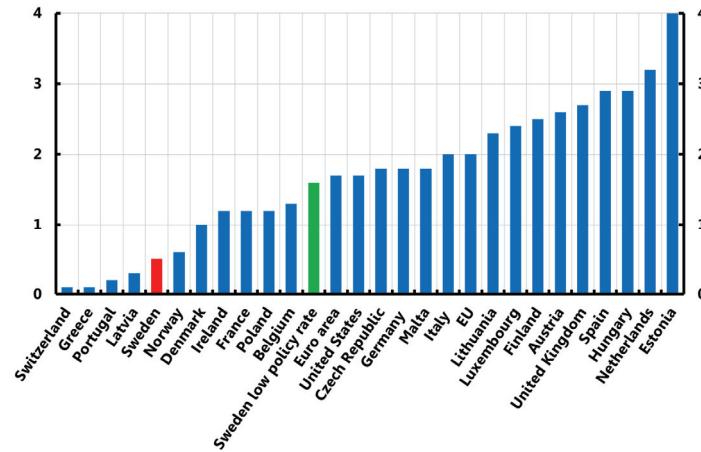
The monetary policy outcome in recent years

- Inflation is well below the target
- Unemployment is well above a long-run sustainable rate
- The household debt ratio is about 3 percentage points lower than it would have been with a repo rate of 0.25 percent since June 2010 (174 percent of disposable income instead of approximately 177 percent)
- This track record is alarming

4

HICP-inflation, selected countries, February 2013

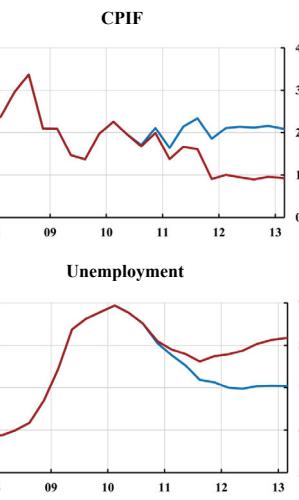
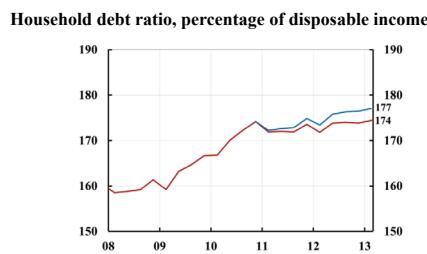
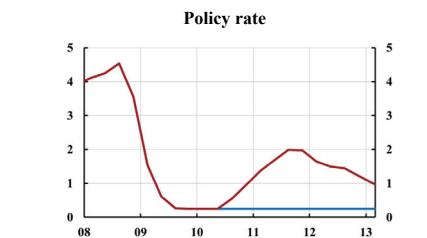
Percent



Note: Some observations from January or December

Source: Eurostat and own calculations 5

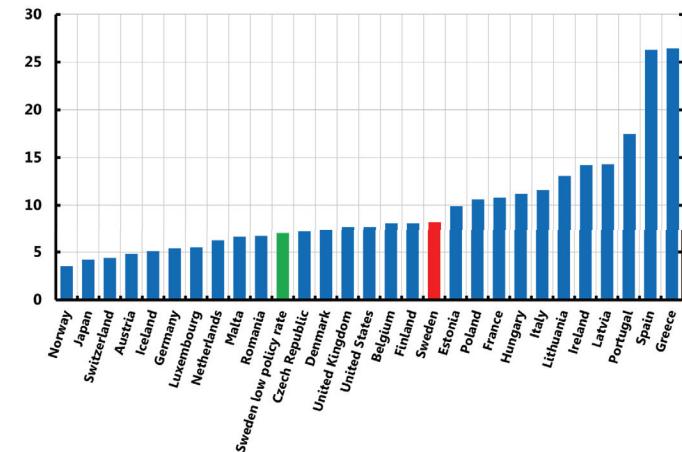
Outcomes compared to counterfactual low policy rate 2010-2012



Sources: The Riksbank, Statistics Sweden, and own calculations 7

Unemployment, selected countries, February 2013

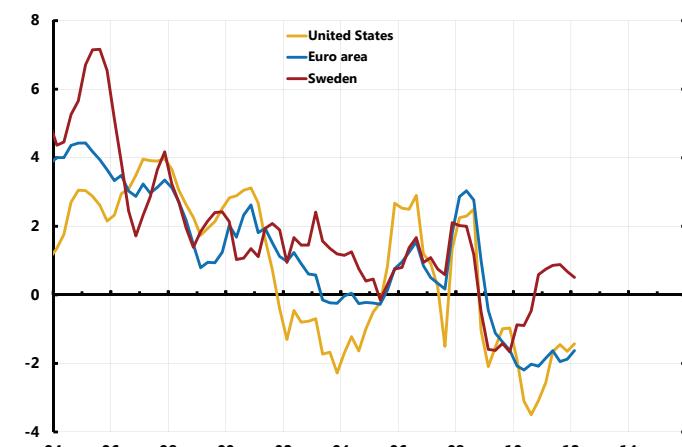
Percentage of labour force



Note: Some observations from January or December. Swiss unemployment rate from OECD 2012Q4. Source: Eurostat, OECD, and own calculations 6

Tight monetary policy in Sweden: High short real interest rate

Real one-year interest rate in Sweden, the euro area, and the United States
Percent

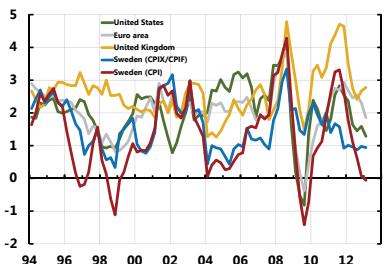


Sources: Bureau of Labor Statistics, ECB, IMF, OECD, Statistics Sweden, and the Riksbank 8

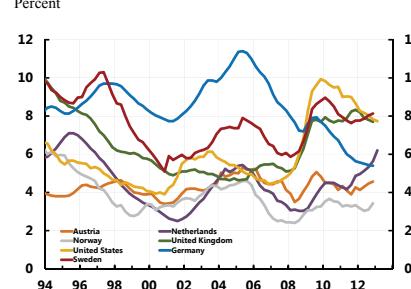
Tight monetary policy in Sweden: Low inflation and high unemployment



Inflation in Sweden, the euro area, the United Kingdom, and the United States
Percent



Unemployment in Sweden and selected countries
Percent



Note: CPIX/CPIF for Sweden shows the CPIX to the end of March 2008 and thereafter CPIF. For the United Kingdom, the RPIX is shown to the end of 2003 and thereafter the CPI. The HICP is shown for the euro area. The PCE deflator is shown for the United States.

Sources: The Bureau of Labor Statistics, Eurostat, IMF, OECD, Office for National Statistics, Statistics Sweden, and the Riksbank

Check claim 2: Policy rate effective



- Outcome 2010-2012 compared to 0.25 policy rate: 3 percentage point lower debt ratio, 1.2 percentage point higher unemployment
- Extensive theoretical and empirical research on effects of policy rate
- The policy rate has **little effect in the short run** on the household debt ratio (debt/disposable income)
 - Rule of thumb:
 - 1 percentage point higher policy rate for four quarters results in...
 - ...about 2 percent lower housing prices and debt
 - ...about 1 percent lower GDP and disposable income
 - ...that is, about 1 percent lower debt ratio (about 1.7 percentage points)
 - ...about 0.5 percentage points higher unemployment (25 000 jobs)
- A 1.7 percentage points lower debt ratio costs about 25 000 jobs, but has no tangible effect on potential risks associated with indebtedness

Monetary policy and household indebtedness

- **Three claims** that must all be true before trying to use the policy rate to limit household indebtedness
 1. The current level of household debt in Sweden entails sufficiently large risks to need remedying.
 2. A higher repo rate could significantly reduce these risks and the reduced risk is worth the lower inflation and higher unemployment caused by the higher repo rate.
 3. There is no better instrument available, with a greater or similar effect on the risks and less effect on inflation and unemployment.

Check claim 2: Policy rate effective



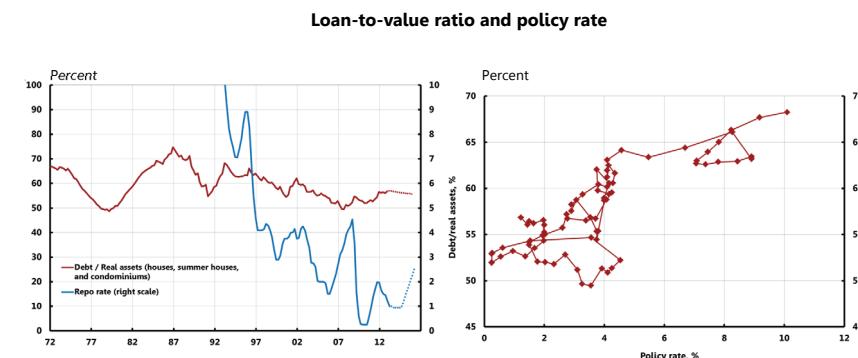
- The approximate effect of a 1 percentage point higher policy rate on housing prices over a period of 12 months, all else being equal?
 P_t housing prices in year t , b_t value of housing services during year t
 P_0 present value is 0 of future housing services:
- $$P_0 = \sum_{t=0}^T d_t b_t, \quad d_t = \frac{1}{\prod_{t=0}^T (1+i_t)} \text{ (discount factor)}$$
- $$P_0 = b_0 + \frac{1}{1+i_0} P_1$$
- $$i_0 \uparrow 1 \text{ p.p.} \Rightarrow \frac{1}{1+i_0} \downarrow 1\%, P_1 \text{ unchanged} \Rightarrow P_0 \downarrow 1\%$$
- Then 1 percentage point higher policy rate for 2 years leads to about 2% lower price
 - This shows the order of magnitude of the effect, quite small

Check claim 2: Policy rate effective

- The policy rate has **in the long run no effect** on the household debt ratio
 - Debt ratio = Loan-to-value ratio x Housing prices/Disposable income
 - High policy rate does not seem to imply lower loan-to-value ratio

13

Check claim 2: Policy rate effective



Source: The Riksbank 14

Check claim 2: Policy rate effective

- The policy rate has **in the long run no effect** on the household debt ratio
 - Debt ratio = Loan-to-value ratio x Housing prices/Disposable income
 - High policy rate does not seem to give lower loan-to-value ratio
 - Housing prices/Disposable income determined by factors (e.g. long real mortgage rate after tax) that in the case of low and stable inflation monetary policy cannot affect
 - No effect in the long run
- **Claim 2 does not hold true!**
- Sufficient for not using the policy rate to try to affect indebtedness

15

Check claim 3: No other instruments

- The government and Finansinspektionen (FSA) have taken or announced several effective measures
 1. The loan-to-value cap
 2. Higher capital adequacy requirements for systemically important banks
 3. Higher risk weights for mortgages
- The banks are contributing
 1. Applying the loan-to-value cap
 2. Stringent lending standards (FSA Mortgage Market Reports)
- **Claim 3 does not hold true**

16

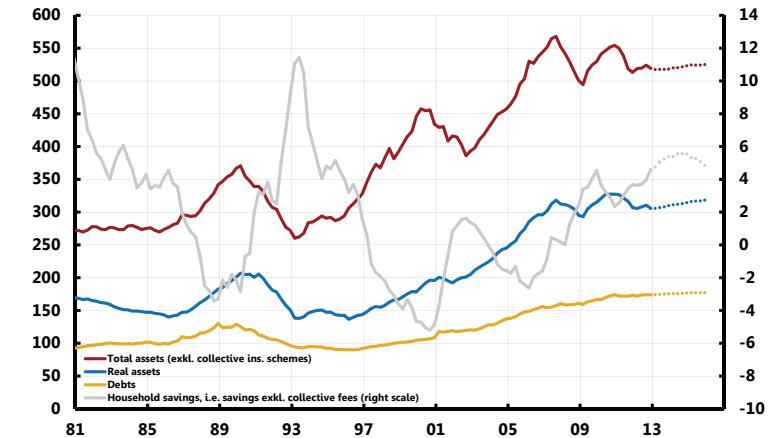
Check claim 1: Household debt is a problem

- Households have strong balance sheets
- High leverage ratios (net worth/total assets)
- Housing prices in line with fundamentals (and have stabilized)
- Households have long-term funding and shorter-term investments
- Stable, moderate loan-to-value ratios
- High rate of household saving
- New borrowers have good debt-servicing capacity and good resilience to interest-rate increases and falls in prices and incomes (FI Mortgage Market Reports)
- Old borrowers have even better debt-servicing ability and greater resilience (new loans per year some 5-6% of the loan stock)

17

Households total wealth, real assets, debt, and savings

Percent of disposable income

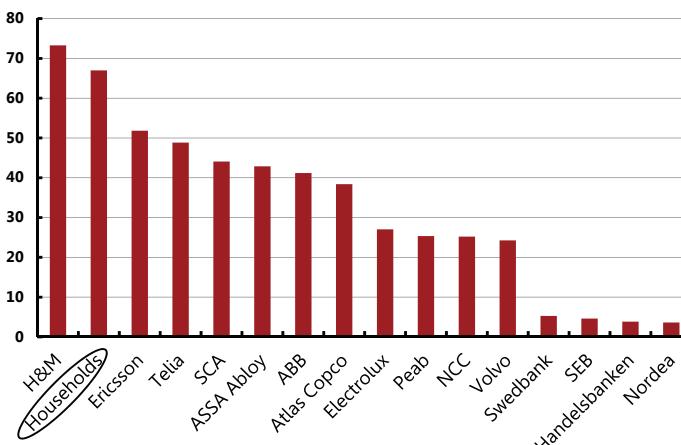


Note: Collective insurance schemes approximately 120 percent of disposable income December 2012.

Sources: Statistics Sweden and the Riksbank 18

Household leverage ratio, some large listed companies, and Swedish banks

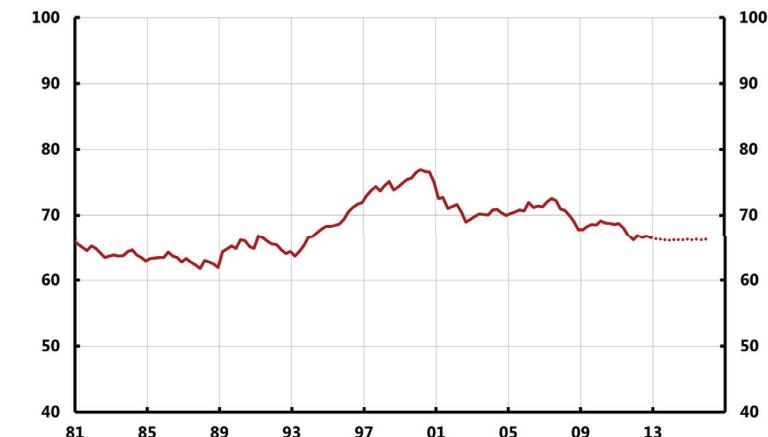
Own capital as a percentage of total assets (excluding collective insurance claims, excluding human capital (!))



Sources: Dagens Industri (leverage ratios 2011 for listed companies and Swedish banks) and the Riksbank (household leverage ratio). 19

Household leverage ratio

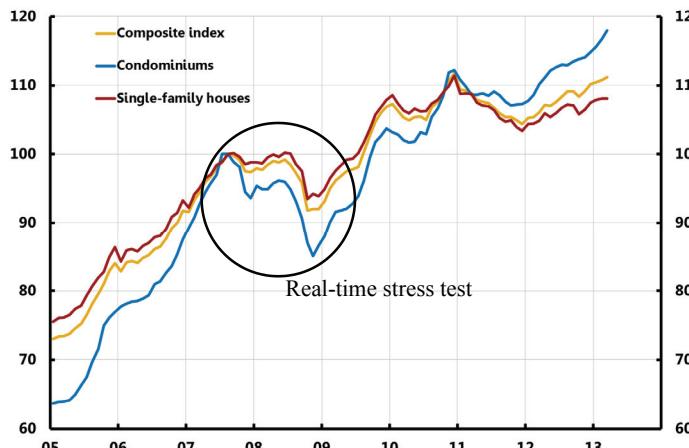
Net wealth as a percentage of total assets (excl. collective insurance claims), percent



Sources: Statistics Sweden and the Riksbank 20

Nominal prices for single-family houses and condominiums

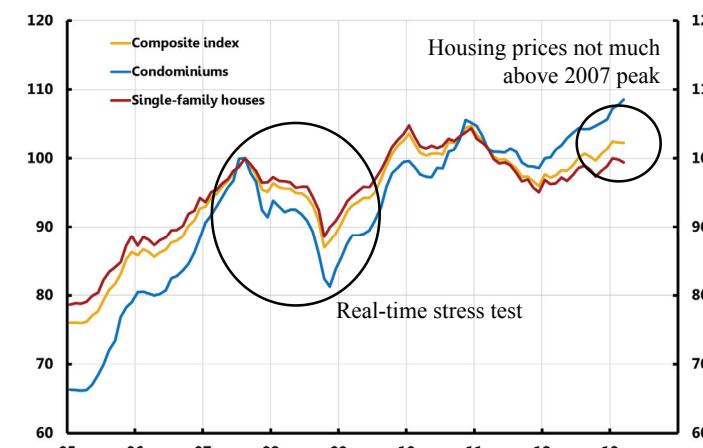
Index, August 2007 = 100, seasonally-adjusted data



Sources: Valueguard and the Riksbank 21

Real prices for single-family houses and condominiums

Index, August 2007 = 100, seasonally-adjusted data



Sources: Statistics Sweden and the Riksbank 22

Swedish 5-year real interest rate, contributes to rising housing prices

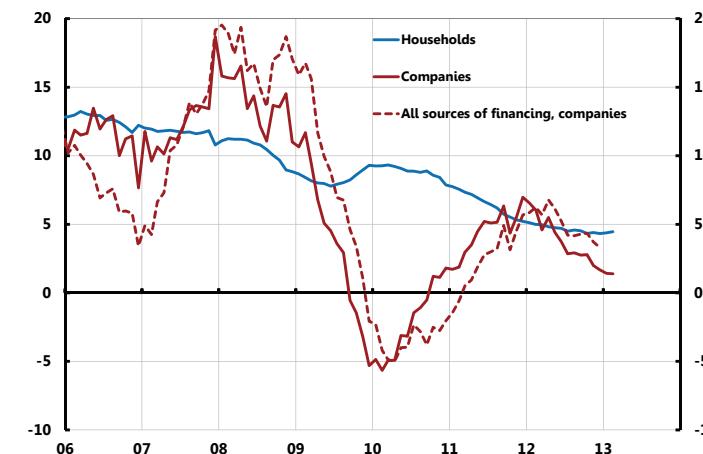
percent



Sources: The Swedish National Debt Office and the Riksbank 23

Bank lending to households and companies

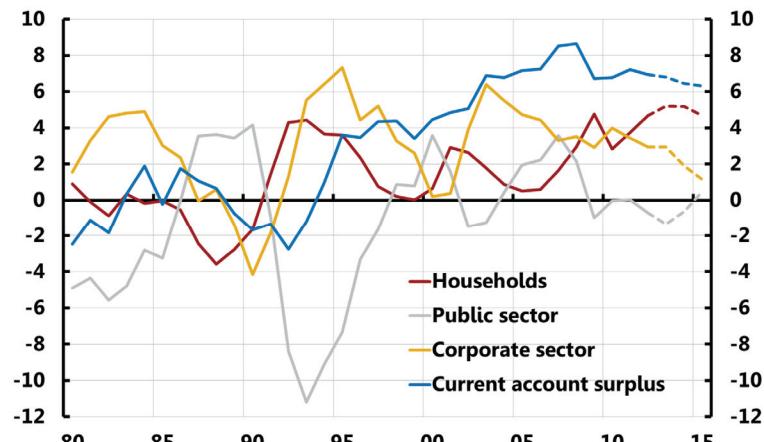
Annual growth, percent



Sources: Statistics Sweden and the Riksbank 24

Financial surplus for different sectors

Percentage of GDP



Sources: Statistics Sweden and the Riksbank 25

Check claim 1: Household debt is a problem?

- Sweden looks strong in terms of the factors behind crises
- **Claim 1 can be questioned**
- But it is enough that claim 2 doesn't hold true to conclude that the policy rate should not be used to limit indebtedness



27

Check claim 1: Household debt is a problem

- Inadequate analysis of risks. Often just "Household debt is at a level that has caused problems in other countries". **So what? Not enough!**
- Look at factors behind the crises in other countries:
 - Overheated economy • Overvalued housing in relation to fundamentals
 - Rapidly rising housing prices • Rapidly rising debt
 - Low lending standards (debt-servicing capacity, resilience, subprime!)
 - High loan-to-value ratio • Low net worth/assets for borrowers
 - Construction boom • Overoptimistic expectations
 - Weakly-capitalized banks, large off-balance-sheet liabilities
 - Financial sector that is hard to oversee and regulate (cf. 4 major banks!)
 - Low saving • Weak public finances
 - Current account deficit • ...
- Sweden looks good on these factors behind crises in other countries
- No threshold value for debt (cf. Reinhart and Rogoff...)
- Not all debt is bad, it depends crucially on what the debt is financing



26

My conclusions

- The results of monetary policy in recent years are alarming
- Monetary policy in Sweden should stabilize inflation around the target and unemployment around a long-run sustainable rate
- Monetary policy and the policy rate should not be used to stabilize household indebtedness
- If indebtedness is/becomes a problem, handle it with other available means
- The government and Finansinspektionen already have effective means to handle indebtedness and more can be created/are in the pipeline (Financial Crisis Committee)



28