The recent Swedish experience of monetary policy and macroprudential policy

Lars E.O. Svensson
Stockholm School of Economics
Web: larseosvensson.se

Finansbolagens informationsmöte
Stockholm, May 20, 2016

Outline

- Background: Monetary policy tightening 2010-2011
- Current monetary policy
- Cost-benefit analysis of leaning against the wind
- Macroprudential policy: Swedish model
1. Background:
Fed and Riksbank forecasts June 2010

- Riksbank and Fed forecasts quite similar
- Policies very different


Large and rapid increase in Riksbank policy rate 2010-2011
Swedish inflation fell rapidly

Riksbank real policy rates increased even more, causing large real interest-rate gap to Eurozone, UK, and US
Swedish Krona appreciated dramatically

![Graph showing nominal and real SEK exchange rates from 2000 to 2017. The exchange rates are plotted against a y-axis ranging from 80 to 120, and an x-axis from 00 to 17. The real effective exchange rate, based on consumer prices, is marked with a red line, and the nominal effective exchange rate is marked with a yellow line. An oval highlights a period around 2008-2009.](image)

Swedish unemployment stayed high

![Graph showing unemployment rates from 2001 to 2016 for Sweden, US, Germany, UK, and Canada. The y-axis ranges from 2 to 12, and the x-axis from 01 to 16. Sweden's unemployment rate is marked with a red line, US with a blue line, Germany with a yellow line, UK with a green line, and Canada with a darker green line. An oval highlights a peak around 2009.](image)
Swedish unemployment rate more than 1 pp higher than counterfactual with no policy-rate increase

2. Current monetary policy

- Negative policy rate
  - Note: Structural reasons for low/negative rates

- Asset purchases

- May work: Inflation rising, unemployment coming down

- What if this monetary policy already in 2010-2011?

- Additional policies:
  - Currency floor
  - Monetary financing
3. Cost-benefit analysis of “leaning against the wind” for financial-stability purposes (LAW)

- LAW: Tighter monetary policy than justified by normal flexible inflation targeting
- Instead undershooting the inflation target and/or overshooting the long-run sustainable unemployment rate
- Costs: Higher unemployment, lower inflation
- Forgotten additional cost in previous literature: Higher cost of a crisis if economy initially weaker because of LAW
- Possible benefits: Lower probability or severity of a financial crisis

Empirically very small and temporary effect (dashed) on the probability of a crisis from a higher policy rate

Marginal cost of policy-rate increase much larger than marginal benefit; net marginal cost large
(Also if negative benefit beyond quarter 24 is disregarded)


Compare w/ possible effect of macroprudential policy
IMF: 20% risk-weighted bank capital might have avoided 80% of the OECD banking crises since 1970

Figure 7. Share of Public Recapitalizations Avoided, Depending on Hypothetical Precrisis Bank Capital Ratios

Swedish capital requirements now:
Total capital 22% (CET1 17%)
Macroprudential policy: Goal

- **Financial stability**
- Definition: Financial system fulfilling 3 main functions (submitting payments, transforming saving into financing, allowing risk management/sharing) w/ sufficient resilience to disturbances that threaten those functions
- Stability of financial system more broadly, including stability of the credit market: Resilience not only of lenders but also of borrowers (households and non-financial firms (real estate))
- Secondary objective (not to be forgotten)
  - Not the stability of the graveyard
  - “Support the economic policy of the government” (BoE FPC)
  - Tradeoff between stability/resilience and activity/growth (Tucker)

Main policy conclusion from cost-benefit analysis of LAW

- For financial stability, there is no choice but to use macroprudential policy
- Monetary policy cannot achieve and maintain monetary policy
4. Macroprudential policy: Swedish model

- Gov’t Aug 2013: New strengthened framework for financial stability
- Swedish FSA (Finansinspektionen)
  - Main responsibility for financial stability
  - All micro- and (with some lag) macroprudential instruments
  - Boundary between macro- and microprudential policy unclear, especially in Sweden (oligopoly of 4 banks dominate financial sector)
  - Efficiency and accountability: Micro- and all macroprudential policy together, in one authority
  - But legal authority to use all instruments has been lagging
- Riksbank
  - No macroprudential instruments, only lending of last resort during crisis management
- Financial Stability Council
  - Members: MoF (chair), FSA, NDO (bank-resolution and deposit-insurance authority), RB
  - Forum for exchange of information and discussion, not decisions
  - Published minutes, reports from workgroups
  - The FSC will lead crisis management in crisis

What determines the risks related to household debt and the housing market?

- Not levels of housing prices and household debt
- Instead
  - Excessive levels (relative to what is consistent with fundamental factors)
  - Resilience of lenders and borrowers
    - Loss-absorbing capacity of lenders and borrowers
    - Debt-service capacity of borrowers
Finansinspektionen (the Swedish FSA), no “inaction bias” 1

- LTV cap 85% (October 2010)
- Risk-weight floor for mortgages 15% (May 2013)
- LCR-regulation (Basle 3, USD, EUR, total) (Jan 2014)
- Pillar II capital add-on 2% for 4 largest banks (Sep 2014)
- Risk-weight floor for mortgages 25% (Sep 2014)
- Systemic buffer 3% for 4 largest banks (Jan 2015)
- CCyB activated at level 1% (Sep 2015)
- Amortization requirements (Jun 2016)
- CCyB raised to 1.5% (June 2016)
- CCyB raised to 2.0% (March 2017)
- Current capital requirements for 4 largest banks 22% of RWA (17% CET1)

Finansinspektionen (the Swedish FSA), no “inaction bias” 2

- Produces an annual mortgage market report, with stress tests on individual data on new borrowers, according to which
  - lending standards are high
  - households’ loss-absorbing and debt-service capacity is good and increasing over time
  - households’ resilience to disturbances in the form of mortgage rate increases, housing price falls, and income falls due to unemployment is good and increasing over time
- Best source for risk assessment of household debt
- As far as I can see, macroprudential tools and policy seem effective and good in Sweden in maintaining resilience
- But legal authority for new tools have been lagging
Household assets much higher than debt

Chart A27. Household assets and liabilities in Sweden

Percentage of disposable income

Note. Total assets exclude collective insurance. Financial assets refers mainly to cash, bank deposits, bonds, mutual funds and shares. Real assets refers to single-family houses, tenant-owned apartments and second homes.

Sources: Statistics Sweden and the Riksbank

Household saving historically high (no indication of debt-financed overconsumption)

Chart A26. Household saving in Sweden

Percentage of disposable income

Sources: Statistics Sweden and the Riksbank
Large average down payments of new borrowers:
Average LTV ratio of new borrowers 65%,
so average down payment is 35%

Resilience 1: Stress tests on individual household data:
Unemployment increase and housing-price fall

- Severe shocks to new borrowers
  - Unemployment increase from 0 to 5% (requires economy-wide increase of more than 5 pp)
  - Housing prices fall by 40%
- What fraction of new borrowers (1) have problems servicing their debt (a deficit in a “left to live on” analysis) and (2) are underwater?
- Answer: 1.7%
Outline

- Background: Monetary policy tightening 2010-2011
- Current monetary policy
- Cost-benefit analysis of leaning against the wind
- Macroprudential policy: Swedish model
Goodfriend and King: Tightening 2010-2011 “broadly excepted by all members”?

- GK ignores minority policy rule
- Lower minority policy rate and policy-rate path only first step of several to get to “well balanced” monetary policy
- Even first step substantially more expansionary

Was the tightening justified given the info at the time?

- What did the Riksbank know?

CPI inflation below target
GDP 5% below peak, 10% below trend; export 13% below peak

What the Riksbank knew in June 2010


Unemployment close to 9%, at peak; far above Riksbank’s “long-term” unemployment rate

What the Riksbank knew in June 2010

Distinguish central banks and monetary policy

- Should monetary policy have financial stability as a goal? No
- Should central banks have financial-stability as a goal?
  - Depends on whether the central banks have suitable instruments
  - Crisis management: Yes, since CBs have lending of last resort (liquidity support)
  - Crisis prevention: Depends of whether CBs have suitable instruments
    - Riksbank example: No crisis-prevention instruments; should hence not have a financial-stability mandate for crisis prevention and normal times, only for crisis management
Distinguish *central banks* and *monetary policy* 2

- Specific argument for CB financial-stability goal
  - Failure of crisis prevention may result in a crisis that will involve CB liquidity support and put CB capital at risk
  - Therefore, the CB should have influence over crisis prevention (liquidity regulation) and a general financial-stability mandate

- Not convincing
  - Failure of diplomacy may result in a war that will involve the military and put its resources at risk
  - Should therefore the military have influence over foreign policy?

What if monetary policy would pose a threat to financial stability?

- BoE model, Aug 2013, forward-guidance promise
- 3rd knockout: FPC would judge that monetary policy poses a significant threat to financial stability that the FPC cannot contain with its instruments
- It should be the macroprudential authority, not the monetary policy one, to make the judgment and to warn if necessary
- Monetary policy authority may then decide whether to adjust monetary policy or not
- Preserves independence of monetary policy, although some element of “comply or explain”
Additional cost: Inflation below household’s expectations has increased household real debt burden

The real value of an SEK 1 million loan taken out in Nov 2011, actual and for 2 percent inflation
Additional cost: Inflation below household’s expectations has increased household real debt burden

- Since November 2011, price level more than 6% lower than if inflation had been 2%
- The real value of fixed nominal debt taken out in Nov 2011 is more than 6% higher than if inflation had been 2%
- Leaning against the wind may have increased real debt, not reduced it
- Schularick-Taylor: 5% higher real debt in 5 years increases the probability of a crisis by 0.4 pp
- Leaning counterproductive