Inflation targeting and leaning against the wind

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Outline

- Should standard flexible inflation targeting be combined with some leaning against the wind, in order to promote financial stability?
- Leaning strongly promoted by BIS (incl. latest Annual Report)
- Skepticism against leaning elsewhere, but debate continues
- Sweden a case study: Quite aggressive leaning since summer 2010, because of concerns about household debt
- Outcome now: Zero or negative inflation, very high unemployment, most likely higher real debt, zero policy rate
- Was Riksbank leaning justified?
Leaning against the wind

- Tighter monetary policy than justified by stabilizing inflation and resource allocation (unemployment)
- Purpose is to moderate financial “imbalances” and threats to financial stability
- Presumes (Smets 2013):
  1. Macroprudential instruments or policies are ineffective
  2. A higher policy rate has a significant negative impact on threats to financial stability

My view:
- Condition (1) varies from country to country
- Condition (2) has little theoretical and empirical support. But may vary depending on the structure of the financial sector (competitive/oligopolistic, shadow banking…)
- Local conditions matter; do not directly apply experiences from one economy to other economies
Case study: Sweden

- Riksbank has been leaning against the wind since summer of 2010, referring to concerns about household debt
- This has led to inflation far below the target and unemployment far above a long-run sustainable rate
- With inflation much below expectations, it arguably also led to higher real debt than expected and planned for

Why lean? What is the problem?

- Household debt is high relative to disposable income
- But debt ratio has been stable since LTV cap of 85% in Oct 2010
**Household debt-to-income ratio**
(% of disposable income)

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**Why lean? What is the problem?**

- Household debt is high relative to disposable income
- But debt-to-income ratio is quite stable since LTV cap of 85 % introduced in Oct 2010
- And debt is normal relative to assets
Household debt and assets (excluding collective pensions), % of disposable income

Swedish households' net wealth and debt relative to assets
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- Average LTV for new mortgages has stabilized around 70%
- Housing prices have not increased faster than disposable income since 2007
- Housing prices are in line with fundamentals (disposable income, mortgage rates, tax changes, urbanization, construction…)

And, the FSA has:

- introduced an LTV cap of 85%
- introduced higher risk weights on mortgages (25%)
- introduced higher capital requirements (16% CET1)
- proposed individual amortization plans for borrowers
- produces an annual mortgage market report, according to which
  - lending standards are high
  - households’ repayment capacity is good
  - households’ resilience to disturbances in the form of mortgage rate increases, housing price falls, and income falls due to unemployment is good

- Macroprudential tools and policy are arguably effective and good in Sweden
The leaning: Policy rates in Sweden, UK, and US; Eonia rate in euro area

The leaning: Inflation in Sweden, euro area, UK, and US
The leaning: Real policy rate in Sweden, UK, and US, real Eonia rate in euro area

Ex post evaluation: Policy-rate increases from summer of 2010 have led to inflation below target and higher unemployment (and probably a higher debt ratio)

Ex ante evaluation: Compare Fed and Riksbank forecasts, June/July 2010

- Riksbank and Fed forecasts quite similar
- Policies very different
  - Fed: Keep policy rate between 0 and 0.25%, forward guidance, prepare QE2
  - Riksbank: Start raising the policy rate from 0.25 to 2% in July 2011
- Riksbank: Premature tightening


Riksbank’s case for leaning against the wind

- Higher debt could imply (1) a higher *probability* of a future crisis, or (2) a *deeper* future crisis if it occurs
- Hence, a tradeoff between (a) tighter policy now with lower debt but worse macro outcome now and (b) easier policy now with more debt but worse expected future macro outcome
- Worse outcome now is an insurance premium worth paying
- Is that true?
- The answer can be found in the Riksbank’s own boxes in MPR of July 2013 and February 2014, plus Schularick and Taylor (2012) and Flodén (2014)
- This involves putting numbers on the cost and benefit of leaning
Cost of 1 pp higher policy rate: 0.5 pp higher unemployment rate

Benefit (1) of 1 pp higher policy rate: Lower probability of a crisis

- Schularick & Taylor (2012): 5 % lower real debt in 5 yrs implies 0.4 pp lower probability of crisis (average probability of crises about 4 %)
- Riksbank, MPR Feb 2014, box:

Cost: 1 pp higher policy rate leads to 0.25 % lower real debt in 5 years
- Lowers probability of crises by 0.25*0.4/5 = 0.02 pp
- Assume 5 pp higher unemployment in crisis (Riksbank crisis scenario, MPR July 2013, box):

Benefit (1):
- Expected lower future unemployment: 0.0002*5 = 0.001 pp
- Cost:
- Higher unemployment rate now: 0.5 pp

Source: MPR July 2013, chapt. 2; Svensson, post on larseosvensson.se, March 31, 2014.
Benefit (2) of 1 pp higher policy rate:
Smaller increase in unemployment if crisis

- Flodén (2014): 1 pp lower debt ratio may imply 0.02 pp smaller increase in unemployment rate in crisis
- Riksbank MPR Feb 2014, box:

1 pp higher policy rate leads to 0.44 pp lower debt ratio in 5 yrs
Smaller increase in unemployment in crisis:
0.44*0.02 = 0.009 pp
With probability of crisis as high as 10 %, divide by 10 (Schularick & Taylor: 4 %)

Benefit (2):
Expected lower future unemployment: 0.0009 pp

Cost:
Higher unemployment now: 0.5 pp

Source: Svensson, post on larseosvensson.se, March 31, 2014.

Summarize cost and benefit of 1 pp higher policy rate

Table 1. Cost and benefit in unemployment of 1 percentage point higher policy rate during 4 quarters

<table>
<thead>
<tr>
<th>Cost: Higher unemployment during the next few years, percentage points</th>
<th>0.5</th>
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<tbody>
<tr>
<td>Benefit: Lower expected future unemployment, percentage points</td>
<td></td>
</tr>
<tr>
<td>1. Because of lower probability of a crisis</td>
<td>0.001</td>
</tr>
<tr>
<td>2. Because of a smaller increase in unemployment in a crisis</td>
<td>0.0009</td>
</tr>
<tr>
<td>Total benefit, percentage points</td>
<td>0.0019</td>
</tr>
<tr>
<td>Total benefit as a share of the cost</td>
<td>Should have been &gt; 1!</td>
</tr>
</tbody>
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- Riksbank’s case does not stand up to scrutiny
More costs: Inflation below credible target causes negative real effects

- Credible target: Inflation expectations anchored at target
- Inflation below credible target means inflation below expectations
- Causes bad real effects:
  - Higher unemployment
  - Higher real debt for households…
    due to Fisherian “debt deflation,” inflation less than expectations
- An inherent flaw in leaning against the wind

CPI inflation and household inflation expectations

Note: Dashed lines are 5-year trailing moving averages
The real value of an SEK 1 million loan taken out in Nov 2011, actual and for 2 percent inflation

Percent increase to September 2014 in the real value of a given loan, compared to if inflation had been 2 percent (depending on when the loan was taken out)
Sum up:
Leaning against the wind and household debt

- ”Leaning against the wind” counter-productive in Sweden
- Leaning implies undershooting (credible) inflation targets
- Leads to lower inflation than expected
- Leads to higher unemployment
- Leads to higher real debt (Fisherian debt deflation, inherent flaw in leaning)
- May increase debt-to-income ratio by affecting disposable income faster than nominal debt (Svensson 2013)
- May undermine the credibility of the inflation target
- Not the best way to handle any debt problem
- Generally, this points to an inherent flaw in leaning

Q: What is monetary policy’s best contribution to debt issue (at least in Sweden)?

A: Achieve inflation on target, stable growth, and lowest long-run sustainable unemployment

Why?
- 2 % inflation, 2 % real growth = 4 % nominal growth
- Implies that disposable income and housing prices double in 18 years
- Implies that debt-to-income and LTV ratios for any given nominal debt halve in 18 years
- Good contribution to debt problems
Sum up:
Leaning against the wind and household debt

- Do not use monetary policy and leaning to deal with debt problems
- Debt problems and financial stability are better handled with other means than monetary policy: macro- and microprudential tools (lending standards, LTV cap, higher capital, risk weights…), taxes, deduction rules, etc.
- These conclusions probably apply to other economies than Sweden