

Links between Macro Stability and Financial Stability

Isabel Schnabel
University of Bonn

Conference “**Rethinking the Central Bank’s Mandate**”
Sveriges Riksbank, Stockholm, June 4, 2016

I. Macro stability and financial stability

II. Central banks as crisis managers

III. Financial stability as a monetary policy objective

IV. Central banks as prudential supervisors

V. Conclusion

Back-up

Can a central bank ignore financial stability?

Can a central bank ignore financial stability?

- ▶ **No!**
- ▶ Any central bank has to take financial stability into account, independent of its mandate
- ▶ Banking system plays an important role in the *transmission* of monetary policy
- ▶ If the banking sector is impaired, monetary policy is unlikely to function well
- ▶ Moreover, severe banking crises tend to go along with *deep depressions*, putting pressure on macro stability

Macro stability and financial stability

- ▶ Central banks may take account of financial stability in different ways:
 1. as *crisis managers* (LOLR)
 2. as part of their *regular monetary policy*
 3. as *prudential supervisors*
- ▶ While 1. is uncontroversial, there is much more dispute about 2. and 3.

I. Macro stability and financial stability

II. Central banks as crisis managers

III. Financial stability as a monetary policy objective

IV. Central banks as prudential supervisors

V. Conclusion

Back-up

The central bank as a lender of last resort

- ▶ Role of central banks as LOLR is uncontroversial
- ▶ Is there a *conflict* between macro stability and the role of the central bank as a lender of last resort?

The central bank as a lender of last resort

- ▶ Role of central banks as LOLR is uncontroversial
- ▶ Is there a *conflict* between macro stability and the role of the central bank as a lender of last resort?
 - ▶ **No** if exchange rates are *flexible* and bank liabilities are denominated in *domestic currency*
 - ▶ Systemic financial crises typically go along with deflationary pressure
 - ▶ Therefore, LOLR activity tends to support both macro stability and financial stability
- ▶ But: Scope of LOLR activity is limited in *fixed* exchange rate regimes or with *foreign currency* bank liabilities

I. Macro stability and financial stability

II. Central banks as crisis managers

III. Financial stability as a monetary policy objective

IV. Central banks as prudential supervisors

V. Conclusion

Back-up

How should central banks react to asset price booms?

- ▶ Should central banks behave passively and intervene only when a bubble bursts?
 - ⇒ **“Cleaning up the mess”** (Greenspan view)
- ▶ Or should they try to prevent the emergence of bubbles early on?
 - ⇒ **“Leaning against the wind”** (BIS view)
- ▶ If central banks should “lean against the wind”, how should they intervene?
 - ▶ Should they *raise interest rates* ...
 - ▶ ... or use *macroprudential tools*?

Why monetary policy **should not** react to asset prices

- ▶ Bubbles cannot be *identified* with confidence
- ▶ Monetary policy is *too blunt* to contain a bubble in a specific market
- ▶ High *costs of intervention* because it may damage other parts of the economy
- ▶ Bubbles are a problem only in combination with *unstable financial markets*
 - ▶ Problems should be tackled by financial regulation rather than monetary policy

Why monetary policy **should** react to asset prices

- ▶ Even if bubbles are hard to identify, it is not optimal to do nothing
- ▶ Expected *costs of bursting bubbles* outweigh the costs of intervention
- ▶ Cleaning after a bubble is an *asymmetric* policy, which risks creating the *next bubble*
- ▶ Financial regulation may not be fully effective
 - ▶ *Regulatory arbitrage* limits the reach of financial regulation
 - ▶ Monetary policy also reaches the *shadow banking sector*

A historical perspective

- ▶ Markus K. Brunnermeier and Isabel Schnabel (2016): Bubbles and Central Banks - Historical Perspective, forthcoming in *Central Banks at a Crossroads What Can We Learn from History?* by Michael D. Bordo, Oyvind Eitrheim, Marc Flandreau, and Jan F. Qvigstad (eds.), Cambridge University Press
- ▶ Analyze and categorize 23 prominent asset price booms from the past 400 years:
 - ▶ Types of assets involved
 - ▶ Holders of assets
 - ▶ Economic environment during emergence
 - ▶ Severity of crises
 - ▶ **Policy responses**

Overview of sample

	Event	Time	Place
1	Tulipmania	1634-37 (crisis: Feb. 1636)	Netherlands
2	Mississippi bubble	1719-20 (crisis: May 1720)	Paris
3	Crisis of 1763	1763 (crisis: Sept. 1763)	Amsterdam, Hamburg, Berlin
4	Crisis of 1772	1772-73 (crisis: June 1772)	England, Scotland
5	Latin America Mania	1824-25 (crisis: Dec. 1825)	England (mainly London)
6	Railway Mania	1840s (crises: April/Oct.1847)	England
7	Panic of 1857	1856-57 (crisis: Oct.1857)	United States
8	Gründerkrise	1872-73 (crisis: May 1873)	Germany, Austria
9	Chicago real estate boom	1881-83 (no crisis)	Chicago
10	Crisis of 1882	1881-82 (crisis: Jan. 1882)	France
11	Panic of 1893	1890-93 (crisis: Jan. 1893)	Australia
12	Norwegian crisis of 1899	1895-1900 (crisis: July 1899)	Norway
13	U.S. real estate bubble	1920-26 (no crisis)	United States
14	German stock price bubble	1927 (crisis: May 1927)	Germany
15	U.S. stock price bubble	1928-29 (crisis: Oct. 1929)	United States
16	"Lost decade"	1985-2003 (crisis: Jan. 1990)	Japan
17	Scandinavian crisis: Norway	1984-92 (crisis: Oct. 1991)	Norway
18	Scandinavian crisis: Finland	1986-92 (crisis: Sept. 1991)	Finland
19	Asian crisis: Thailand	1995-98 (crisis: July 1997)	Thailand
20	Dot-com bubble	1995-2001 (crisis: April 2000)	United States
21	Real estate bubble in Australia	2002-04 (no crisis)	Australia
22	Subprime housing bubble	2003-10 (crisis: 2007)	United States
23	Spanish housing bubble	1997-2012 (crisis: 2007)	Spain

Summary of main results

- ▶ Lesson 1: *Type of financing* (debt vs. equity) matters more for the severity of crises than the type of bubble assets
 - ▶ Main factors: Lending booms, high leverage, involvement of financial institutions

Summary of main results

- ▶ Lesson 1: *Type of financing* (debt vs. equity) matters more for the severity of crises than the type of bubble assets
 - ▶ Main factors: Lending booms, high leverage, involvement of financial institutions
- ▶ Lesson 2: “*Cleaning up the mess*” is unlikely to be optimal
 - ▶ Policy measures can be effective in mitigating crises
 - ▶ Cleaning strategy risks causing the next crisis

Summary of main results

- ▶ Lesson 1: *Type of financing* (debt vs. equity) matters more for the severity of crises than the type of bubble assets
 - ▶ Main factors: Lending booms, high leverage, involvement of financial institutions
- ▶ Lesson 2: “*Cleaning up the mess*” is unlikely to be optimal
 - ▶ Policy measures can be effective in mitigating crises
 - ▶ Cleaning strategy risks causing the next crisis
- ▶ Lesson 3: *Timing* and *dosage* are of the essence
 - ▶ Late interventions can be ineffective or even harmful
 - ▶ This calls for a continuous *macroprudential analysis* trying to detect the emergence of bubbles early on

Summary of main results

- ▶ Lesson 4: No instrument appears to be dominant to deal with asset price bubbles
 - ▶ Trade-off: Macroprudential policy is *more targeted* but can more easily be *circumvented*
 - ▶ Interest rate tools and macroprudential tools appear to be *complementary*

How should central banks react to asset price booms?

- ▶ *No simple prescription*
- ▶ Macroprudential oversight as an *early-warning system*
- ▶ *Macroprudential policy measures* as the first line of defense against the build-up of asset price bubbles
- ▶ Monetary policy and macroprudential tools should be used in a *complementary* way and should not counteract each other

I. Macro stability and financial stability

II. Central banks as crisis managers

III. Financial stability as a monetary policy objective

IV. Central banks as prudential supervisors

V. Conclusion

Back-up

The ECB as prudential supervisor

- ▶ Since November 4, 2014 the ECB has taken over important responsibilities in banking supervision
- ▶ The current setup was *not* chosen because it was considered to be *optimal* but because ...
 - ▶ the ECB at the time was one of the few institutions *capable of acting*
 - ▶ it could be implemented *quickly* under the existing *legal constraints*
- ▶ Central banks (and especially the ECB) also play a dominant role in macroprudential supervision
- ▶ Current debate in the euro area: Is it desirable to combine the responsibilities for monetary policy and banking supervision within one institution?

To Combine or Not To Combine?

- ▶ Old debate whether banking supervision and monetary policy should be combined or not
- ▶ Theoretically it is *ambiguous* whether a combination of banking supervision and monetary policy is desirable or not
- ▶ Therefore, the question has to be answered empirically

Empirical evidence: Inflation

- ▶ Di Noia and di Giorgio (1999), Copelovitch and Singer (2008): Inflation rates are *higher* (and more volatile) in countries in which the central bank is responsible for monetary policy and banking supervision
- ▶ Lima, Lazopoulos and Gabriel (2012): Whether the central bank is responsible for banking supervision and monetary policy does *not* affect inflation
- ▶ Peek, Rosengren and Tootell (1999): Bank supervisory information helped the Federal Reserve to conduct monetary policy more effectively

Empirical evidence: Financial stability

- ▶ Goodhart and Schoenmaker (1995): In countries in which the central bank is also the banking supervisor bank failures are *less frequent*
- ▶ Barth et al. (2002): Banks have *more non-performing loans* if the central bank is involved in banking supervision
- ▶ Dincer and Eichengreen (2012): Banks have *fewer non-performing loans* and higher capital ratios if the central bank supervises banks

New Empirical Evidence

- ▶ Felix Rutkowski and Isabel Schnabel (2016): *Should Banking Supervision and Monetary Policy Be Separated?*, Working Paper, University of Bonn
- ▶ Reassessment of the relationship between supervisory structure and inflation or financial stability
- ▶ Contributions of the paper:
 - ▶ *New detailed dataset* on the structure of banking supervision in OECD countries from 1970 until 2013 based on a careful research of legal texts etc. and complemented by a *survey* among central banks
 - ▶ Attempt to solve *endogeneity problems*

Classification of supervisory regimes

- ▶ Early literature has considered this a 0/1 question (combined vs. separated regimes)
- ▶ In reality, supervisory regimes are much more manifold
- ▶ We argue that one has to distinguish between the *cooperation* between supervisors and central banks ...
- ▶ ... and the *transfer of supervisory tasks* to the central bank, which goes along with a transfer of *responsibility*

Questionnaire (extract)

1. Is the central bank involved in the microprudential supervision of banks at the national level?
2. Is the central bank the *sole institution* that is responsible for the microprudential supervision of banks at national level?
3. **Cooperation** among bank supervisors and the central bank:
 - ▶ Formal mechanisms for the exchange of information
 - ▶ Sharing of resources (e. g., staff, financial budget)
 - ▶ Voting rights of central banks in administrative boards
4. **Tasks** of the central bank in microprudential banking supervision:
 - ▶ Granting and withdrawal of bank licences
 - ▶ Imposing and enforcing of sanctions
 - ▶ Off-site analysis
 - ▶ On-site inspections

Main variables of interest

1. Index of *cooperation*:

- ▶ 0 = no cooperation at all
- ▶ 3 = full cooperation, i. e., exchange of information, sharing of resources, and voting rights

2. Index of *tasks*:

- ▶ 0 = no tasks in banking supervision
- ▶ 4 = central bank is responsible for licensing, sanctioning, off-site analysis, and on-site inspections

Potential effects of cooperation

- ▶ Better implementation of monetary policy due to improved *information* about monetary transmission
- ▶ More effective policies as a **lender of last resort**
 - ▶ Prompt response to banking troubles
 - ▶ Better distinction between illiquidity and insolvency on the basis of supervisory information
 - ▶ Mitigation of moral hazard problems
- ▶ Prediction: Cooperation among central banks and supervisors *improves monetary and financial stability.*

Potential effects of a transfer of supervisory tasks

- ▶ Transfer of supervisory tasks makes the central bank responsible and accountable for developments in the banking sector, leading to potential *conflicts of objectives and interest*
- ▶ The central bank is likely to subordinate monetary stability to financial stability when banks are getting distressed (**financial dominance**), which may ...
 - ▶ raise financial stability if the central bank lowers interest rates at times of bank distress
 - ▶ lower financial stability due to moral hazard (*Greenspan put*)
 - ▶ induce supervisory *forbearance* to preserve the CB's reputation
 - ▶ lead to higher inflation
 - ▶ lead to **hidden fiscal dominance** if banks use CB funding to lend to governments
- ▶ Prediction: The transfer of supervisory tasks to the central bank *raises inflation* and has an *ambiguous effect on financial stability*.

Summary of empirical results

- ▶ A higher level of **cooperation** tends to *lower* inflation, a higher level of **tasks** tends to *raise* inflation
- ▶ A higher level of **cooperation** tends to *lower* the probability of crises, a higher level of **tasks** has no significant effect on the crisis probability (but coefficient is positive)
- ▶ No significant effects in the **euro area**:
 - ▶ Supervision remained at national level, whereas monetary policy was at supranational level
 - ▶ Supervisory structure at national level does not measurably affect inflation (managed at supranational level) or financial stability

Policy Implications

- ▶ Results suggest that **cooperation** between supervisory authorities and central banks is *clearly beneficial*:
 - ▶ lower inflation
 - ▶ lower probability of crises
- ▶ The benefit of transferring supervisory **tasks** to the central bank is *less obvious* because this tends to raise inflation and does not have measurable benefits in terms of financial stability
- ▶ The creation of the SSM in the euro area is likely to have *improved cooperation* at the supranational level, which is desirable
- ▶ The transfer of tasks, however, may be *harmful*

I. Macro stability and financial stability

II. Central banks as crisis managers

III. Financial stability as a monetary policy objective

IV. Central banks as prudential supervisors

V. Conclusion

Back-up

Conclusion

- ▶ Role of central banks as *lenders of last resort* in acute financial crises is *uncontroversial*
- ▶ Monetary policy should *support macroprudential policy* in preventing the build-up of asset and credit booms
- ▶ Supervisory information can be useful for monetary policy and lender of last resort activities, therefore a *close cooperation* between supervisors and central banks is desirable
- ▶ But a transfer of *supervisory responsibilities* to the central bank may *compromise* monetary stability without providing clear benefits in terms of financial stability

Implications for the current situation in the euro area

- ▶ Low interest rates put *pressure on financial institutions' profitability* and induce *search for yield* behavior, leading to the build-up of risks in many market segments
- ▶ So far no sharp expansion of credit, but high leverage of banks
- ▶ Reluctant use of *macroprudential policies*, which are *counteracted* by monetary policy
- ▶ Build-up of risks in the *shadow banking sector*, but no macroprudential framework “beyond banking”
- ▶ ECB may find itself in a straightjacket in the future because an *exit from low rates* would threaten the stability of the financial system
- ▶ Decisive actions to *prevent a further build-up of risks* may be beneficial for both financial and macro stability

I. Macro stability and financial stability

II. Central banks as crisis managers

III. Financial stability as a monetary policy objective

IV. Central banks as prudential supervisors

V. Conclusion

Back-up

Country examples

1. **Germany:**

- ▶ Since bank failures of 1930s strong role for state in banking supervision and establishment of supervisory authority in 1934
- ▶ No changes since 1970 (before EMU): Cooperation = 1 (exchange of information), tasks = 2 (off-site analysis and on-site inspections)
- ▶ EMU de facto raised the distance between supervisory authorities and the central bank (ECB)

Country examples

2. United Kingdom:

- ▶ 1970-1997: Bank of England was the traditional supervisor: Cooperation = 3, tasks = 4
- ▶ 1998: Financial Services Authority (FSA) becomes the banking supervisor: Cooperation = 2, tasks = 0; regime change was related to the failures of BCCI (1991) and Barings Bank (1995)
- ▶ Since 2013: Prudential Regulation Authority (PRA) as new bank supervisor within the Bank of England: Cooperation = 3, tasks = 4; regime change was related to financial crisis (lack of coordination of FSA and BoE may have exacerbated the problems of Northern Rock, Ferran, 2011)

Country examples

3. Sweden:

- ▶ Supervisory authority was founded in 1907 (before it had been part of the ministry of finance)
- ▶ Riksbank never had any tasks in financial supervision, formalized exchange of information since 1991:
Cooperation = 1, tasks = 0