12ᵗʰ Conference of the ECB-CFS Research Network

Learning from the Crisis: Financial Stability, Macroeconomic Policy and International Institutions

Origins

Discussion

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November 2009

Commonly Cited Causes of the Financial Crisis

- Global imbalances
- Monetary Policy
- Maturity mismatch
- Procyclicality
- Originate and distribute
- Lax lending and underwriting standards
- Conflicts of interest in rating agencies
- Insufficient bank regulation and regulatory arbitrage
- Adverse incentives in compensation contracts
- Investors' risk assessment

Bhardwaj and Sengupta (2009)

Commonly held belief

- Significant deterioration in underwriting standards *within* the subprime mortgage market

- Particularly for later vintages, i.e. post-2004 originations

Questions

- Was there indeed a dramatic weakening?

- Did it begin in 2004?

Analysis

- Loan-level data on > 9 million subprime mortgages between 1998 and 2007

- Distribution of borrower and mortgage characteristics

Results

Underwriting standards
- Riskier origination attributes: Weakening along some dimensions (lower documentation)
- Increased borrower quality: Strenghtening along other dimensions (higher FICO scores)
- Offsetting effect (multidimensional nature of credit risk)

Counterfactual analysis
If loans underwritten in 2005 were originated in 2001/2
→ They would have performed better than loans originated in 2001/2

Overall result
- No evidence for weakening of lending standards
- Similar (observable) risk characteristics

No News Might Be Bad News

<u>Data</u>
- Individual loan level data
- > 9 million subprime mortgages between 1998 and 2007

<u>Not known</u>
- Development of volume over time (by year)
- Development of volume by financial institution

<u>Why important to know?</u>
- When subprime market is tiny segment, maybe no need for strict lending standards (e.g. experiment, please politicians, diversification)
- But: What happens if subprime market grows substantially overall and for particular banks? – Need for improvement in lending standards

Development of U.S. Real Estate Market
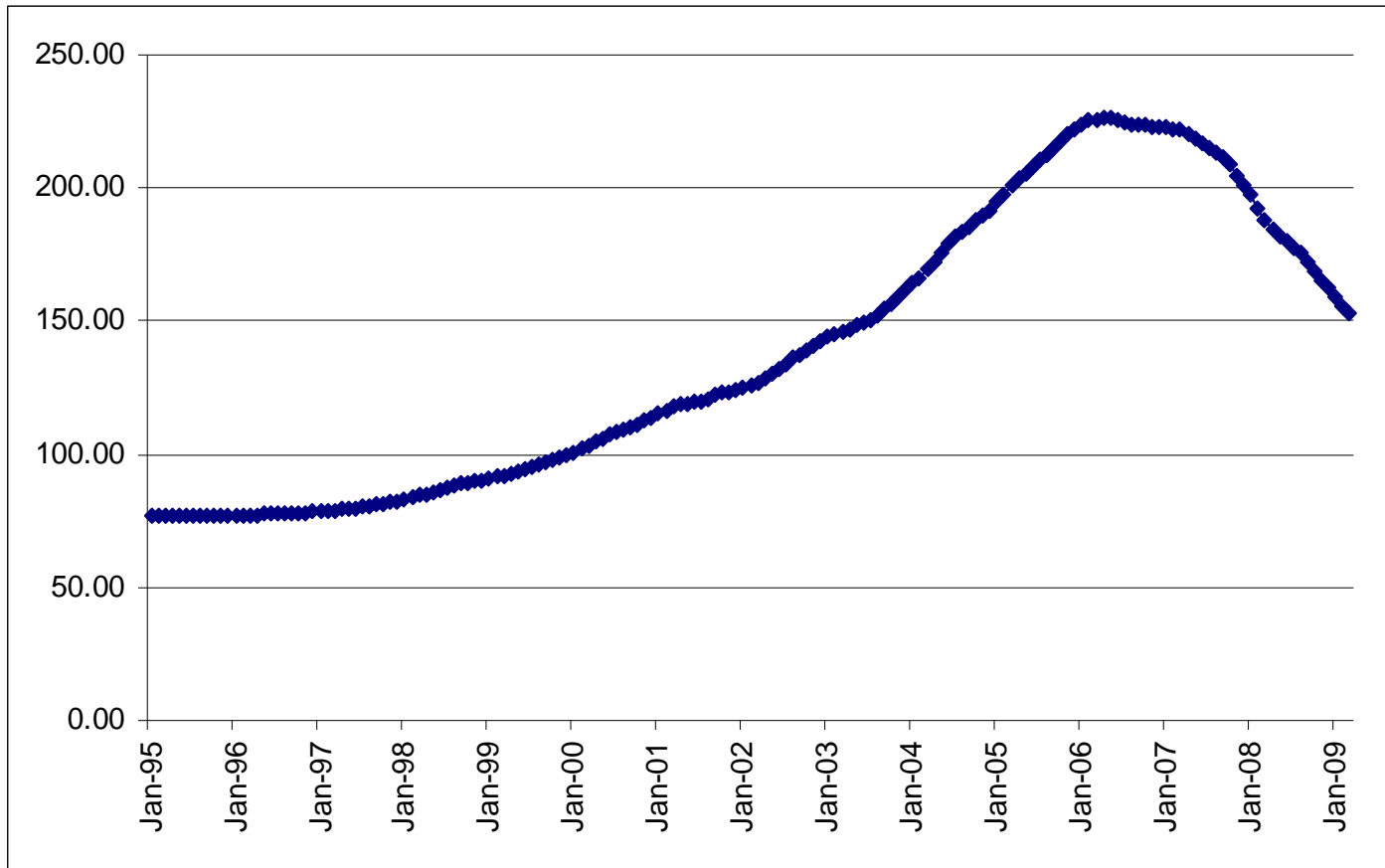
Paper is About Changes, Not About Levels

Key message

"We show that while it is possible that underwriting standards in this market were poor to begin with, deterioration in underwriting post-2004 cannot be the explanation for the collapse of subprime mortgage market."

How about levels?

Lender can/should assess

- Borrower and mortgage characteristics – no change over the sample period (at least for those that can be observed)

- Value of collateral – changed dramatically (+ non-recourse loans/jingle mails)

→ What do we really learn? Policy implications?

Maddaloni and Peydró (2009)

Main idea

Euro Area countries have

- Identical monetary policy
- Different GDP growth and inflation → different Taylor-rule implied rates
- Different banking supervision, securitization

Goal

- Determinants of bank lending standards in the Euro Area
- In particular: Do low interest rates soften lending standards?

Data

- ECB Bank Lending Survey for 12 countries in Euro Area
- Only qualitative answers
- Q4 2002 until Q1 2009

Empirical Design

Main empirical specification

$$BLS_{t,i} = \alpha_i + \beta \times \text{Short-term rate}_{t-1,i} + \gamma \times \text{Long-term rate}_{t-1,i} + \delta \times \text{Controls}_{t-1,i} + \varepsilon_{t,i}$$

Main question – Dependent variable

"Over the past three months, how have your bank's lending standards as applied to the approval of loans changed?"

→ Net percentage of banks that tightened lending standards over previous quarter

Additional explanatory variable

- Deviation = 3-month EURIBOR rate – Taylor-rule implied rate
- Positive value: restrictive monetary policy
- Negative value: expansive monetary policy
  - Number of consecutive quarters: *"too low for too long"*

Main Results

- Short-term interest rates soften lending standards for
  - Businesses
  - Households (mortgages and consumer loans)

- Standards further softened if rates below Taylor-implied rates for too long (*too low for too long*)

- Softening over and above improvement of borrower creditworthiness → Increasing risk appetite

- High levels of securitization and weak banking supervision as amplifier of low short-term interest rates (interaction effect)

- Weaker impact of long-term rates

How Representative is the Sample?

Description

"The survey started in 2002:Q4 and it collects the answers from a representative sample of 90 banks."

Questions
- How representative is the sample?
- Are these mainly large banks?
- How to take into account their international presence?

Particular importance of the last question
- Test design relies on cross-country variation in monetary policy conditions
- How to deal with banks that face different conditions in different countries?

There are 6,926 Banks in the EU-15 in 2006
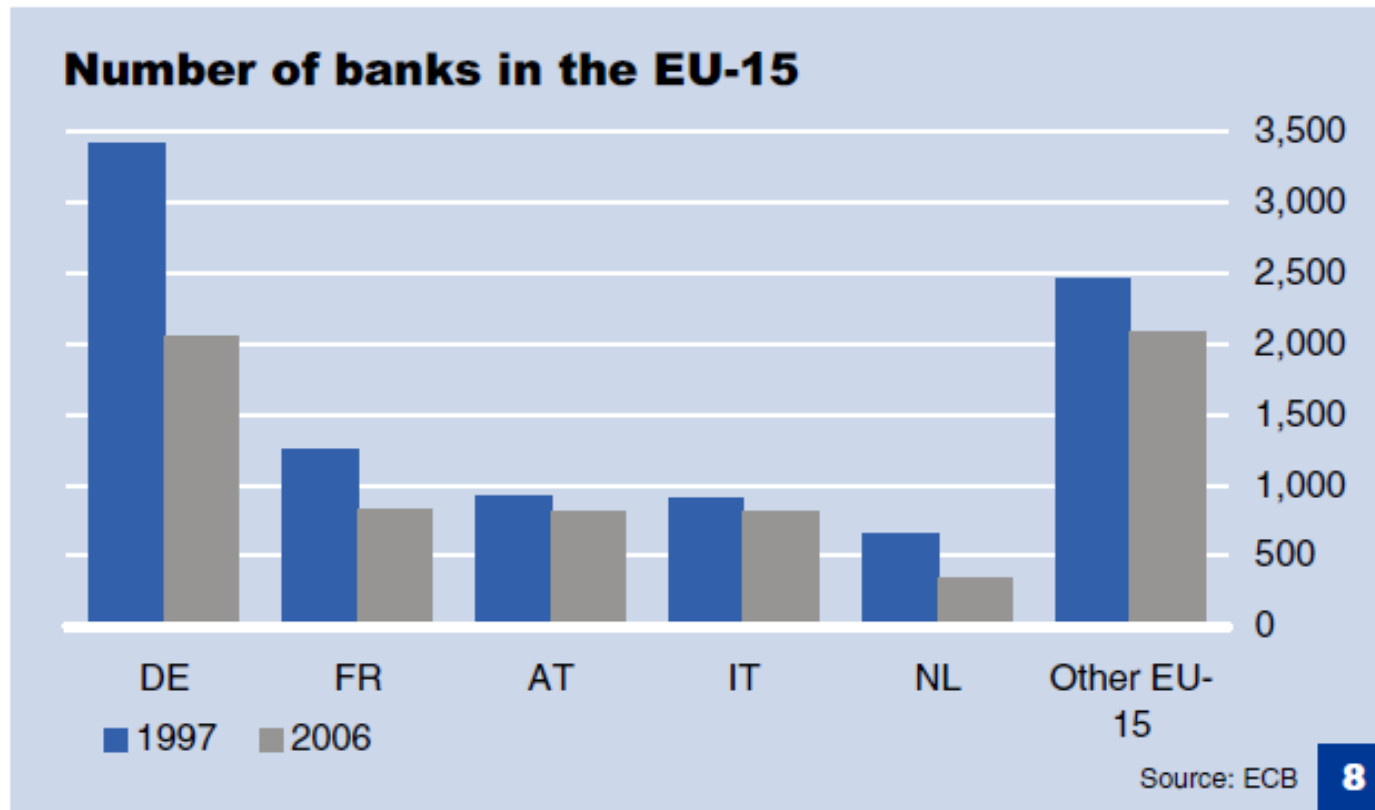
Source: Deutsche Bank Research

Market Share of Foreign-owned Banks

Market share of foreign-owned banks
% of total assets, 2006

Sources: ECB, SNB
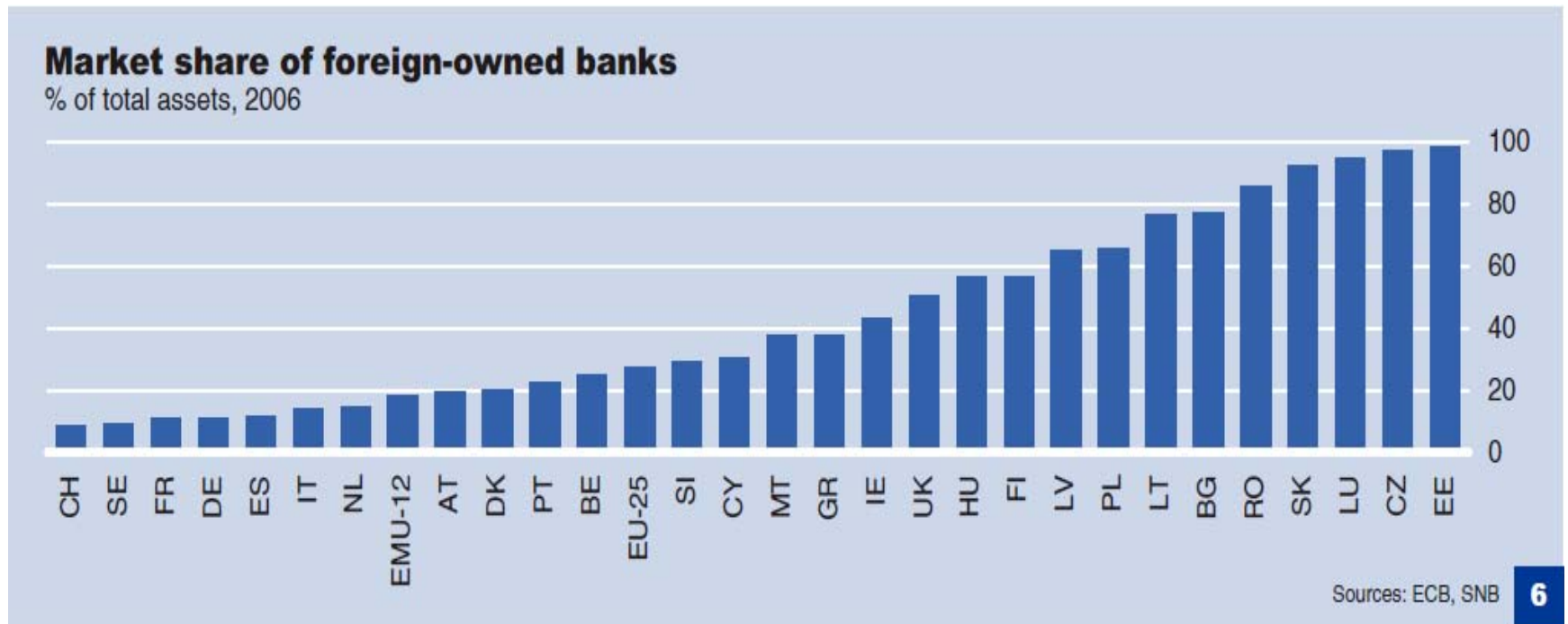
Source: Deutsche Bank Research

How Reliable is the Survey?
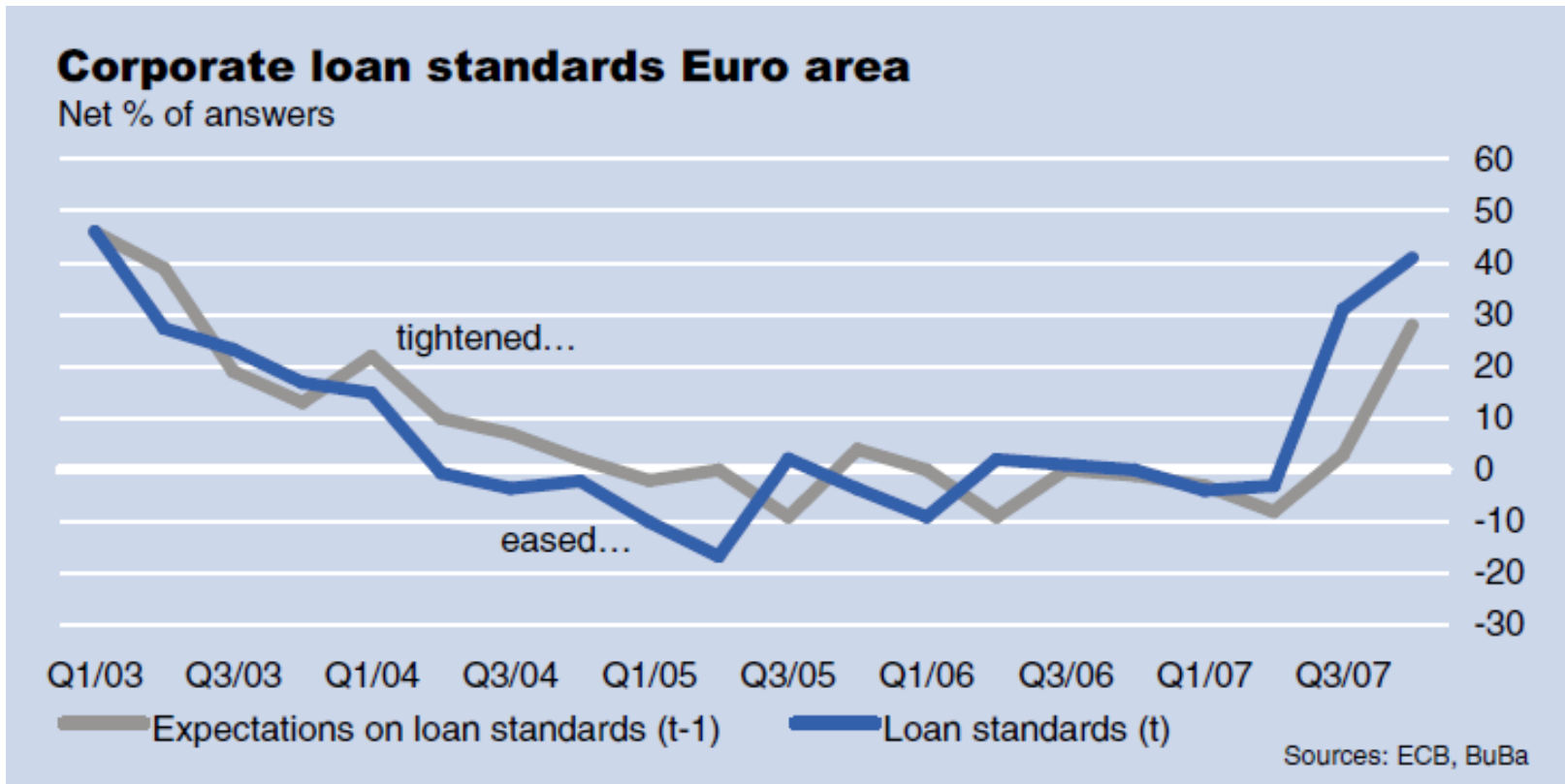
The practitioner's wiew (Deutsche Bank Research, 2008)
"The BLS's forecast quality is moderate, though it has improved over time. While banks' expectations and actual behavior with regard to lending standards broadly follow a similar pattern, there can be marked differences between the two."

→ Deviation between expectations and actual behavior

Questions
- Can the actual behavior in each quarter be tested?
    – Development of loan volume
    – Development of interest rates
- Does it – ex post - match the results from the survey? Accuracy?

Development over Time

Corporate loan standards Euro area
Net % of answers

tightened…

eased…

Q1/03 Q3/03 Q1/04 Q3/04 Q1/05 Q3/05 Q1/06 Q3/06 Q1/07 Q3/07

Expectations on loan standards (t-1)   Loan standards (t)

Sources: ECB, BuBa

Source: Deutsche Bank Research

Further Comments

Too low for too long

- How many events?

- Common case in different countries?

- Report countries and time periods for negative differences

Borrowers' creditworthiness

- "… the softening is over and above an improvement of borrowers' creditworthiness."

- Tested indirectly by showing that softening is also due to loosening of bank balance sheet constraints

- Why not test directly for borrower creditworthiness?

- Adding one more control variable (such as CDS, Risk spread on corporate bonds) to basic empirical specification