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Session IV: Measuring and Assessing Financial Stability
Comments

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A Comment on
“ Early warning models for systemic banking crises in Montenegro”

Methodology

- An early warning model for a banking crisis in Montenegro during 2005-2012.
- Logit-regression.
- Bayesian model averaging technique based on seven simple logit-regressions, each one containing two explanatory variables.

Main findings

- The model provides correct signals for the banking crisis a year or two in advance. Hence, it is truly an early warning model.

- Indicators related to credit expansion have a dominant role in signaling the occurrence of a systemic banking crisis in Montenegro.

- Indeed, a huge credit expansion in Montenegro during the pre-crisis period, followed by contraction of economic activity and in lending.

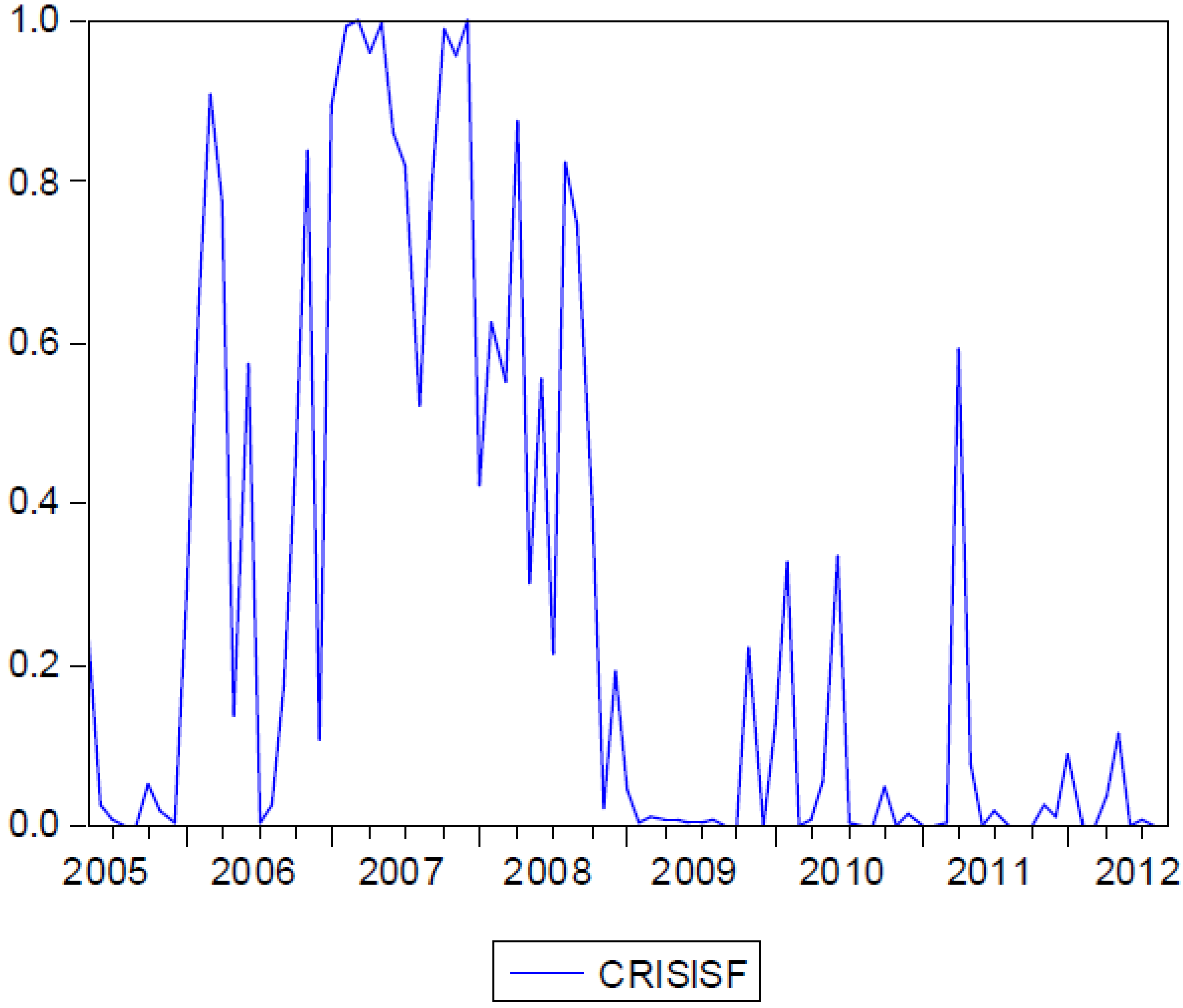
Some qualifications

- How to define a banking crisis?
- The crisis hasn’t ended, yet.
- Only one banking crisis in Montenegro, i.e. a single crisis episode.
- The Global crisis.
- The problem of monthly data: transitory and/or seasonal effects (too much noise).
- Some omitted or redundant variables: EU output, capital flows; house prices; Euribor, inflation.
- Capitalisation – the effect of cyclical data.

How interpret early warning models?

- Cyclical movements or banking crisis?
- The intensity of signaling: strong signals followed by weak ones (Figure 1).
- Identify a few main indicators as an input to “what-if” scenarios or simulation.

Graph 1: The forecasted probability of systemic banking crisis



Source: Author's calculations in EViews 6

A comment on
"Measuring financial stability – systemic risk accumulation and materialization vs. financial system resilience"

Methodology

- Principal component analysis, 2002-2013
- Three composite indices of financial stability:
  - systemic risk accumulation index
  - systemic risk materialisation index
  - financial system resilience index
- Various risk indicators

Main findings

- Risk accumulation driven by asset prices, credit growth, indebtedness, euroisation etc.

- Risk materialisation is reflected by NPLs, unemployment, exchange rate, interest rate spreads, risk premium of foreign mother-banks etc.

- Financial system resilience reflected in capitalisation and capital adequacy of the banking sector, stability of funding, FX liquidity, bank profitability , international reserves .

Some remarks

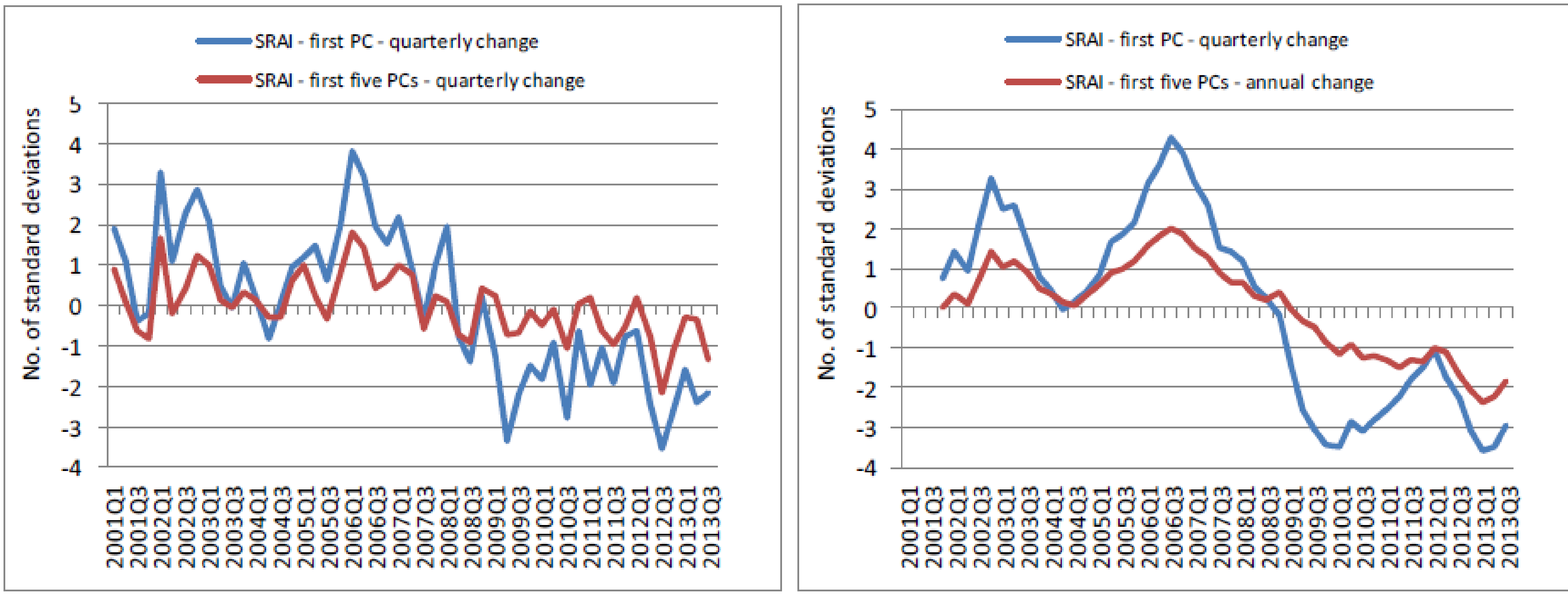
- Few vs. more indicators in the index
- High vs. low frequency data
- Cyclical movements or banking crisis?
- Hence, how to define excessive credit growth?
- Alternative indicators:
    - credit growth/GDP growth
    - house prices/rent ratio
    - house prices/personal disposable income ratio
    - loan/deposit ratio
    - bank leverage
    - indicators measuring the borrowers' ability to pay

- Risk accumulation index
  - Early strong signals followed by weak signals
  - Accumulated or additional risks?

- Risk materialisation index - a “too-late” index? (Figure 4)

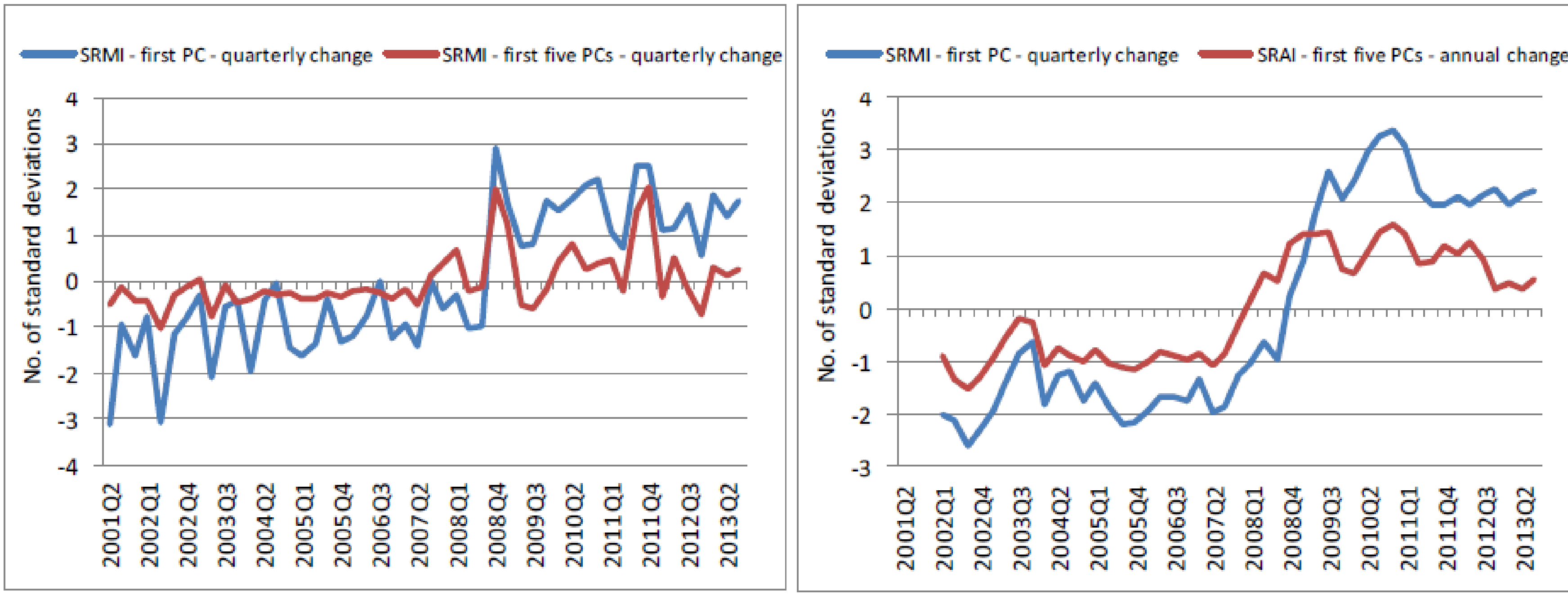
“Risk materialisation indicators represent a signal to policy makers and confirm that measures should be taken and instruments used to mitigate vulnerabilities. From the central bank perspective, this type of indicators can be used as a signal for loosening previously used measures and instruments of macroprudential policy (pp.20-21).”

Figure 2. Systemic risk accumulation index



Source: Author's calculations

Figure 4. Systemic risk materialisation index



Source: Author’s calculations

- Financial system resilience index as a signaling tool (Figures 5 and 6)
    - Capital adequacy
    - Retail deposit-to-loan ratio