

Measuring and Forecasting Financial Stability

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Miroslav Misina
Bank of Canada

Comments on „Distress in the Financial Sector and Economic Activity“

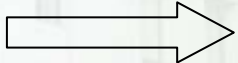
Comments on
“Distress in the financial sector and economic activity”
by M. Carlson, T. King, and K. Lewis

Miroslav Misina
Bank of Canada
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Two types of work in the area:

- Macro stress testing
- Early warning indicators literature

Common feature:

Economic activity  financial sector

Missing link: the interaction between financial sector and the real economy

This paper is a work that seeks to “close the loop” by examining the relationship between the *health of the financial system* and *economic activity*.

Approach:

- Quantify the notion of “the health of the financial system”
- Assess the relationship between the proposed measure of financial stress and economic activity

Working hypothesis: weak financial sector will have real effects and lead to a slowdown in economic activity.

Health of the financial system

- Translate the notion of the weak financial system into a statement about changes in probabilities of default (distance to default) of financial institutions.
- Probabilities of default (distances to default) are based on Merton model). Market prices and volatilities used as inputs.

Assume that prices reflect information about the future prospects of a given institution, and about the prospects of a broader economy.

- A measure based on market prices should be informative at least about the general direction of economic activity (provided idiosyncratic effects ‘cancel out’)
- In the paper, the cancelling out is accomplished via a broad sample (68 institutions) and aggregation.
- The resulting measure (FHI) displays behaviour largely consistent with priors (high PD/low DD around episodes of financial stress).

Economic activity?

1. Lending standards and conditions (SLOS)
2. Real non-residential fixed investment
3. GDP, Consumption, unemployment

Empirical analysis:

- Granger causality analysis of 1.
- VAR model for 2.
- Extended VAR (robustness checks for 3.)

Results:

- Declines in financial health lead to tightening of credit terms and conditions (Granger causality)
- Shocks to FHI have a negative impact on profitability and investment
- Declines in the health of financial institutions amplify the impact of profitability shocks on investment (via credit constraints?)

Questions:

- **FHI:** the measure is intuitive and seems to behave in line with expectations, but a comparison with the measures based on other methodologies might be interesting. If they disagree, which one do we believe?

Two ways to proceed:

1. Derivation on theoretical grounds
2. Assessment against an agreed on set of events

This work uses Goodhart et al. to justify the use of PDs as a measure of stress.

Problem: That type of work does not put any constraints on empirical implementation. It is possible to have a range of measures that claim to capture the same thing, yet give contradictory signals.

Comparison of different measures, and of all these against an agreed on set of events would be of interest. The authors do part of the latter.

- **FHI and economic activity:** Granger causality test using the SLOS survey of credit terms and conditions. May provide intuitive support for the VAR results, but there are no direct links between the two sets of results. Credit aggregates in VAR?

Problem: the links between bank behaviour and credit aggregates don't seem to be very strong in the data (at least for Canada)

The proposed approach is interesting, since it isolates the supply-side effect, but could it be that the net effect is dominated by the demand side (lack of profitable investment opportunities)?

- **Economic activity and credit:** to what extent are the companies using external financing as source of investment ('credit constrained')
 - Small vs. large companies and external financing
 - Share of each in the investment aggregates
 - Supply or demand identified by the VAR? Granger causality tests points towards supply, but the VAR does not distinguish between the two, nor is there a direct link between causality results and the VAR results.

Suppose it is mostly demand: the story of the impact of the financial sector on the real economy becomes questionable.

How to close the loop?

- The results support the working hypothesis: weakness of financial institutions can have impact on real activity. But real activity may feed back into the FHI and lead to a further deterioration. Taking these ‘higher-order’ interactions is important in assessing the longer-term consequences of financial stress.
- Are these effects captured in the VAR? Impulse responses shown do not exhibit much persistence. A table with VAR results might be informative.



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Thank you