Is Market Information Useful for Supervisory Purposes? A Survey of Recent Academic Research

Presentation for "Using Market Information in Banking Supervision"

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Overview:

What the academic literature has to say about:

I. The market response to supervisory information

II. The value of market info. for supervisory purposes

III. The reasonable sources of market data

I. Does the market respond to supervisory information?

A. Supervisory information is useful for a period of time

Academic studies find that supervisory information, usually as summarized by supervisory ratings, is useful in the supervisory monitoring of banks.

Barker & Holdsworth (1993): CAMEL ratings are useful in predicting bank failures, even after controlling for publicly available information about bank condition & performance

Rationale behind the SEER model (Cole et al., 1995)

For how long is this information useful?

Cole & Gunther (1998): look at bank failures

Information in CAMEL ratings decays quickly;

for 1988-1992, statistical model using public information better predicts bank failure than CAMEL ratings more than two quarters old.

Hirtle and Lopez (1999): look at CAMEL ratings

From 1989 to 1995, controlling for public info., past CAMEL ratings provide insight into current CAMEL ratings; useful for up to 6 to 12 quarters

B. Market reaction to supervisory information

Market prices are assumed to incorporate all available information, so supervisory information made public should have an impact on market prices.

Insured depositors:

Gilbert and Vaughn (1998): public announcement of supervisory enforcement actions did not cause deposit runoffs or dramatic increases in the deposit rates

Uninsured depositors:

Jordan, Peek and Rosengren (1999): During the New England banking crisis, uninsured deposits at banks subject to public enforcement action declined in the quarter after the announcement.

Bondholders, especially subordinated bonds:

Bondholders have interests in common with supervisors; i.e., concern about bank default and downside risk

DeYoung, Flannery, Lang & Sorescu (1998):

Is supervisory information useful in pricing sub. debt?

CAMEL ratings add explanatory power; the information incorporated into prices after 6 months

Supervisors uncover unfavorable info.; consistent with managers publicizing just positive information

Equity holders:

Jordan et al. (1999): enforcement announcements are associated with large negative stock returns, especially banks w/o previously known problems.

Flannery and James (1999): bank financial statements are viewed as more informative when bank recently examined; information obtained via FIA

Berger and Davies (1998): focusing CAMEL ratings, downgrades reveal unfavorable information about bank conditions; suggest management may reveal favorable information in advance, but supervisors force the release of unfavorable information.

Summary:

Supervisors generate useful information beyond what is publicly available.

Thus, supervisory information does impact market prices.

However, according to Flannery (1998), the limited available evidence does not support the view that supervisory assessments of bank conditions are uniformly better and more timely than market assessments.

II. Is market info. useful for supervisory purposes?

A. The opacity of bank assets

Banks underwrite debt not easily issued in public debt markets; hence, bank assets "opaque" to the market

Morgan (2000): Rating agencies disagree more on banks

Morgan & Stiroh (2000): debt-based

Bond spread / rating relationship is the same for banks as for non-banks, especially if investment grade

However, market is easier on bigger banks and less transparent banks; possible slippage in disciplinary mechanism if bank is TBTF or too hard to understand

Flannery, Kwan & Nimalendran (2000): equity-based

Banks and non-banks should exhibit different trading characteristics if banks are more (or less) difficult for outsiders to understand.

Large banks traded on NYSE / AMEX exhibit stock microstructure closely resembling nonbanks, while smaller banks on NASDAQ trade less frequently.

Balance sheet composition affects trading of a bank's stock, consistent with different bank assets w/ different opacity.

Bottom line: largest banks are not unusually difficult for investors to value

B. Evidence on the value of market information

Berger, Davies, and Flannery (2000):

Is information on BHC conditions gathered by supervisors is different from that used by the financial markets?

Assessments by supervisors and rating agencies are similar, but different from equity market. Debtholders focus on default, while equityholders focus more on future revenues & issues of an ongoing concern.

Jordan et al. (1999): Examiners uncover problems that banks were unwilling to disclose publicly; hence, supervisors and equity market should be considered complements.

Main points:

The perspectives of supervisors and bondholders are generally aligned, so monitoring of bank debt could provide some additional insight.

The different perspectives of supervisors and equityholders lead to their possibly collecting different information and probably looking at the same information in a different way.

Thus, market information is of value and market discipline seems possible.

C. Caveats on market discipline

Bliss and Flannery (2000):

Study of whether managerial actions are influenced by securities prices (BHC stocks and bonds)

Not strong evidence that stock or (especially) bond investors influence managerial actions, but neither is it conclusive evidence against it.

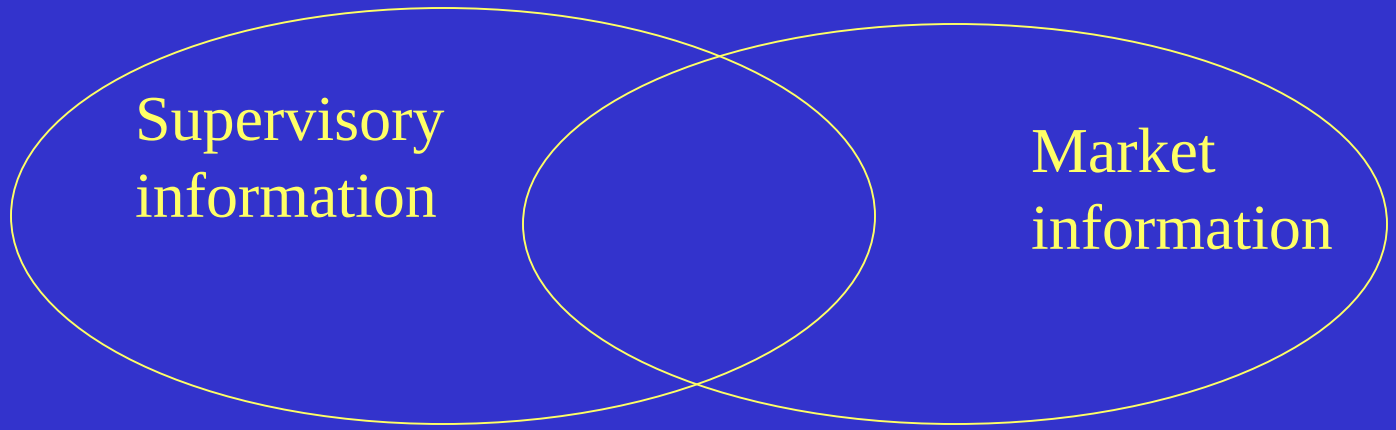
Flannery (1998): "[t]he scarcity of empirical evidence about the relative efficacy of market versus supervisory discipline makes it very difficult to argue for greater reliance on one versus the other type of corporate governance. Much further research is needed."

D. Bottom line

Supervisory information alone: basically been disavowed in recent declarations by international & domestic agencies

Market information alone: not supported empirically

Thus, supervisors can and should expand their information set by using market prices of bank securities.



III. What are reasonable market data sources?

Debt markets:

- Insured deposits: not particularly useful
- Uninsured deposits / CDs:

  Ellis and Flannery (1992): large CD rates from 1982-1988 incorporate same information as stock prices

  Furlong & Kwan (2000): more recent data
- Commercial paper: Furlong & Kwan (2000)
- Bonds:

  Levonian & Perez (1998): there is a two-way casual relationship between bond credit spreads and aggregate past-due bank loans

- Subordinated bonds: In 1998, BHCs had $120b in SND.

  Flannery & Sorescu (1996): focus on OAS of BHC bonds from 1983-91; firm-specific measures of risk correlated with spreads, and it increased as implied TBTF guarantees weakened in by early 1990s

  DeYoung etal. (1998): Confirms this for 1989-95.

  Jagtiani, Kaufman and Lemieux (2000):

  sample includes bank SNDs; the market does impose a risk premium, esp. for less capital

Federal Reserve Staff study on SND:

"The overwhelming impression is that the market for the SND of the largest banks and BHCs is, in the context of the corporate bond markets, quite liquid, to the point that it provides a useful vehicle for trading and hedging."

"Ft.: An important exception to this generalization is the post-Russian default experience in Aug.-Oct. 1998."

"An important caveat is that, as a bank approaches insolvency, the risk preferences of SND holders become more like those of stockholders."

My opinion: Useful only when not in crisis?

More research is needed here.

Equity markets:

- Stock prices: about 350 traded BHCs accounting for about 75% of bank assets; about 8x larger SND market

  Kho, Lee & Stulz (2000): study of EM currency events, IMF bailouts and LTCM; unexposed banks unaffected; thus, the market can differentiate between banks

- Default probabilities via the Merton model: ongoing work

- Option prices: Levonian (1991); noisy, but useful?

Conclusion

- Academic research finds that the market information set is useful and not completely dominated by the supervisory information set.
- Hence, supervisors should use it.
- But, since it is used for purposes other than those of the supervisors, need to be very careful in how implemented.