Available online at www.sciencedirect.com

SCIENCE DIRECT®

Int. Fin. Markets, Inst. and Money 15 (2005) 369–390

Journal of INTERNATIONAL FINANCIAL MARKETS, INSTITUTIONS & MONEY

www.elsevier.com/locate/intfin

When risk premiums decrease as the bank's risk increases—a caveat on the use of subordinated bonds as an instrument of banking supervision

Jochen Bigus[a,*], Stefan Prigge[b,1]

[a] *Department of Economics and Management, University of Osnabrück, Rolandstr. 8, 49069 Osnabrück, Germany*

[b] *Department of Economics, Hamburg University, Money and Capital Markets' Institute, Von-Melle-Park 5, 20146 Hamburg, Germany*

Received 4 February 2003; accepted 9 August 2004
Available online 24 December 2004

Abstract

Many new proposals advocate the use of subordinated bonds in banking supervision. These proposals explicitly or implicitly assume that the prices and yields (i.e., risk premiums) of subordinated bonds are unbiased signals on the bank's risk exposure. We show that in general this assumption does not hold. In actuality, the risk premiums may decrease even as the bank's risk increases. This may also hold when the bank is solvent, that is, when total assets exceed total liabilities. This result occurs with both general density functions as well as the more positively skewed density functions that are intended to reflect the return of a bank's asset portfolio. As this distortion of market prices is more likely to occur with sufficiently large volume of subordinated debt, we advocate the implementation of an upper bound on subordinated debt—as a complement to the minimum level recommended by the literature.

JEL classification: G21; G28

Keywords: Subordinated bonds; Information function of market prices; Basel II banking regulation

* Corresponding author. Tel.: +49 541 969 2730; fax: +49 541 969 2722.
E-mail addresses: jbigus@uni-osnabrueck.de (J. Bigus), prigge@web.de (S. Prigge).
[1] Tel.: +49 40 42838 2763; fax: +49 40 42838 5512.

1042-4431/$ – see front matter
doi:10.1016/j.intfin.2004.08.002

1. Introduction

In June 1999, the Basel Committee on Banking Supervision (1999) published a proposal suggesting a fundamental reform of the 1988 Basel Accord. The proposal focuses on three main "pillars:" (1) further development of the 1988 Accord in order to establish a new Accord on minimum capital requirements for banks, (2) enlarging the role of supervisory authorities in monitoring banks' equity and their internal risk-controlling models, (3) strengthening market forces for supervisory purposes (market discipline) in terms of supporting both investors' ability to monitor changes in bank condition and the ability to influence a bank's actions (see for this distinction, Bliss and Flannery, 2001).

The first pillar and to some extent the second receive much attention in both literature and regulatory practice. The third pillar of market discipline is less prioritized, even in the 1999 proposal only few pages are dedicated to it. In the amended proposal of April 2003 the Basel Committee places greater emphasis on market discipline. That is to say that the recommendations for transparency and disclosure are more numerous and detailed. Additionally, there are requirements; and the interplay between the three pillars is stressed, stating that pillar 3 is "to complement" the other two pillars (Basel Committee on Banking Supervision, 2003, p. 154).

We advocate the initiative of more comprehensive integration of market forces in banking regulation (see Barth et al., 2002 for empirical support of this current). As the supervisory provisions become increasingly complex, regulation costs increase sharply—for both supervisory authorities and banks. Moreover, the new regulations complying with the first two pillars may provide incentives for banks to evade the intended consequences. In some cases these banks may choose regulatory capital arbitrage through some means of securitization (Benink and Wihlborg, 2002) or may lack incentives to correctly assess credit risk (Kirstein, 2002). Finally, supervisory authorities may not react quickly enough to both the innovations and the changing environment of financial markets. The stabilization of the banking system, which is the goal of banking regulation, may be reached by more efficiently utilizing the information and expertise of thousands of market participants as reflected in terms of yields and prices. Growing evidence indicates that investors may accurately assess the financial firm's true condition through the analysis of these data (see, for instance, the review by Flannery, 1998).

In order to take advantage of the market participants' monitoring activities and skills Banks' stakeholders need to have adequate incentives to both monitor banks and impose discipline on managers. An adequate number of creditors who are not covered by deposit insurance appears to be the most important factor generating market discipline", European Central Bank (2001, p. 74). The most popular suggestion in achieving market discipline is to obligate the larger banks to issue a substantial amount of subordinated debt. Subordinated debt is defined as "unsecured debt that has an original weighted average maturity of not less than five years; is subordinated as to payment of principal and interest to all other indebtedness of the bank, including deposits; is not supported by any form of credit enhancement, including a guarantee or standby letter of credit; and is not held in whole or in part by any affiliate or institution-affiliated party of the insured depository institution or bank holding company." Board of Governors (2000, p. 3).