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Bank Market Discipline: An Overview and the Way Forward

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ABSTRACT

Market discipline has been regarded as a popular tool to help supervisors safeguard the well-being of the banking as well as the financial sector. Research on market discipline has picked pace over the years and has covered all types of banking institutions. This paper aims to provide an overview of the recent and lesser-known aspects of market discipline in the banking sector. In doing so, this paper also provides directions for future research in this domain. The overview, classified into three categories, that is, drivers of market discipline, monitoring agents and outcomes of market discipline, attempts to provide an understanding of the recent literature. The study holds relevance for scholars, practitioners, bank managers and various bank stakeholders. It also has implications for policymakers and regulators, since this study shall help them gather an understanding of the recent developments in the arena of bank market discipline.

KEYWORDS: Market discipline, Banking, Review, Depositor discipline

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INTRODUCTION

Banking firms, in their simplest sense, can be perceived as institutions whose primary responsibility is accepting deposits and advancing credit. It follows rather naturally for banks to be susceptible to the risks of insolvency, bankruptcy, or bank runs, leading to failures. Reasons and situations leading to failure of banks are myriad, including but not limited to, asset shortages, questionable lending practices, risky lending via indulging in non-credible borrowers and unfamiliar territory (Cullen, 2011). As a result, high levels of bank risks may create panic and even distrust among depositors regarding their savings and deposits in banks. In such a situation, a variety of undesired and ancillary outcomes might assume silhouette, such as depositors withdrawing their savings, dwindling reputation of the bank, decreased borrower confidence, overall decline in macroeconomic saving/expenditure activity, thereby worsening the economic and financial atmosphere (Sardana et al., 2024a).

Systemic bank insolvencies, in essence, are sources of exceptional costs to the banking institutions, its customers and the government (Demirgüç-Kunt et al., 2005). Bank failures might destroy the brand legacy of a bank and sever the relationship with its customers. Contractions in bank lending activity can subsequently conceive supressed investments and economic functioning. Depositors experience severe losses and so does the government in mitigating the crisis. Such is the extent of the impact of bank failures, and hence appropriate preventive measures must be adopted in order to remedy the possible debris of savings' loss depositors might have to suffer from such an occurrence. Preventive measures exist in many different forms but more importantly, they 'act' from different arenas of the banking system. Bank stakeholders, including the market agents, depositors, subordinated debtholders, etc., also keep a vigilant eye upon banks where they have rested their money, and respond appropriately when banks increase risky activities (Sha et al., 2018). This reaction or behaviour of the market in response to banks' risk attributes is known as 'Market Discipline'. Market discipline in the banking sector can be interpreted as a scenario in which private sector players, that is, depositors, stockholders, creditors, etc. face costs proportional to a bank's risk-taking, and hence direct their behaviour considering such costs (Berger et al., 1995).

Research on market discipline has picked pace over the years, and has covered all types of banking institutions: from conventional banks to credit unions, cooperative banks, and

regional banks. Literature suggests that when credit unions expand their activities into business loans, the depositors discipline them through lower rate of deposit growth (Gomez-Biscarri et al., 2021). For cooperative banks, evidence from Poland and Japan indicates that depositors are able to distinguish between less risky and more risky banks, either directly or indirectly through signals sent by the stock market, and they react to such risk-taking by withdrawing their deposits (Kozłowski, 2016; Shimizu, 2009). In India, however, depositors are not able to differentiate between weak and strong cooperative banks, except during election years, as they understand the nexus between the cooperative banks and political parties (Chipalkatti et al., 2007). As far as regional banks are concerned, because of their relatively small size and restricted scope, they do not attract sufficient discipline from shareholders (Lee, 2011) or subordinated debtholders, except during situations of banking instability (Baba & Inada, 2009). However, for such banks, depositor discipline is intensely exercised, especially if they adopt market price accounting (Spiegel & Yamori, 2007).

In light of such an extensive background of prior research, it becomes essential to undertake a thorough study of the papers in this discourse, not only to bridge the gaps in information availability but also in order to render us conscious of the debates prevalent in academia. This paper aims to provide an overview of the recent and lesser known aspects of market discipline in the banking sector. In doing so, this paper also provides directions for future research in this domain.

DRIVERS OF MARKET DISCIPLINE

The presence and strength of market discipline in any economy is impacted by multiple factors. Apart from the frequently discussed factors such as level of information disclosure (Guillemin & Semenova, 2020), size of banking sector (Ghosh, 2017), type of bank ownership (Oliveira & Raposo, 2021), etc., certain country-specific studies have laid down additional determinants of bank market discipline. For example, banks in the United States of America (USA) that issue dividends are subject to stricter market discipline as the dividend policy acts as a tool to signal the financial soundness of banks (Tran et al., 2021; Tran & McMillan, 2021). Similarly, book-to-market ratio provides advance signals that help in disciplining the banks across the USA and Japan, and hence, banks that publish this ratio or adopt the market price accounting are subject to better scrutiny (Balasubramnian et al., 2019; Spiegel & Yamori,

2007). The presence of institutional investors at banks also acts as a source of market monitoring (Deng et al., 2013), especially for overseeing the earnings of large bank holding companies of the USA (Elyasiani et al., 2017). Reduction in bank complexity that improves transparency (Brandao-Marques et al., 2020), and increases the market power of banks leads to a higher deposit growth rate in the long term (Ariefianto et al., 2020), which has been found to improve market discipline in the recent past.

Further, in China, banks that rely on internet finance (i.e. using the internet for offering various services and sharing information) are also subject to greater discipline (Hou et al., 2016). This derives from the increased transparency in their financial statements published on their websites, and the visibility of their deposit offers, which allows easy access to information and boosts deposit mobility (Kozłowski, 2016). In the same country, the relationships between the financiers and clients have been found to improve the discipline exercised on bankers due to private monitoring by the clients (Selmier, 2016). However, having strong relationships with its clients may enable a bank to mitigate the deposit withdrawal risks during distressed periods, considering the high switching costs of its clients, thereby impeding the discipline exercised by them (Brown et al., 2020).

Having pension funds as large depositors of banks can cause a conflict of interest if the banks have ownership of the pension fund management companies, and this can also hamper market discipline, as evidenced from Argentina (Barajas & Catalán, 2015). Findings from Turkey suggest that depositor discipline is also undermined if the bank has political connections with the ruling parties, since it creates a perception of government support for the bank (Disli et al., 2013).

In addition, market discipline has been profoundly impacted by diverse regulatory frameworks adopted across nations, yielding mixed research findings. This includes the bail-in clause, government safety nets, and other country specific regulations introduced over time. First, the opinion regarding bail-in regulation is divided. Recent evidence suggests that the introduction of the bail-in framework helps in restoring market discipline, especially among the senior unsecured bondholders and subordinated debtholders, due to their higher risk profile (Cutura, 2021; Velliscig et al., 2022). In Italy, the introduction of bail-in tool led to

an improvement in the discipline for the bank bond primary market as well (Crespi et al., 2019). These results indicate that investors perceive the bail-in regulation as a credible tool that does away with the government interventions (in the form of bail-outs) (Schnabel, 2020), and reduces the too-big-to-fail (TBTF) problem as well as moral hazard, thereby enhancing market discipline (Bodellini, 2018; Fiordelisi et al., 2020). However, this is not true for all countries and in all contexts (see Pablos Nuevo, 2020). Infact, the bail-in design under the Bank Recovery and Resolution (BRRD) in the European Union (EU) has been found to dilute market discipline due to competing policy objectives pursued by the directive (Martino, 2020; Tröger, 2018).

Second, bank safety nets (primarily government support to banks and deposit insurance), which are adopted by countries to avoid the spill-over effects of a banking crisis, may end up jeopardizing market discipline (Önder & Özyildirim, 2008; Sardana & Singhania, 2022). Safety nets in the form of government support to banks significantly reduce the monitoring incentives of market participants, resulting in enhanced risk-taking by banks (Bai et al., 2020, Sardana et al., 2023). Such government guarantees not only diminish creditor market discipline (Baron, 2020; Yan et al., 2014), but also foster opportunistic behavior among banks (Vernikov, 2020) by shifting the monitoring responsibility from depositors and creditors to regulators (Gunther et al., 2000). In such a situation, banks start relying more on the comparatively cheaper insured deposits as a source of funds, which shields them from the full cost of market discipline (Billett et al., 1998). Even if such a guarantee is removed, its negative effects on market discipline may still remain due to market perceptions of continued implicit government support for the banks (Luong et al., 2020; Wang et al., 2015). Additionally, intervention in the banking industry by a lender of last resort leads to an altogether suspension of market discipline by raising moral hazard problems (Ojo, 2011), thereby diluting the sensitivity of banks' interest costs to banks' risks (Jackowicz et al., 2018).

The role of deposit insurance systems as part of safety nets has been extensively studied. In general, it is found that adoption or expansion of deposit insurance enhances moral hazard (Gupta & Sardana, 2021) and reduces depositor discipline in the banking sector (Calomiris & Jaremski, 2019), especially from the large depositors (Ioannidou & Penas, 2010). This effect is more pronounced in countries with either powerful deposit insurers (Distinguin et al., 2013),

or with full or blanket deposit guarantees (Hadad et al., 2011), both of which lower the incentives of market participants to monitor the banks. However, there are a few exceptions. Contrary to widespread evidence, the Islamic deposit insurance scheme in Turkey has been found to strengthen the disciplining mechanisms because it is meant for a handful of Islamic banks that have the onus of detecting early warning signs of distress (Aysan et al., 2017). The interconnectedness of member banks, and the realization that failure of one bank can have repercussions for other banks in the system (in terms of loss of depositor confidence and reputation), leads to strict mutual supervision among the member banks (Aysan et al., 2015). The same is the case with Germany, which operates a private deposit insurance system, known for its peer monitoring rather than depositor monitoring (Beck, 2002). In general, in countries where the depositors have limited awareness about the deposit insurance scheme or they don't trust the scheme or believe that the coverage limits are unlikely to be extended, market discipline remains intact (Bijlsma et al., 2015).

To tackle the issues associated with deposit insurance, regulatory authorities need to introduce certain features in the scheme design that control moral hazard, such as better information disclosure by banks (Zhu et al., 2019), lower and limited levels of insurance coverage limits (Hogan & Johnson, 2016; Sardana & Shukla, 2020), use of coinsurance (Sealey, 2008), subordinating the claims of uninsured depositors to the claim of the deposit insurer (Chen, 1999), and adopting risk-adjusted insurance premium (Garcia, 2000).

Third, other country-specific bank regulations have produced some evidence regarding their role in influencing the extent of market discipline. For example, by reducing the TBTF discounts on yield spreads, the Dodd-Frank Wall Street Reform and Consumer Protection Act, 2010 of the USA has been successful in improving market discipline among banks (Balasubramnian & Cyree, 2014). Further, in Vietnam, the enhancement of minimum capital adequacy requirement has been reported to weaken market discipline, since the market participants assume that the regulators are already closely monitoring the insolvency risks of banks (Le, 2020).

By and large, market discipline can be exercised more efficiently when bank regulators generate their own information about banks' risk, rather than relying on market signals (Acharya & Thakor, 2016).

MARKET DISCIPLINING AGENTS

Ample prior literature on market discipline highlights the role played by equity shareholders (Hamalainen et al., 2012), subordinate debtholders (Imai, 2007; Zhang et al., 2014), interbank lenders (Francis et al., 2019) and depositors (Baer & Brewer, 1986) in the monitoring of bank risks.

Flannery (1998) undertook a literature analysis and found conclusive evidence on investors' ability to vigil financial condition of banks in the USA. Experience from South American countries of Argentina, Chile and Mexico (when assessed over the decades of 1980s and 1990s) exude the evidence of market discipline through action on part of depositors, as they tend to withdraw deposits and demand higher rate of interest in reflex to riskier activities on part of banking institutions (Martinez Peria & Schmukler, 2001). Substantial evidence has been presented in support of presence of positive relation between interest rates on uninsured deposits and indulgence in risky activities on part of banks, along with an explanation for other factors influencing value of certificate of deposit rates such as kind of bank's customer base, local environment, etc. (Hannan & Hanweck, 1988).

Furthermore, ratings given by external rating agencies incorporate forward-looking information about banks, and thus, provide a channel through which market discipline can operate (Simion et al., 2020), given that such ratings are consistent with the bank's default probability (Godlewski, 2007). However, for TBTF banks, the reliability of credit ratings as a tool for discipline is questionable since market participants do not seem to react to credit rating downgrades, given the assumption of implicit government guarantees extended to such banks (Kolaric et al., 2021). Additionally, the credit rating agencies not only failed to understand and measure the bank risks during the global financial crisis (Oliveira & Raposo, 2019), but ended up fanning the wildfire of bank failures due to their false ratings, arising from their conflicts of interest (Mullard, 2012), thereby raising doubts on their authenticity as a source of bank monitoring.

There are a few less-researched measures which have been used in different contexts for enforcing market discipline. For one, contingent capital notes (also known as CoCo bonds) have been found to be more effective in inducing market discipline than subordinated bonds since the yield information on these instruments is more sensitive to the issuing bank's risks (Chang & Yu, 2018; Lee & Park, 2020). Through the conversion of bank's debt to equity in the face of falling equity ratios, these instruments provide market discipline by forcing the equity shareholders to internalize the banks' losses from risky decisions (Flannery, 2017; Hilscher & Raviv, 2014). However, this is only true for CoCo bonds that are permanently written down on being triggered, since temporary write-down CoCo bonds are less risky for investors and diminish the incentives to monitor the banks (McCunn, 2015). Additionally, credit default swaps contracts written on banks have also been found to act as a source of indirect market discipline (Avino et al., 2019), though the signals from their spreads are distorted due to the size effect when a bank is considered as TBTF (Völz & Wedow, 2011).

OUTCOMES OF MARKET DISCIPLINE

The first and foremost impact of market discipline is on the levels of bank risks. If taken seriously, monitoring by market agents can pressurize a bank to reduce its risky activities (Gabr & Elbannan, 2018). This can further enhance the bank capital levels, efficiency and profitability, while also improving the loan quality (Nier & Baumann, 2006; Agoraki et al., 2010; Ertan et al., 2017; Sardana et al., 2024b; Rosario & Mazumdar, 2021).

The bank charter value, which refers to the worth that it would have to forego subsequent to its closure (Acharya, 1996), is also linked with the consequences of market discipline. The higher the charter value of banks, the greater is their tendency to respond adequately to the disciplining mechanisms in order to preserve their charter value (Park & Peristiani, 2007). Research evidence also suggests that by imposing restrictions on banks' risk-taking, market discipline exercised through depositors, subordinated debtholders and interbank relations has a positive impact on the bank charter value (Akhtar & Saleem, 2021). However, in Australia and Canada, this relation between market monitoring and bank charter value has become weaker after the global financial crisis (Haq et al., 2019), plausibly on account of the increased regulatory scrutiny that may have reduced the dependence on market monitoring, and a distrust in market signals.

Additionally, foreign banks seem to be more sensitive to private monitoring vis-à-vis domestic banks in a country (Li, 2019). Such banks, therefore, have been found to have a lower presence in countries with a strong market discipline mechanism (Bertus et al., 2008), due to their belief that their activities would be curtailed in such countries. Hence, countries with weak market monitoring mechanisms tend to attract more foreign banks, owing to information asymmetry and a relatively less competitive banking sector (Bertus et al., 2008). On the other hand, Sironi (2002) reports that strengthening market discipline in a country neither has any negative effect on the presence of foreign banks, nor does it reduce the competition among domestic and internationally active banks.

All in all, market discipline can serve to improve the banking and financial stability.

FUTURE RESEARCH AVENUES

The overview of literature presents multiple gaps that underline the way forward for scholars and academicians in this domain.

First, a comparative analysis on the extent of market discipline across various banks such as conventional banks, Islamic banks, government banks, private banks, cooperative banks and regional banks, taking into account their unique characteristics and target market can be undertaken. Second, scholars can examine how different institutional features affect the extent of auditor involvement in bank regulation, and how this involvement influences outcomes such as risk-taking behaviour, and market monitoring of banks. Third, it would be worthwhile to investigate the relationship between government bailout actions and the presence and efficiency of market discipline, including how the presence of government intervention may impact market discipline in different ways across various regulatory environments. Fourth, it may be interesting to examine the impact of banks' market driven actions, such as issue of new shares, rights issue, dividend, etc. on the discipline exercised by non-market bank stakeholders such as depositors and borrowers. Lastly, identification of regulatory and political factors (such as the strength and competence of governments) that may impact banks' risk-taking behaviour differently in each type of economy (developed and emerging) can be done, to examine how these factors could be leveraged to promote financial stability and mitigate systemic risk through a better disciplining mechanism.

CONCLUSION

Market discipline has been regarded as a popular tool to help supervisors safeguard the well-being of the banking as well as the financial sector. This paper aimed at providing a bird's eye view of the lesser explored side of the literature on market discipline, and providing certain directions for future research.

The overview, classified into three categories, that is, drivers of market discipline, monitoring agents and outcomes of market discipline, attempts to provide an understanding of the recent literature. The study holds relevance for scholars, practitioners, bank managers and various bank stakeholders. It also has implications for policymakers and regulators, since this study shall help them gather an understanding of the recent developments in the arena of bank market discipline.

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