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2023

Online at <https://mpra.ub.uni-muenchen.de/116984/>
MPRA Paper No. 116984, posted 09 Apr 2023 08:57 UTC

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Abstract

Many bank failures have occurred in history. The lessons learnt from past bank failures remind us that any bank can fail and they fail for different reasons. The first step to avoid the failure of a strong bank is to identify the factors that cause the failure of a strong bank. This paper focus on strong banks and identifies the reasons why strong banks might fail. The reasons why a strong bank might fail are numerous. The insights offered in the article can help existing banks to avoid a bank failure in the future. The insights offered in the article has financial stability implications which needs to be taken seriously.

Keywords: Bank failure, bank stability, financial crisis, capital adequacy, financial stability.

JEL classification: G21, G28.

February 2023

Published in Book: Exploring the Dark Side of Fintech and Implications of Monetary Policy

1. Introduction

The purpose of this paper is to identify the reasons why strong banks might fail. Banks play a significant role in society. As financial intermediaries, they collect funds from savers and depositors and allocate these funds to businesses and entrepreneurs, thereby fulfilling their main intermediary function of channeling funds from surplus units to the deficit units (Hellwig, 1991; Thakor and Boot, 2008; Bord and Santos, 2012). Banks allocate funds to economic agents to carry out investment and production activities towards economic growth.

But for banks to perform their function effectively, regulators want banks to be stable and strong (Einarsson and Marquis, 2001; Gorton and Winton, 2003). A term used to describe this is 'bank stability'. A bank is considered to be stable or strong when the bank has adequate capital, sufficient liquidity, high cost efficiency, high profitability, good management quality and low nonperforming loans, which together ensures that the bank is capable of withstanding unexpected losses and external shocks (Brauers et al, 2014; Köhler, 2015; Ozili, 2018). A bank is also considered to be 'strong' if its liquidity ratio, asset quality ratio, efficiency ratio and profitability ratio are within regulatory limits or when the ratios meet and exceed regulatory thresholds, thereby providing additional stability buffers. Banks that meet these criteria are considered to be 'strong', hence, the term 'strong banks'.

History is replete with many strong and powerful banks that suddenly collapsed. Examples are Northern Rock in the United Kingdom and Bear Stearns in the United States. Many strong banks, that were once reputable and dominated the banking industry, have lost pre-eminence and have either become a shadow of their former selves or have collapsed and disappeared. Bank failure is a major concern for regulators and market participants because of the possible contagion across the banking sector and the subsequent collapse of the financial system (Luu, Doan and Anh, 2021; Allen and Gale, 2000).

The fact that strong banks can suddenly fail is proof that there is an incomplete understanding of the causes of bank failure. Of course, some would argue that the choices, commitments and actions of the executive management of strong banks are responsible for the failure of strong banks. While these factors may play a role in the failure of a strong bank, there are deeper causes

of bank failure that need to be unmasked. Therefore, this paper identifies some of the reasons why strong banks might fail. An understanding of why strong banks might fail is crucial because it helps in developing prudential regulatory frameworks that enhance the stability and health of the banking sector. The insights gained from such understanding can help existing strong banks to avoid actions that could lead to bank failure in the future. The literature has examined the failure of weak banks (Braun and Deeg, 2020; Tamirisa and Igan, 2008; Tsagkarakis, Doumpos and Pasiouras, 2021; De Grauwe and Ji, 2013). But there has been very little discussion about the failure of a strong bank. This study focus on strong banks and identifies some factors that could trigger the failure of a strong bank.

This study contributes to the bank stability literature (see, Köhler, 2015; Ozili, 2018; Nier, 2005; Ozili, 2020; Chava and Purnanandam, 2011; Englund, 1999; Cabane and Lodge, 2022; Lskavyan, 2020). It adds to existing studies that examine how certain events have triggered the failure of banks – both weak banks and strong banks. The study extends the literature by turning the focus to strong banks and identifying the factors that could trigger the failure of a strong bank. This paper also contributes to the banking crisis literature. The literature show that strong banks are more likely to survive a banking crisis due to their strong prudential ratios. However, some bank failures may be unrelated to changes in banks' prudential ratios and I identify some factors that could trigger the failure of a strong bank.

The rest of the paper is structured as follows. Section 2 presents a literature review of the general causes of bank failure. Section 3 presents a case study of an erstwhile strong bank that failed. Section 4 presents some reasons why strong banks fail. Section 5 concludes the paper.

2. Related literature

Some studies define bank failure. For instance, Calomiris (2007) states that bank failures result either from unwarranted depositor withdrawals during a crisis event characterized by contagion or panic, or as the result of fundamental bank insolvency. According to Arena (2005), a bank failure can occur when (i) a financial institution is recapitalized by either the central bank or an agency specifically created to address the crisis or when a financial institution receives a liquidity injection from the monetary authority; (ii) a financial institution's operations are temporarily suspended ("frozen") by the government; (iii) the government closed the financial institution; (iv) the financial institution is absorbed or acquired by another financial institution. Cebula, Koch and Fenili (2011) show that a bank failure occurs when a bank is forced by regulators either to close or to merge with another banking institution.

Other studies examine the causes and factors that predict bank failure. Estrella, Park and Peristiani (2000) show that a simple leverage ratio and gross revenue ratio perform well in predicting bank failure over longer horizons. Liu and Ngo (2014) examine the effect of elections and political competition on bank failure. They find that bank failure is 45 percent less likely to occur in the year leading up to an election. Amel-Zadeh and Meeks (2013) argue that bank failures might occur despite banks having adequate capital and a solvent balance sheet. They also argue that banks may fail due to sudden shocks to liquidity positions as this was the major cause of the failure of Northern Rock. Antoniadou (2021) show that the cause of commercial bank failures during the Great Recession was exposure to the real estate sector. It was argued that the main exposure was credit to non-household real estate borrowers (Antoniades, 2021). Private-label mortgage-backed securities contributed to the failure of large banks (Antoniades, 2021). Also, failed banks skewed their portfolios towards product categories that performed poorly on aggregate which made their downfall unavoidable. Carmona, Climent and Momparler (2019) used extreme gradient boosting methodology to predict bank failure in the U.S. banking sector. They use data from 2001 to 2015 and find that lower values for retained earnings to average equity ratio, pretax return on asset ratio and the total risk-based capital ratio are associated with a higher risk of bank failure. Assaf, Berger, Roman and Tsionas (2019) examine how bank

efficiency during normal times affects bank survival, risk, and profitability during financial crises. They used data from five U.S. financial crises and preceding normal times. They find that cost efficiency during normal times helps to reduce the probability of bank failure during financial crises.

Fungacova, Turk and Weill (2015) show that decaying capital ratios, reduced liquidity, deteriorating loan quality, and depleted earnings are signals of an increased likelihood of bank failure. Chiaramonte, Liu, Poli and Zhou (2016), using data from U.S. commercial banks, find that Z-score can predict 76 percent of bank failure, and the prediction power of Z-score remains stable within the three-year forward window. Daley, Matthews and Whitfield (2008) examine banks in Jamaica, and find that real GDP growth, size and managerial efficiency were the most significant factors contributing to the failure of banks where bank failure was defined to include bailout and regulator-induced or supervised merger. Chennells and Wingfield (2015) show that several governments bailed out failing financial institutions. They proposed a bail-in framework which allows the authorities to make sure that shareholders and creditors of a firm bear the costs of failure without recourse to public funds. Meanwhile, Brown and Dinç (2011) show that a government is less likely to take over or close a failing bank if the banking system is weak.

Cooke, Koch and Murphy (2015) define liquidity mismatch as the risk of a bank being unable to fund increases in assets or meet its obligations as they come due. They show that liquidity mismatch increased in the U.S. banking sector during the run-up to the financial crisis especially among largest institutions. Cooke, Koch and Murphy (2015) suggest that exposing shareholders to more downside risk can successfully reduce bank failure. Luu, Doan and Anh (2021) investigate the impact of managerial ability on bank failure, and find that more ably managed banks experienced lower failure probability, and such banks have more adequate capital, better asset quality, greater efficiency in the allocation of resources, higher liquidity and lower risk. Ferreira, Lloyd-Braga and Modesto (2016) revisit the 'competition-fragility' and 'competition-stability' debate, and argue that more competition always raises the risk of bank default, and a higher intensity of competition in the loan market can result in an increase in deposit rates rather than a decrease of loan rates. Pruitt (2017) shows that a liquidity shortfall in the United States triggered the bankruptcy of several large commercial banks, and bank failures continue to occur

with 50 banks failing between 2013 and 2015. Colander et al (2009) argue that economists not only failed to anticipate the 2008 financial crisis; they may have contributed to it by encouraging policy makers and market participants to see more stability and risk-sharing benefits of derivatives before the 2008 financial crisis. Alvarez-Franco and Restrepo-Tobón (2016) show that managerial inefficiency and loan quality are strong predictors of bank failure. Subramanian (2011) shows that the global financial crisis was both a failure of markets and failure of regulation.

Cihak and Poghosyan (2009) analyze the causes of banking distress in Europe and identify a set of indicators and thresholds that can help to distinguish strong banks and weak banks. They found that cost-to-income ratios and basic liquidity indicators do not seem to have a good predictive power. Instead, a liquidity indicator that captures the share of wholesale financing in liabilities have a good predictive power of a banking failure. Also, the probability of distress in a bank is significantly higher if there was a recent distress in a bank of a comparable size in the same country. Andrews (2019) show that weak banks usually have zombie firms as customers, and this explains why weak banks experience distress and are more likely to fail. Zombie firms are firms that would typically exit in a competitive market. Zombie firms are also firms that earn just enough money to continue operating and service their debt. They have no excess capital to spur growth.

Other studies examine weak banks relative to strong banks. For instance, De Grauwe and Ji (2013) show that banks operating in countries with financially strong governments follow business strategies aimed at issuing too much subsidized debt which weaken their balance sheets and make them become more fragile, weak and less able to withstand future shocks. As a result, there will be weaker banks in countries with financially strong governments. In contrast, banks operating in countries with financially weak governments are forced to strengthen themselves because they are unable to rely on their governments to bail them out if they fail. As a result, there will be more strong banks in countries with financially weak governments. They conclude that financially strong governments breed fragile banks while financially weak governments breed strong banks. Brown and Dinç (2011) show that a government is less likely to take over or close a failing bank if the banking system is weak because of the too-many-to-fail effect which is stronger for larger banks and when there is a large government budget deficit. Tamirisa and Igan

(2008) found that, during credit booms, weaker banks increase lending faster than stronger banks which leads to credit booms. They conclude that supervisors need to carefully monitor the soundness of rapidly expanding banks during credit booms and they should monitor the credit expansion of weak banks.

3. A case study of a strong bank – Northern Rock

Background: Northern Rock bank was a strong bank in the United Kingdom. It became a victim of the 2008 financial crisis. Prior to being a bank, Northern Rock was previously a building society. It had demutualized and was listed on the FTSE 100. Soon, it became the fourth biggest bank in the United Kingdom by share of lending. Only 23 percent of its liabilities were in the form of retail deposits by June 2007. The remaining 77 percent of the bank's funding came from a combination of short-term borrowing in the capital markets and securitized notes and other longer-term funding sources (Shin, 2009).

The cause: When the sub-prime crisis started in America, the short-term funding market and interbank lending froze. What triggered the crisis event was the news that the French bank BNP Paribas had closed the three investment vehicles that invested in U.S. subprime mortgage assets using short-term borrowed money. BNP Paribas took the action because many other investment vehicles and financial institutions that tapped short-term financing had already begun experiencing difficulties in renewing their short-term borrowing (Shin, 2009). Although Northern Rock did not participate significantly in subprime lending, Northern Rock was financing its activities from the same pool of short-term funding (Shin, 2009; Keasey and Veronesi, 2008). Northern Rock bank could not access money from international financial markets or the money market anymore. They became the first casualty in the United Kingdom. The bank requested for liquidity support facility from the Bank of England because it had difficulties in raising funds in the money market to replace its maturing money market borrowings.

Run on the bank: The BBC broke the news that Northern Rock needed central bank support. The central bank announced that it would provide liquidity support to the bank. The next day after

the central bank announcement, there were large queues outside all the branch offices of Northern Rock bank. Depositors had queued up to collect all their deposits at once from Northern Rock. This became the first ever run on a British bank in 150 years.

Consequence: Months after, the bank could not outlive the stigma of the bank run it experienced. Customers did not want to keep money with Northern Rock bank. The bank was later nationalized by the UK government in early 2008. After the collapse of the bank, the bank's assets and operations were split into 'good assets' and 'bad assets' as well as 'good operations' and 'bad operations'. Virgin Money acquired the good part. The government bought the bad part and paid using taxpayers' money. The entire bank was later sold to Virgin money four years later. The demise of Northern Rock bank led to the loss of about 2,500 jobs. The collapse of the erstwhile strong bank 'Northern Rock' also led to the collapse of Northern Rock Foundation, a charitable trust which received 5 percent of Northern Rock bank's profit each year.

Lesson learned: The most important lesson learnt from the failure of Northern Rock, an erstwhile strong bank, is that the government's agreement to bail out Northern Rock, which triggered a run on the bank, should have been kept secret to prevent panic. The failure to keep the planned intervention secret led to the first run on a British bank since 1866. This demonstrates that a strong bank can fail when there is negative media publicity about its problems. People's reaction to the disclosure of bad information about a bank can lead a large number of depositors to withdraw deposits from the bank. This is one of many cases where a strong bank has failed despite having good prudential regulatory ratios. In the next section, I identify other reasons why a strong bank might fail.

4. Reasons why strong banks fail

Below are some reasons why a strong bank might fail despite having strong prudential ratios and a robust balance sheet.

4.1 Engaging in a bad acquisition

One quick indicator of whether a strong bank will fail is the type of acquisition the bank wants to close in on, and whether the acquisition will bring doom or bliss to the strong bank. The management of strong banks may focus more on the reward of an acquisition while downplaying the risks of the acquisition as they seek to get the buy-in of shareholders in support of the acquisition. Ideally, both the buyer and seller need to feel that they are getting a good value for the acquisition. The corporate seller has to convince its board and shareholders that the sale price is high enough to ensure that the seller gets good value from selling the business at that price. On the other hand, the corporate buyer wants to avoid paying too much for the acquisition, and convince its board and shareholders that they are getting a good bargain, and that the combination of the two company will bring great value to the buyer such as higher revenue, cost savings and other competitive advantages. Placing more emphasis on reward rather than on the risk of acquisitions has been a reason why large acquisitions by strong banks fail in the banking sector. The executive management of the strong bank and shareholders who gave the approval are to blame for bad acquisitions that lead to the collapse of an erstwhile strong bank. Acquisitions by strong banks go wrong when the management of the buyer bank fails to inform shareholders about the known risks of the acquisition and the full implication of known risks (Howe and Morillon, 2020). A strong bank may fail if the known risks are not properly managed on time, and when unknown risks emerge that affect the bank's market share in the industry. Acquisitions can also go wrong when the seller fails to disclose all its liabilities, especially contingent liabilities and implicit guarantees, to the buyer bank.

4.2. Reckless lending or pushing credit too far

Risky lending can be pushed too far to a point where borrowers default on loan repayment, and only a small amount of loan recovery can be made from pledged collaterals (Chen, Chou, Chang and Fang, 2015; Nguyen and Boateng, 2013). Strong banks have more freedom to lend money to as many borrowers as possible because they have strong fundamentals and have stable regulatory prudential ratios (Flannery, 1995; Brunnermeier et al, 2009; Tressel and Verdier, 2014; Watanabe, 2007). Banks with strong fundamentals can give too many loans to businesses in a specific sector or too much loans to few companies or individuals, thereby exceeding the regulatory single obligor limit and increasing concentration risk. This creates more credit risk, and may lead to unexpected loan defaults. Unexpected loan defaults can diminish the interest income of strong banks, and decrease their profit. Unexpected loan defaults can also translate credit risk to liquidity risk especially when strong banks need to use the repaid loans to pay depositors that come to collect cash from the bank. This can put strong banks in a difficult position and could lead to bank failure.

4.3. Board squabbles

Board squabbles can create fragilities in the corporate governance of a strong bank. Strong banks may face deep-rooted board squabbles on strategic and tactical issues. Board squabbles may arise from top executive's disagreement about a change of control. Board squabbles may arise from differences in opinions about the strategic direction and decisions of the strong bank. The disgruntled top executives would seek to take sides with major shareholders that share their own perspectives on strategic and tactical issues. This would lead to disagreement among major shareholders, and the disgruntled major shareholders may impose changes on the board that could increase in-fighting within the management ranks of a strong bank. This could lead to bigger problems in the bank as employees may feel divided on the overall positioning of the bank. This could trigger mass resignations, loss of bank customers and loss of market share in the industry. This could lead to the collapse of the strong bank.

4.4. Bank run

A bank run occurs when large number of bank depositors withdraw their money from banks simultaneously based on fears that banks will become insolvent or fears that banks will run out of money to pay all depositors (Brown, Trautmann and Vlahu, 2017; Ozili, 2018). A strong bank – located in the same neighbourhood where a distressed bank is located – may fail when a bank run on a distressed bank triggers a bank run on a strong bank. A bank run on distressed banks can trigger a bank run on strong banks located in the same neighbourhood where distressed banks are located. This is because depositors do not have full information about which banks are safe and which banks are about to collapse (Dijk, 2017). They do not know which banks will be the next to fail or go bankrupt. As a result, a large number of depositors would seek safety by taking out all their deposits from all banks both weak banks and strong banks. Consequently, the massive removal of deposits from strong banks would cause strong banks to fail because no bank in the world has all the money to pay its depositors at once.

4.5. Major Lawsuits

Lawsuit is one of the risks that banks face (Fiordelisi, Soana and Schwizer, 2014; Yuan and Zhang, 2015). This is because strong banks take more risks in search for higher profit or increase in market share. As a result, they are more likely to face increasing lawsuits that could potentially cost them millions of dollars in claims. Strong banks increasingly face lawsuits from their customers, competitors, and suppliers and for various reasons such as excess bank charges, wrongful seizure of collateral, contract breaches, fraud, disclosure breaches, etc. Strong banks often respond to lawsuits by hiring the services of some of the best law firms to help with litigation and contract services. They may also have a fully staffed legal services department to help protect the bank against risks arising from law suits. However, major lawsuits can damage the reputation of strong banks, and the lawsuit penalty payments can significantly deplete bank profit and capital. If shareholders are unhappy about the reputational damage to the strong bank, they may lose confidence in the strong bank and refuse to recapitalize the bank. This can lead to a collapse of the strong bank.

4.6. Withdrawal of banking license

Bank failure that arises from banking license withdrawal or revocation is not a technical bank failure. Rather, such failure is a statutory bank failure that arise from either a change in bank structure or a change in bank form or operations. A strong bank would face a statutory bank failure when its banking license is withdrawn or revoked by the banking regulator. The withdrawal or revocation of a banking license of a strong bank means that the strong bank can no longer conduct banking business anymore, and would lose its customers and its banking business. Regulators can withdraw a banking license when the strong bank no longer pursues regulated banking or financial activities, or when the strong bank is requesting a license to change to a different institutional category such as changing its business from being a banking institution to being an insurance company. Another scenario is when a strong bank merges with another institution and ceases to be a legal entity in its own right.

4.7. Ignoring the competition and innovation

Failure to compete and innovate could lead to the downfall of a strong bank. Strong banks may overestimate the strength of their banking business and turn a blind eye to the competition and innovation occurring in the banking industry. By failing to innovate and ignoring the competition, strong banks would be left behind. By the time the emerging competition and innovation matures, strong banks would realize that they are behind the competition and innovation, and they would be overwhelmed by the competition and innovation in the banking industry. They would struggle to catch up, and might fail. A strong bank that fails to innovate and blatantly ignore competition could face an impending bank failure.

4.8. Responding to competition and innovation – too little, too late.

When the banking industry changes, the changes are bound to result in losers and winners. The losers are not only those who fail to respond to the changes, the losers will also include those who respond too little or too late. When strong banks face unprecedented changes such as intense competition and innovation in the banking environment, they may not respond effectively to the changes. Strong banks that respond too late or too little to the competition will lose their customers to rival banks, watch their employees leave, and witness a significant decrease in fee income. One of the reasons why a strong bank may act too late or too little could be due to managerial stubbornness, sheer incompetence, inactive inertia, rigid devotion to the status quo, or the strong bank's refusal to change its established patterns of behavior even when the competition in the banking industry requires the strong bank to change its established patterns of behavior.

5. Conclusion

This paper identified the reasons why strong banks might fail. There are multiple reasons why a strong bank might fail, and the reasons offered in this paper are not exhaustive. The study identified the following factors that can lead to the failure of strong banks: engaging in a bad acquisition, reckless lending or pushing credit too far, board squabbles, bank run, major lawsuits, withdrawal of banking license, ignoring competition and innovation, and responding too late to competition and innovation.

The policy implication of this findings is that a strong bank can fail even if it has good micro-prudential regulatory ratios such as capital adequacy and nonperforming loans ratio. Micro-prudential regulatory ratios alone cannot guarantee the safety of banks. Strong banks will require a combination of careful planning, funding, skills, research work, extensive experience and expert knowledge to navigate the changing banking environment if they do not want to fail. Policy makers also need to focus on entity-based and activity-based regulation to forestall the failure of strong banks. Entity-based and activity-based regulation are justified when the failure of a strong

bank is caused by the decisions of its managers and the activities they engage in. Entity-based and activity-based regulation restrict the actions of a strong bank that could increase the risk of failure. Such regulation can impose constraints on one item of bank balance sheets and tighten such constraints for strong banks whose failure will have systemic risk consequences.

Future studies in this area can re-examine the case of strong banks and assess the type of regulation that is appropriate to regulate strong banks. Future studies can also examine other country-specific cases of the failure of strong banks. Future studies can also identify other behavioural factors that increase the risk of failure of strong banks.

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