

SITUATION IN THE WORLD BANKING; PROBLEMS AND POSSIBLE SOLUTIONS

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Abstract: This paper presents a review of the recent banking literature centred on the core themes of performance, risk and governance of financial institutions. We write this review against the backdrop of the recent financial crisis and the major changes it caused to banking sectors in many countries. Several themes emerge, but the overarching issue relates to the need to better understand bank risk-taking incentives and the implications for systemic stability. Specifically, there is a need for more work on: the role of safety net subsidies and how these relate to systemic risk; financial innovation and the adoption of new products and processes; and how innovative behaviour links to risk-taking, market returns and contagion. Future research could also be directed to provide a better understanding of the inter-connections between competition, capital, profitability, liquidity and risk.

Keywords: Banking, Risk, Strategies, Future of banking.

1. INTRODUCTION

Technological change revolutionized the processing and analysis of financial data, as well as delivery systems, which reduced bank costs, increased lending capacity and improved the quality and variety of banking services available to customers. In addition, financial engineering and risk management, coupled with the growth of new and broader derivatives markets, were believed to have improved banks' risk management capabilities.

Up until the middle of 2007, the general consensus appeared to be that high-performing banking systems, supported by excess capital and state-of-the-art risk management capabilities, and bolstered by appropriate market-based regulation, would continue to finance investment and stimulate economic growth at recent historical levels. However, over the past two years, turmoil in the global financial system has impacted severely on what once was a profitable, fast growing, dynamic and highly innovative banking sector. Many banks have suffered large losses and have had to raise additional capital, either privately or through their respective national governments, via a variety of bailout schemes (

Goddard, J., & Wilson, J. O. S. (2009). Competition in banking: a dis-equilibrium approach. Journal of Banking and Finance, 33, 2282–2292. These developments have led academics and policy-makers alike to reexamine the scale, scope, governance, performance and the safety and soundness of financial institutions.

2. BANK STRATEGIES AND PERFORMANCE

In recent years, competitive pressures on earnings streams relative to costs has prompted financial institutions to pursue diversification strategies, often including mergers and acquisitions (M & As). Furthermore, the tremendous growth of the securitization market, and its consequent collapse during the recent financial turmoil, has highlighted the importance of understanding the implications of bank strategies for the stability of the sector. This section presents a review of the literature on bank strategies, ranging from M & As to product diversification, and their impact on bank efficiency and performance (

Berger, A. N., & Mester, L. J. (1997). Inside the black box: what explains differences in the efficiencies of financial institutions. Journal of Banking and Finance, 21, 895–947. The motives for M & As and diversification are discussed and include: asset growth, realization of efficiency gains; reduction in idiosyncratic risk and increased profitability. The links between diversification and the volatility of income or market-based returns will also be explored. Further, we will discuss the impact of bank mergers on pre- and post-merger accounting performance, and stock price reactions to merger announcements.

3. DIVERSIFICATION

A large body of literature examines the determinants of corporate diversification and the subsequent impact of diversification on firm value. Motives for corporate diversification can be summarized under the market power, agency and resources views. We can suggest that the rationale for diversification of banks in the financial services industry is to grow, realize efficiency gains via economies of scale and scope, and reduce idiosyncratic risk.

Consistent with this rationale is the growth in non-interest income. For example, for US banks, non-interest income increased from 20 percent in 1980 and peaked at 43 percent in 2001. Since then, however, the share of non-interest income has tended to reduce and this has gone partially in hand with a renewed focus on retail banking, evidenced by rising trends in retail loan and deposit shares and an increase in the number of bank branches.

In general, empirical research which has examined the performance and diversification of banks in North America has tended to conclude that expansion into less traditional financial activities is associated with increased risk and lower returns (

DeYoung, R., & Roland, K. P. (2001). Product mix and earnings volatility at commercial banks: evidence from a degree of total leverage model. Journal of Financial Intermediation, 10, 54–84.

Outside the US, a less uniform picture tends to emerge. The diversification effects of non-interest income in 15 EU countries and conclude that non-interest income is less stable than interest income. However, they also find negative correlations between these two income streams which leads them to conclude (in contrast to the US studies) that non-interest income tends to stabilize bank earnings. This might explain why large European banks tend to perform better (in terms of market-based measures) over sustained periods of time. This is confirmed to some extent and find that risk is negatively related to the extent of bank trading activities. However, other European evidence contends that small banks that have diversified into non interest income activities are riskier than those that focus on traditional areas of business.

Most recently in press examine the effects of diversification and funding strategies on bank risks and returns for a sample of banks from 101 countries covering the period 1999–2007. They find evidence that banks with high proportions of non-interest income, or those that rely on non-deposit funding, tend to be very risky. This appears to provide clear evidence that there are limits to the extent to which banks can steer away from traditional financial intermediation activities.

3. MERGERS AND ACQUISITIONS

Recent studies have focused predominantly on the influence of bank mergers on the price and availability of small business credit. These studies have been driven not only by the desire to understand the market power effects of mergers, but increasingly by an interest in relationship lending and the role of soft and hard information in determining banks' credit decisions (

Boot, A. W. A., & Thakor, A. V. (2000). Can relationship banking survive competition? Journal of Finance, 55, 679–713. Evidence on the net effects of bank M&As and market consolidation on credit availability however is rather mixed. Some studies find that bank mergers reduce

credit availability for small borrowers and capital constrained firms, while others find that market power effects vary depending on the specific product considered (

Park, K., & Pennacchi, G. (2007). Harming depositors and helping borrowers: The disparate impact of bank consolidation. Federal Reserve Bank of Cleveland. Discussion Paper, 2007-04. Whether credit availability declines or holds steady in the aftermath of bank mergers, the bulk of the evidence suggests that credit becomes more expensive .

The recent financial crisis and the subsequent bailouts of banks and other large financial institutions have highlighted the implications for macroeconomic and financial market stability deriving from the increased size of banking firms. As recent experience shows, banks that grow very large are eventually viewed as 'too big to fail' (TBTF) or 'too big to discipline adequately' and may have the opportunity to exploit safety net subsidies (

Kane, E. J. (2000). Incentives for banking mega mergers: what motives might regulators infer from event-study evidence? Journal of Money, Credit and Banking, 32, 671–701. The literature on bank consolidation in the US prior to the recent crisis expressed growing concerns about TBTF subsidies (

Stern, G. H., & Feldman, R. J. (2004). Too big to fail: The hazards of bank bailouts. Washington, DC: Brookings Institution Press.

Closely linked to the arguments about consolidation and safety net subsidies are those studies that examine systemic risk. Systemic risk may have increased but not particularly as a result of the consolidation trend. However, there is evidence that trends in international consolidation and conglomeration are likely to have increased risks for large financial firms. Empirical studies that examine systemic risk issues in European banking, either by looking at bank profitability or stock-return volatility data, indicate that systematic risk has increased in recent years. Clearly there is a need for more work on the role of safety net subsidies in banking, especially since we now know that these are substantial. Future research could also investigate how such subsidies are linked to systemic risk (

Wheelock, D. C., & Wilson, P. W. (2009). Are US banks too big? Federal Reserve Bank of St Louis. Working Paper Number 2009-054a.

4. NEW TECHNOLOGIES

The impact of new technologies on the banking industry has been a key feature of research over the past twenty years. Several studies have examined patterns of adoption of innovations, including: Automated Teller Machines (

*Hannan, T., & McDowell, J. M. (1986). Rival precedence and the dynamics of technology adoption: an empirical analysis. *Economica*, 54, 155–171.; Automated Clearinghouse Settlement Systems; credit scoring technologies; and Real Time Gross Settlement Systems (*

*Furst, K., Lang, W. W., & Nolle, D. E. (2002). Internet banking. *Journal of Financial Services Research*, 22, 95–117.. We used multivariate logit regressions to identify factors driving the adoption of internet banking. Banks that are more likely to introduce internet banking services are: those that incurred high fixed costs relative to net operating revenues; those that are members of a bank holding company; or those that are located in urban areas. We examined the decision to invest in internet banking using a two-stage real options framework. Bank size, industry concentration and bank location were significant determinants of the probability of adoption. We can suggest that banks are more likely to adopt internet banking when uncertainty over the level of demand is low. We can find that the adoption of internet banking was slower in US states where average income is low, internet access is not widespread, financial institutions are older, and average bank size is smaller. We can find that banks are more likely to adopt transactional internet banking*

when competition is intense and when rival banks have already adopted. Recent evidence suggests that financial institutions face a greater probability of acquisition if they fail to adopt internet banking.

5. FINANCIAL INNOVATION AND SECURITIZATION

The creation and distribution of new financial products and services has influenced a broad spectrum of areas, ranging from retail financial services (particularly in the mortgage area) to corporate banking where new loan and structured products proliferate (*Frame, W. S., & White, L. J. (2004). Empirical studies of financial innovation: lots of talk, little action? Journal of Economic Literature, 42, 116–144.* The substantial growth in Over-The-Counter (OTC) derivative markets has had a major impact on the industry with exponential growth in 'new' credit products including credit-default swaps and traditional products that have derivative variants (such as mortgages with caps and collars, investment products with capital protection and so on). There has also been a boom in index tracking investment products, such as Exchange Traded Funds (ETFs) that generate beta returns based on underlying indexes (FTSE, Dow Jones, commodity indexes, property indexes, etc). The most significant recent financial innovation has been the growth in securitized products, particularly those backed by residential mortgages.

Recent research has been devoted to assessing how securitization affects banks' overall risk positions. Since securitization provides banks with additional liquidity, it might motivate them to shift their portfolios towards higher risk, higher return investments. We find evidence suggesting that banks use securitization via the loan sales market to engage in more potentially profitable, but higher risk activities also provides evidence to show that banks use the proceeds from securitizations to issue loans with higher than average default risk. In particular, the author shows that US banks engaged in extensive securitization prior to the 2007 sub prime crisis had significantly higher mortgage charge-offs after the crisis.

Overall, the growth in securitization activity has increased the linkages between banks and markets. From a positive perspective, the securitization trend offers the potential for banks to manage their balance sheets more effectively and to move risks to those most willing to bear it. This can result in a more efficient use of capital resources and a better allocation of risks in the system overall. Using US bank holding company data from 2001 to 2007, the authors evaluate empirically how the insolvency risk, leverage and profitability of securitizes would change if banks had to take the securitized assets back onto their balance sheet. They find that mortgage securitization reduces bank insolvency risk and increases bank leverage and profitability.

Securitization which is well managed and appropriately overseen, can offer a number of benefits. However we now know that there is a serious negative downside to such activity that needs to be taken into account. Since the onset of the sub prime lending crisis, securitization activity has collapsed and banks that were heavily engaged (both issuing and investing on their own account) have experienced major losses, if not failure. Subsequently, both U.S and European regulators have announced plans to limit the securitization activities of banks. The US Treasury Secretary, Timothy F. Geithner's, written testimony before the House Financial Services Committee, summarizes what went wrong and suggests how regulation can be strengthened to improve the safety and soundness of the financial system: Loan originators failed to require sufficient documentation of income and ability to pay. Securitizes failed to set high standards for the loans they were willing to buy, encouraging underwriting standards to sag. Investors were overly reliant on credit rating agencies, whose procedures proved no match for the

complexity of the instruments they were rating. In each case, lack of transparency prevented market participants from understanding the full nature of the risks they were taking. In response, the President's plan requires securitization sponsors to retain five percent of the credit risk of securitized exposures; it requires transparency of loan level data and standardization of data formats to better enable investor due diligence and market discipline; and, with respect to credit rating agencies, it ends the practice of allowing them to provide consulting services to the same companies they rate, requires these agencies differentiate between structure and other products, and requires disclosure of any "ratings shopping" by issuers. (23 July 2009).

6. BANK COMPETITION, OWNERSHIP, GOVERNANCE AND RISK-TAKING

Competition in banking is important because any form of market failure or anti-competitive behavior has far-reaching implications for growth, efficiency and welfare throughout the economy. Accordingly, studies fostering the understanding of market power or competition in banking are highly relevant and carry important implications for competition and macroeconomic policy, financial stability and for the effective regulation and supervision of the banking and financial services sector.

Research that examines the links between the competitive environment and bank performance has a long empirical tradition. Early research focused on structure-performance linkages starting from the Structure-Conduct-Performance (SCP) paradigm and the Chicago Revisionist School. The former contested that a small number of banks may be able to collude either implicitly or explicitly, or use independent market power, to charge higher prices (lower rates paid on deposits, higher rates charged on loans) so as to earn abnormal profits. The latter contested that finding evidence of a positive concentration–profitability relationship does not necessarily infer collusive behavior as it may simply reflect the relationship between size and efficiency (larger banks gain from scale and other efficiency advantages so more concentrated markets are inherently more profitable). The extent to which banks are able to earn high profits through collusion or the exercise of market power, or as a consequence of superior efficiency, has never been satisfactorily resolved (

Casu, B., & Girardone, C. (2006). Bank competition, concentration and efficiency in the single European market. Manchester School, 74, 441–468.,

Casu, B., & Girardone, C. (2009). Testing the relationship between competition and efficiency in banking: a panel data analysis. Economics Letters, 105, 134–137.

More research, using different measures of competition and risk, is required in this area, in order to resolve on-going theoretical controversy. A recent study by

Berger, A. N., Klapper, L. F., & Turk-Ariss, R. (2009). Bank competition and financial stability. Journal of Financial Services Research, 35, 99–118. is a useful step in this direction. The authors use a variety of risk and competition measures derived from a dataset of banks from 23 countries. The results are rather mixed and provide limited support to both the competition-fragility view and competition-stability views. Market power increases credit risk, but banks with more market power face less risk overall. Some of authors assess the extent to which deregulatory measures aimed at promoting competition lead to increased risk-taking across Indian banks. The results suggest competition encourages banks to increase risk.

Banking systems in various parts of the world often comprise public, private and mutual (cooperative and savings bank) institutions, which operate together in a competitive market. Since mutual banks often pursue social and economic development objectives (and may be subject to a lack of capital market discipline) their performance (as measured by profitability or efficiency) might be expected to compare unfavorably with that of profit-

maximizing privately-owned banks. Some authors suggest that a lack of capital market discipline weakens owners' control over management, leaving management free to pursue its own interests with few incentives to be efficient. Conflicts of interest between owners and managers may sometimes make the relationships between profitability and other variables difficult to disentangle (

Fama, E. F. (1980). Agency problems and the theory of the firm. Journal of Political Economy, 88, 288–307.

Financial institutions are subject to prudential regulation, designed to increase the efficiency of service provision and protect the interests of depositors. Regulation seeks to ensure that financial institutions remain solvent by building up reserves. The regulatory system also provides deposit insurance and lender-of-last-resort facilities. Market discipline imposed by investors is seen as a complement to such regulation. However, bank balance sheets are opaque because the quality of loans and investment portfolios are difficult to assess. Nevertheless, if investors can identify the condition of banking accurately, banks' stock prices will provide useful information on their economic condition. Financial crisis can be to an important extent attributed to failures and weaknesses in corporate governance arrangements which did not serve their purpose to safeguard against excessive risk taking in a number of financial services companies. Accounting standards and regulatory requirements have also proved insufficient in some areas. Last but not least, remuneration systems have in a number of cases not been closely related to the strategy and risk appetite of the company and its longer term interests.

The structure of executive compensation is likely to affect the behavior of senior managers when formulating bank strategy. Recent work tests whether there is an observed empirical relationship between compensation and bank behavior utilizing measures related to the value of executive share options, or some ratio of share options to total compensation (

Chen, C. R., Steiner, T. L., & Whyte, A. M. (2006). Does stock option-based executive compensation induce risk-taking? An analysis of the banking industry. Journal of Banking and Finance, 30, 915–945.. The structure of managerial compensation (proxies by the ratio of the value of share options to total compensation) leads to increased risk-taking. Evidence find that share options lead Chief Executive Officers (CEOs) to undertake riskier investments. Banks with CEOs whose incentives were closely aligned with the interests of their shareholders performed poorly during the recent credit crisis (

Fahlenbrach, R., & Stulz, R. Bank CEO incentives and the credit crisis. Journal of Financial Economics, in press.. Such poor performance was not anticipated by senior managers and subsequently led to large wealth losses.

6. CAPITAL, LIQUIDITY, PROVISIONING AND FAIR VALUE

Over the past 30 years, the role of capital in minimizing the impact of unforeseen losses has received much attention. In line with the Basel Capital Accords, national regulators have introduced minimum capital adequacy requirements, and in some cases supported by Prompt Corrective Action (PCA) procedures for regulatory intervention. Such prudential measures have increased the safety and soundness of financial institutions by providing a buffer against failure. Subsequent to the passing of these rules and prior to the current financial crisis, most banks have held capital in excess of the regulatory minimum (

Berger, A. N., DeYoung, R., Flannery, M. J., Lee, D., & Oztekin, O. (2008). How do large banking organisations manage their capital ratios? Journal of Financial Services Research, 34, 123–149. This could be for a number of reasons such as: high earnings retention; the perceived advantages associated with high economic capital (such as preserving charter values); acquisition plans; and external pressure from regulators or the financial markets.

Recent research has focused on the role of capital buffers in absorbing shocks to banks' capital base. Shocks to capital arise from sudden increases and decreases in risk (particularly credit risk). While bank lending is pro-cyclical, credit risk is countercyclical: defaults tend to increase during economic downturns. Capital regulation that requires banks to hold more capital during economic downturns than during upturns may tend to accentuate this effect. A sharp decline in bank lending in primary markets, following the re-pricing of credit and liquidity risks in secondary markets and downgrades of asset-backed securities in the US and elsewhere since 2007, illustrates that banks do not increase their capital buffers sufficiently during economic upturns to absorb loan defaults without reducing lending during downturns. Evidence for Spain finds a positive (lagged) relationship between rapid credit growth and loan-losses. This appears to be driven by less stringent lending standards (in terms of screening and collateral) during boom periods. Strong evidence that loans screened and monitored by female loan officers show lower default rates than loans handled by their male counterparts. Future research is likely to focus on ways in which regulations can be designed to make bank capital less pro-cyclical (

Beck, T., Behr, P., Güttler, A., (2009). Gender and banking: are women better loan officers? European Banking Center Discussion Paper, 2009–19. A number of possibilities exist such as: moving to simple leverage rules (equity as a portion of non-risk weighted assets) or linking capital rules directly to changes in macroeconomic conditions. Robust empirical research in support of such proposals is yet to be presented.

One of the key functions of the banking sector is to maintain liquidity. Banks use short-term liquid deposits to finance longer-term illiquid lending, and provide liquidity off the balance sheet in the form of loan commitments and other claims on their liquid funds. Banks play important roles in funding liquidity (the ability to raise cash on demand) and in maintaining market liquidity (the ability to trade assets at low cost), thereby enhancing the efficiency of financial markets. Banks dominate in the provision of funding liquidity because of the structure of their balance sheets as well as their access to government guaranteed deposits and central bank liquidity. There is considerable functional overlap between commercial banks and other financial institutions in providing market liquidity through devices such as loan syndication and securitization. Until the current financial crisis, the traditional liquidity role of banks declined because the growth of securitization offered cheaper ways to finance loans. In the US and UK, credit growth far exceeded core deposit gathering, leaving significant funding gaps that had to be financed via the inter-bank market and from securitization activity.

In the case of capital management many regulators allow banks to include loan-loss reserves as part of their required regulatory capital. Banks with low Tier 1 capital ratios (equity/assets) make higher levels of loan-loss provisions in order to increase their regulatory capital. This is easier and less expensive than raising Tier 1 capital via the capital market (

Hasan, I., & Wall, L. (2004). Determinants of the loan loss allowance: some cross country comparisons. The Financial Review, 39, 129–152. Many authors suggest that provisioning for loan-losses varies with the business cycle. Banks tend to make fewer provisions for loan-losses during an economic upturn (when economic conditions are favorable and the probability of business defaults is relatively low), but increase them in an economic downturn (when economic conditions deteriorate and loan defaults increase). Consequently, bank provisioning is said to be pro-cyclical, as it tends to re-enforce current developments in the business cycle. There is some theoretical and empirical evidence to support this notion (

Bikker, J. A., & Metzmakers, P. A. J. (2005). Bank provisioning behaviour and procyclicality. Journal of International Financial Markets, Institutions and Money, 15, 141–157.. An alternative view is

that banks are forward-looking, and that loan-losses are anti-cyclical. Under this view, banks recognize that during economic upturns the risks of lending increase as credit expands and risk assessment may become less thorough. Consequently, banks build up loan-losses in an economic upturn. However, given that loan-losses are supposed to absorb foreseen losses (and not unforeseen losses), accounting rules do not give banks unlimited latitude in setting loan-loss reserves. Ultimately, the relationship between provisioning and the business cycle could be determined based on whether static or dynamic provisioning rules apply. Static (often referred to as specific) provisions are based on the current performance of existing loans. When a loan becomes impaired, the bank will make an allowance for this by increasing its loan-loss provisions. This means that bank loan-loss provisions follow the economic cycle with some lag. Dynamic (often referred to as general) provisions are based on the expected future performance of loans. The assumption is that any loan carries some probability of default, and so should have some level of loan-loss provisions associated with it. If banks adopted this latter type of provisioning policies (dynamic provisioning) the relationship between provisioning and the economic cycle is no longer clear (

Perez, D., Salas, V., & Saurina, J. (2008). Earnings and capital management in alternative loan loss provision regulatory regimes. European Accounting Review, 17, 423–445..

A detailed account of pro-cyclicality issues in banking and recommend that provisioning should be dynamic and based on credit value adjustments (like market risk calculations under Basel 2). This is a topical area of current policy research. Future work could usefully be devoted to understanding the experience of banking systems (such as Colombia, Peru and Spain) which have used dynamic provisioning rules prior to the current financial crisis. A useful step in this direction is a recent paper on the provisioning of banks in Spain. In their empirical analysis, the authors find that despite the detailed rules for loan-loss provisions in Spain relative to other countries, managers still appear to continue to use provisioning as a discretionary device to moderate earnings volatility. Knowledge of dynamic provisioning is rather limited and it is too soon to tell whether banks located in countries such as Spain made lower losses than banks in other parts of the world because of such rules, or simply because they were more risk averse.

Focusing on fair value issues in pricing bank assets (particularly in distressed periods) is likely to be a fruitful area of future research. Comparing accounting treatments and the related performance of banks governed by rule based US FASB compared to the more flexible IASB should also offer relevant insights. Future research could engage in simulating the effects of marking more liabilities to market (or model) and different consolidation treatments of off-balance sheet entities under the two different accounting regimes.

7. SUMMARY

The causes, impact and policy response to the recent financial crisis will have a major impact in setting the banking research agenda way into the future. Several avenues for future research have been emphasized, either because they are under researched or because they have acquired a new impetus as a result of the crisis. The scope of this paper is vast, but is by no means an exhaustive review of recent literature. The first part (Section 2) relates to bank strategies and performance, i.e. corporate diversification, M&As, technology and financial innovation. The analysis has shown that there is a need for more work on the implications of bank strategies for financial sector stability. Given bank bailouts and other rescue packages that have been implemented post credit crisis, a deeper understanding of the relationship between systemic stability and safety net

subsidies is necessary. Similarly, studies focusing on financial innovation and the use of new technologies (and new products) should take into account their impact on risk-taking, market returns and financial stability.

Section 3 has evaluated the issues of competition, ownership, governance and executive compensation in banking. Competition is often thought to have a positive impact on banks' efficiency, quality of product and service provision, innovation and international competitiveness.

Finally, issues related to capital, liquidity, provisioning and fair value accounting have been reviewed in Section 4. The analysis has shown that the current and future research will continue to evaluate the effects of pro-cyclicality on the banking industry. Specifically, future research should illustrate ways in which regulation can be designed to make bank capital and provisioning less pro-cyclical. Future work could be devoted to understanding the experience of banking systems which have used dynamic provisioning rules prior to the current financial crisis. Research should also look into the inter-connections between capital, liquidity, performance and systemic risk. Last but not least, researchers should explore various issues in relation to fair value accounting including its potential usefulness in increasing bank transparency and disclosure.

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