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Are the Major Global Banks Now Safer?

Structural Continuities and change in Banking and Finance since the 2008 Crisis

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ABSTRACT

Are the largest global banks now safer in the wake of the Global Financial Crisis? *Focusing on a 'before' (2005) and 'after' (2015) balance sheet analysis of twenty-one of the largest American, British and European banks, we assess post-crisis banking performance. Much of the literature focuses on post-crisis regulation, but we argue instead that the main driver of change since the crisis has been structural conditions in banking and financial markets, particularly high levels of competition, bleak profit and share price conditions, and the largely unsolved too big to fail problem. Older as well as new forms of systemic risk thus prevail and many of the global banks still face major vulnerabilities.*

KEYWORDS Financial crisis, financial markets, banking reform, institutionalism, regulation, banking performance.

Introduction

A key question since the Global Financial Crisis (GFC) is whether the major global banks that were key actors in the crisis have now changed and become stronger and safer?

In answering this question, the responses by governments, officials and academics have varied. President Obama (2016) suggested that regulatory reforms had made the US financial system 'safer and more resilient'. The President of the European Central Bank, Mario Draghi (2016a), has celebrated 'substantial' regulatory reforms. Former US Treasury Secretary, Timothy Geithner (2017: 54) thinks the reforms 'have added a considerable margin of safety to the US financial system'. Former British Chancellor, George Osborne (2015), has claimed 'enormous progress' in resolving the 'British dilemma' of maintaining London as a global financial centre without exposing taxpayers to calamitous costs. The IMF (2017: ix) argues that 'banks in advanced economies have become safer in recent years, with stronger capital and liquidity buffers'. In contrast, academic assessments of the post-crisis environment tend to be less sanguine. Thomas Rixen (2013) thinks post-crisis regulation has been feeble. Eric Helleiner (2014: 11) describes a Status Quo Crisis in which 'the market-friendly nature of pre-crisis international financial standards [has] not been overturned in a significant way'. Similarly, Barry Eichengreen (2015) has unfavourably contrasted the ambition and effectiveness of the post-1930s reform agenda with current reforms.

These views all have one thing in common; they focus almost exclusively on regulation and far less on the actual behaviour or performance of banks. One way of approaching our central question would be to focus directly on the performance of banks and on the agency and behaviour of bankers since the 2008 crisis. The basic institutional insight here is that the agency and behaviour of bankers is conditioned by how they appraise and navigate the constraints and opportunities they confront. Even within the same national markets and institutional arrangements, however, Bell and Hindmoor (2015) have highlighted and explained the variability of banking behaviour prior to the crisis. Such variability is also apparent after it. Indeed, as this paper shows through detailed balance sheet analysis of a sample

of major global banks, some banks have fared reasonably well since the crisis, whilst others are performing far worse on a range of key measures, with many looking decidedly weak and unstable. This variability in performance, even within the same national markets, is interesting both empirically and theoretically and potentially has important lessons regarding regulation, banking practice and banker agency, and is well worth exploring in these terms.

We have decided however to take a somewhat different or at least more expansive approach. We argue that the regulatory reforms that have been the central concern of policy makers and analysts since the crisis have mainly and somewhat narrowly focussed on specific institutional attributes of banks, especially on regulations designed to strengthen bank balance sheets through measures to increase bank capital and liquidity. On the other hand, there has been far less focus on the broader structural context, especially the markets and market conditions in which banks operate. These latter structural/market conditions, we argue, have been more important than extant regulations in shaping bank performance, both before and since the crisis. The narrow regulatory focus compared to a broader structural focus stands in contrast to what happened during the banking reforms in the 1930s in the US, for example, when structural elements such as banking markets were a major reform focus and were fundamentally restructured. This omission is important because the current regulatory and institutional focus on repairing bank balance sheets misses key structural forces in banking markets that continue to leave most of the largest banks collectively less safe.

In the first part of this paper, we assess the current regulatory focus on bank balance sheets and review how banks have responded by examining the balance sheets of twenty-one of the largest American, British and European banks designated by the Financial Stability Board (2016) as being global systemically important.¹ We compare balance sheets at two points in time: in 2005, at the height of the financial boom, and in 2015. While there is no straightforward link between bank balance sheets and financial stability, we argue that this kind of ‘before’ and ‘after’ analysis can tell us a great deal about how the banks have or have not changed. In this part of the paper, we thus assess how banks have responded to regulation, mainly using metrics related to bank capital and liquidity.

We then argue that a regulatory focus on bank balance sheets has several significant limitations as a guide to banking behaviour and safety. First, and as others have argued, extant regulations are overly complex and face the ongoing threat of being gamed, reversed or watered-down (Bell and Hindmoor 2015; Mirowski 2013; Wolf 2014; Johal, Moran and Williams 2014; Moschella and Tsingou 2013; Young and Park 2013; Mügge 2014; Tsingou 2014). Second, and as noted, the focus on how banks have responded to regulation misses the impacts of the wider structural and market contexts in which

¹ These banks are: Bank of America, Citigroup, Goldman Sachs, JP Morgan Chase, Morgan Stanley, Wells Fargo and State Street (all banks with headquarters in the US), Barclays, HSBC, the Royal Bank of Scotland (RBS) and Standard Chartered (all banks with headquarters in the UK), Credit Suisse and UBS (Switzerland), Deutsche Bank (Germany), ING Bank (Netherlands) Unicredit Group (Italy), Santander (Spain), Nordea (Sweden) and Société Générale, Crédit Agricole and BNP Paribas (France).

banks operate. These later conditions are important, and, as we show, can undermine apparent progress on the regulatory front.

We then explore banking in a broader structural/market context. We emphasise four prominent factors that have played an important role in driving vulnerabilities and risk within banking: strong and continuing competitive pressures on banks for high returns in financialised banking markets; the growth of shadow banking, weak post-crisis banking profits and bank equity values; and the continuing huge scale and interconnectedness of the largest banks and financial institutions.

In terms of performance, there are some bright spots. Although there is a degree of inter-bank variation, bank capital and liquidity levels appear, overall, to be higher than they were in 2005, whilst dependence upon volatile wholesale funding has fallen. Furthermore, a number of the largest banks have also wound-back their investment banking activities and reduced their dependence upon non-interest sources of income. This is, in terms of financial stability, a positive story. The problem is that important underlying structural conditions in banking markets have not changed, particularly high levels of competition, the growing presence of off-balance sheet shadow banking activities, and the too big to fail problem. Moreover, a key change that has occurred since 2008 is that banks are now facing weak markets and bleak profit and share price conditions, rendering many banks vulnerable. Older as well as new forms of systemic risk thus prevail and many of the global banks we focus on, especially many of those located within the Eurozone, still face major vulnerabilities.

The implication of our analysis implies the need for states to more actively shape banking markets and not just bank balance sheets. Yet we argue that the agency of political leaders and regulators is constrained, and on this note, we explain why governments and regulators have tended to focus on narrower institutional facets of banking and appear reluctant to alter fundamental market structures.

Methods and Approach

Bank balance sheets comprised of detailed and audited information about assets, liabilities and sources of revenue, can tell us a great deal about what banks are doing and the risks they are carrying. In what follows we use balance sheet information collated and published by Bankscope to conduct a comparative balance sheet analysis.² To make our empirical task more manageable, we analyse the balance sheets of twenty-one American, British and European systemically important banks at the height of the economic and financial boom in 2005 and then, ten years later, in 2015. Because the banking sector has consolidated since the banking crisis, many of these banks, we might add, have become more not less important in the post-crisis era

² Bankscope is published by Bureau van Dijk. All the data cited here was last accessed in December 2016. In January 2017 Bureau van Dijk withdrew Bankscope replacing it with a new service: Orbis Bank Focus. Unfortunately, this new service only reports on bank data since 2011. See <http://www.bvdinfo.com/en-gb/our-products/company-information/international-products/bankscope>.

Our study has limitations however: we do not study all banks or study dynamics in any great detail within the shadow banking sector. Moreover, our ‘snapshot’ analysis takes no account of the ways in which balance sheets change on a year-by-year basis. Our findings are also provisional because, even in 2015, memories of the 2008 crisis remained strong. An important future test of financial stability will inevitably come during the next financial boom when those who experienced the 2008 crisis may have departed, and analysts are, once more, convinced that ‘this time is different’ (Reinhart and Rogoff 2009).

Banking in a Regulatory Context

Public anger about the banking crisis, and subsequent bail-outs and banking scandals, has opened-up the previously ‘quiet’ (Culpepper 2011) world of banking and bank regulation to extensive public scrutiny and extensive regulatory reform. Central bankers and regulators now routinely question the efficiency of markets and the capacity of banks. The Chairman of the Royal Bank of Scotland (RBS) (2015: 1) has stated that ‘the global regulatory and supervisory environment for banks has changed beyond all recognition’. Reforms have been particularly focussed on bank balance sheets, however, especially on bank capital and liquidity, and also on efforts to better control financial trading, and on resolution regimes. New macroprudential regulation has also been introduced, premised upon a recognition of the possibility of irrational exuberance, asset bubbles, systemic risk, and poorly aligned incentive structures (Bell and Hindmoor 2014b; Baker 2013; Tucker, Hall and Pattani 2013; Barwell 2013). In this section, we review the main institutional reforms and their balance sheet outcomes, especially in relation to capital and liquidity. We then review ongoing limitations and vulnerabilities regarding regulation.

Capital

Bank capital is shareholders’ equity, a banks’ own reserves and retained earnings. Capital is important because banks with higher capital buffers (that is a higher ratio of capital to assets) are more likely to be able to withstand significant losses whilst remaining solvent (Bell and Hindmoor 2017). In the aftermath of the 2008 crisis, thin capital buffers came to be seen as a key source of financial fragility, with the then US Treasury Secretary, Tim Geithner, suggesting that the ‘top three things to get done [in reforming the financial system] are ‘capital, capital, and capital’ (Leonhardt 2010; also, see Financial Stability Forum 2008: 12; Turner 2009: 7).

Since 2009, new regulations relating to the size of minimal capital buffers, countercyclical capital buffers, the stress testing of capital adequacy, and, in the US, additional capital requirements for overseas-based banks, have been introduced (see Vives 2016: 58–62 for a review). Critics such as Anit Admati (2015) and the former chair of the UK’s Independent Commission on Banking, Sir John Vickers (2016), have argued that post-crisis capital buffers remain inadequate and have not risen nearly far enough. The Bank of England (Arnold 2016), The European Central Bank (Draghi 2016b) and the

Federal Reserve (Rosengren 2013) argue not only that capital buffers are much higher than they were in 2007/8, but that they are now high enough to withstand the scale of losses experienced then. Geithner (2017: 59) argues that in the US capital levels are now much higher, the ‘quality of the capital bank’s hold... has improved greatly’, and the regulatory net regarding capital is now much wider.

We rely upon a measure of absolute leverage, that is the ratio of total assets to total equity, as our measure of bank capital. This is a better measure than the ratio of risk-weighted assets to equity, which can often be poorly calibrated (Haldane and Madouros 2012). Figure 1 shows the level of absolute leverage at each bank in 2015 as a percentage of its leverage in 2005. What this shows is that there is only one bank, ING Bank, at which overall leverage is now higher than it was in 2005. In several banks, leverage has fallen dramatically. At Morgan Stanley, leverage is 33% of its 2005 level. At UBS, it is 41% of its previous level; at Goldman Sachs 43% of its previous level; and at Barclays 45%. On average and across all twenty-one banks, leverage has fallen substantially and is only 69% of its 2005 level.

Figure 1 2015 Leverage as a % of 2005 Leverage.

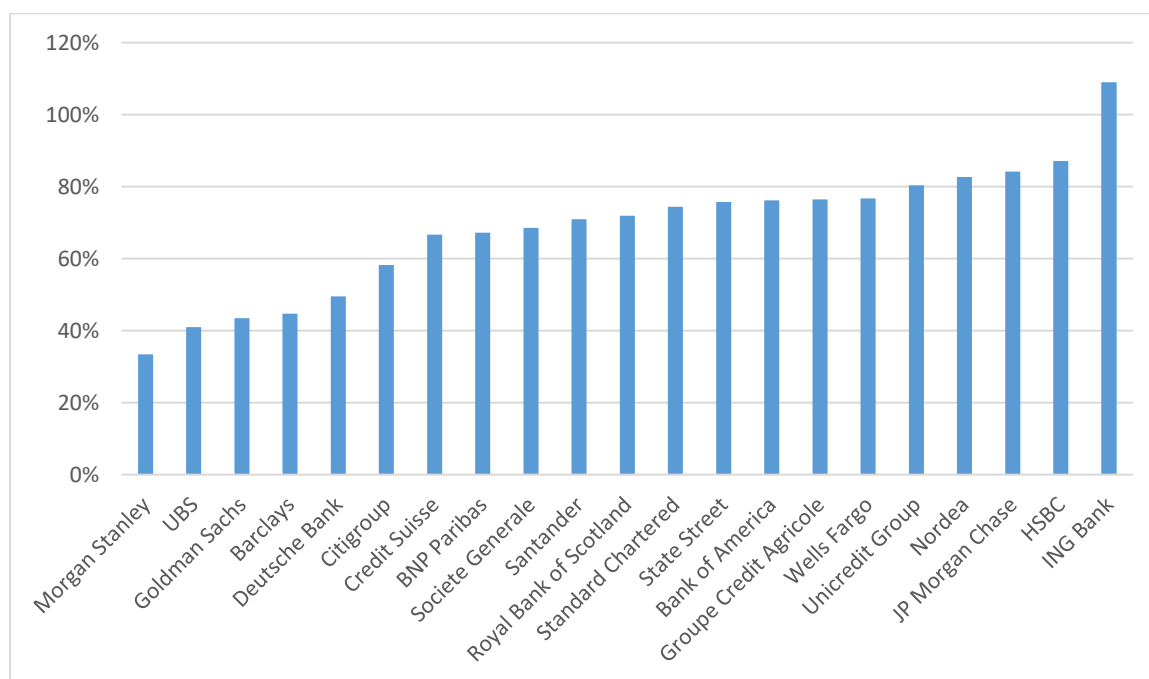
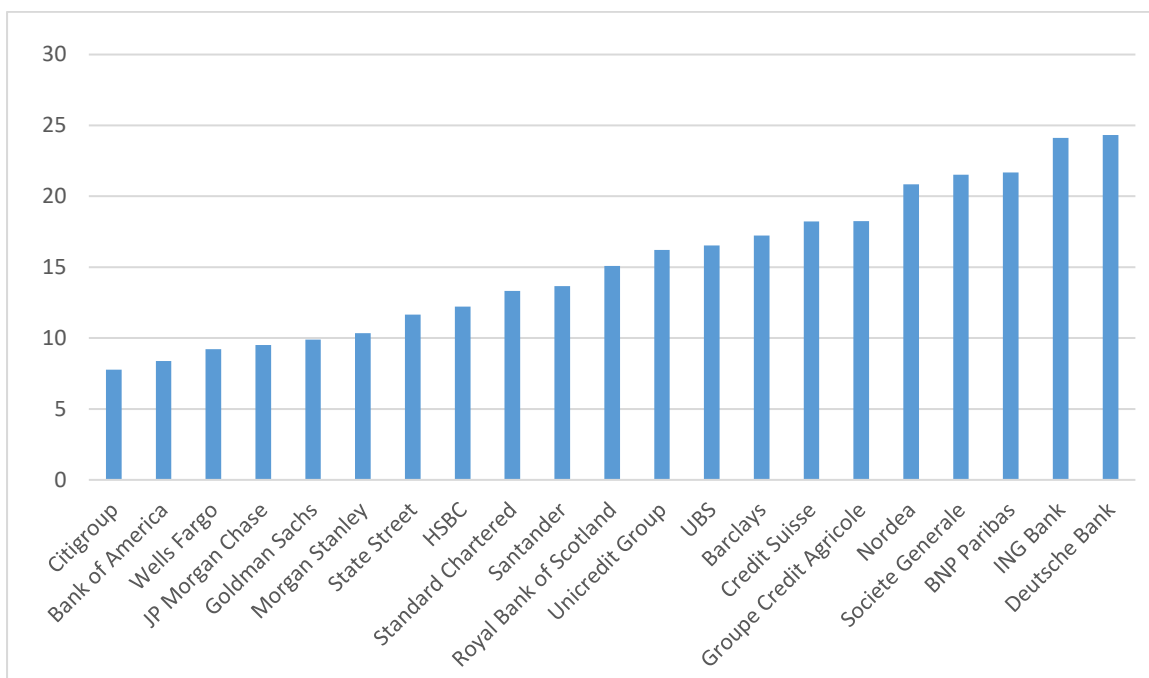


Figure 1 tells us about changes in leverage levels since 2005. Figure 2 shows absolute leverage ratios in 2015. The average leverage ratio was 15.2 of assets to 1 of equity, with a range running from just under 8: 1 (Citigroup) to 24: 1 (Deutsche Bank). In comparing the results of Figures 1 and 2, we note that several banks which have, since 2005, reduced their leverage by the least amount, including HSBC, Wells Fargo and JP Morgan, nevertheless still have amongst the lowest absolute overall leverage ratios. These banks maintained relatively low levels of leverage in 2005 and have not had to reengineer their balance sheets to the same extent most other banks have. Conversely, and despite reducing its leverage

to just 50% of its 2005 level, Deutsche Bank still has the highest absolute leverage ratio: a fact which goes some way toward explaining its recent share price travails. A second point to make is that there is a clear geographic basis to the differences in absolute leverage. The American banks have the lowest leverage (an average of 9.5: 1), the Eurozone banks the highest (an average of 19.5: 1) with the UK banks somewhere in between (an average of 14.4: 1). This, in part, reflects enduring national-level differences in regulation. In Europe, lobbying by the French and German governments resulted in a significant dilution of the Basel III capital rules and the introduction not only of minimum but of maximum capital buffers (Bell and Hindmoor 2016). The difference this has made to absolute leverage levels is clearly apparent in Figure 2.

Figure 2 Leverage in 2015 (ratio of total assets to total equity).



Liquidity

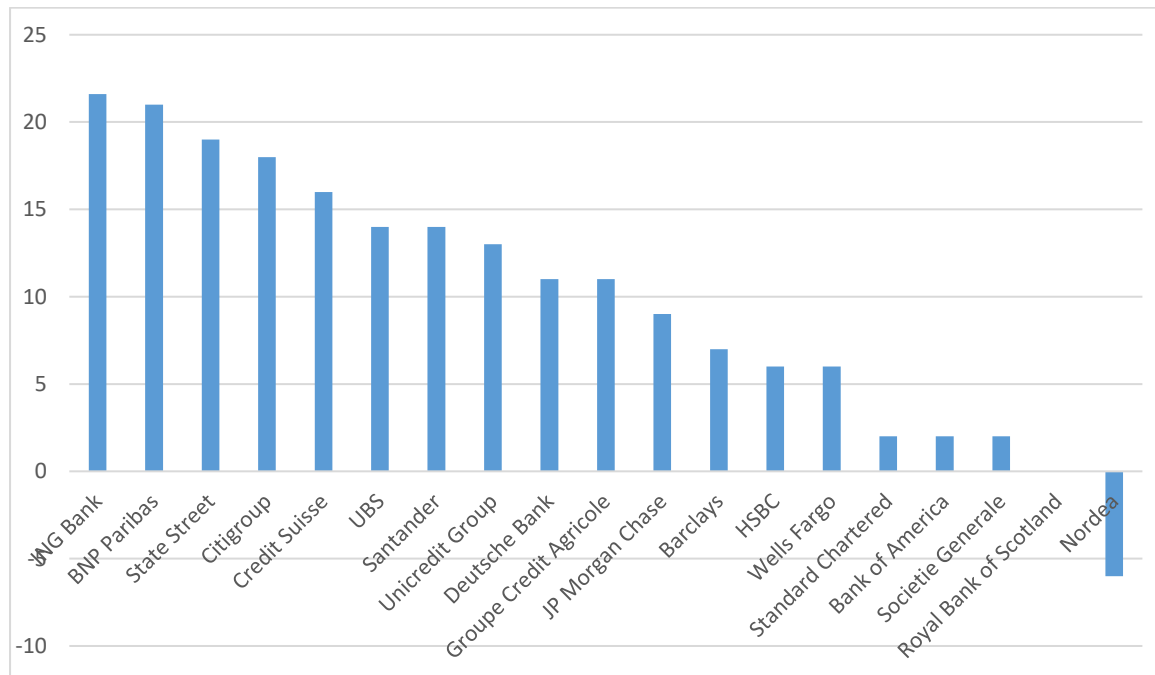
Structurally, banks have always faced a maturity mismatch on their balance sheets; lending long, but borrowing short. This can create funding and liquidity pressures, especially during a bank run. Prior to the 1980s, a central focus of bank regulators was on ensuring adequate levels of liquidity – a measure of the ability and ease with which assets can be converted to cash. In the decades prior to the crisis, regulators' interest in liquidity waned because bank executives and regulators assumed that securitisation and the development of wholesale funding markets meant banks would always be able to sell assets and raise additional funds at short notice (Goodhart 2011).

One of the important lessons of the 2008 crisis was that liquidity matters a great deal to bank solvency and overall financial stability. Following the failures of Northern Rock in August 2007, Bear Stearns in March 2008 and, of course, Lehman Brothers in September 2008, previously liquid asset and

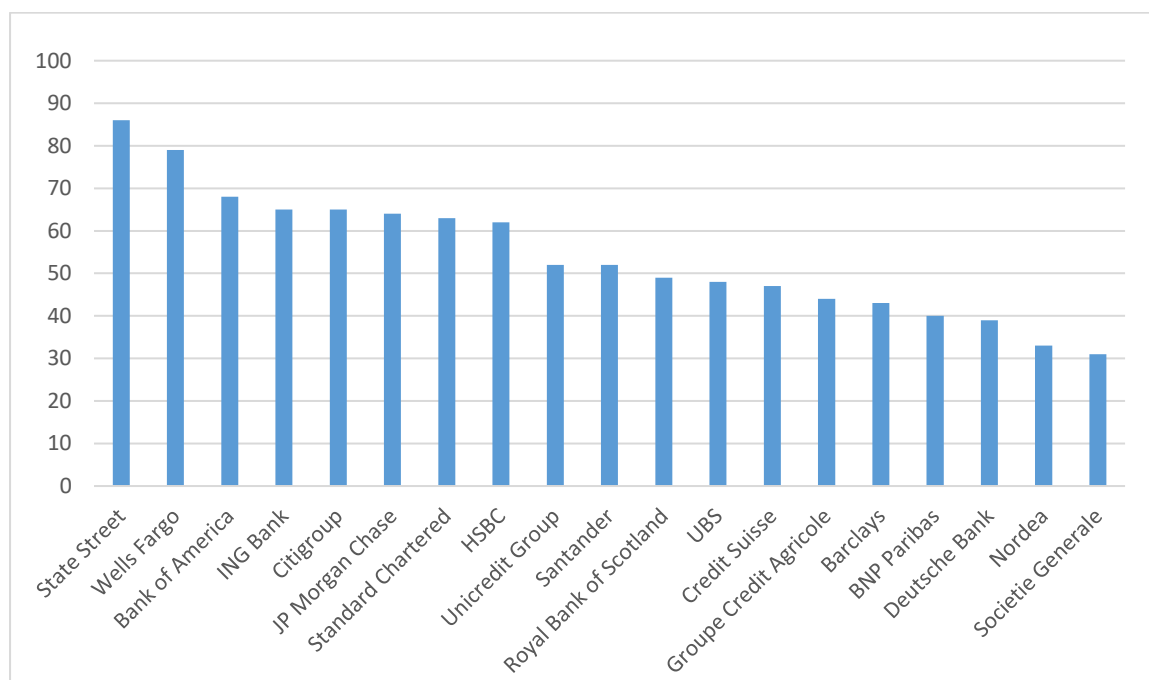
funding markets froze, and banks found themselves unable to sell assets at any price or raise additional wholesale funding at any interest rate premium. The basic problem here was adverse selection. Banks could not sell their assets because potential buyers feared they might be sold the ‘toxic’ assets that banks were desperate to off-load. Nor could banks borrow money because potential lenders had no way of knowing which banks were teetering on the edge of insolvency. Lenders also had good reason to think that any bank which needed to borrow money urgently must be in a great deal of trouble and might not be able to repay it.

A key focus of post-crisis regulation has therefore been upon the development of two new funding rules to enhance liquidity (Basel Committee on Banking Supervision: 2013). The first, the Liquidity Coverage Ratio, is designed to ensure that banks have enough liquid assets – primarily cash and government securities – that can, even in adverse market conditions, be easily sold. The second, the Net Stable Funding Ratio, requires banks to maintain a sustainable funding structure by placing a cap upon the amount they can borrow on wholesale funding markets relative to their level of deposits or equity. Amidst intense lobbying by banks and by the banker’s international lobby group, the Institute of International Finance (2010), the argument was put that new liquidity rules would limit the capacity of banks to lend money and so prolong the post-crisis downturn. The implementation of these new rules has since been delayed.

In terms of the before and after comparison being conducted in this paper, the key question is therefore about the extent to which, in a post-crisis environment, bank executives – perhaps under pressure from market analysts, shareholders and credit rating agencies – have chosen to strengthen their liquidity. We focus here on exposure to wholesale funding for which it is possible to construct a detailed picture. Bankscope does not publish figures on wholesale borrowing on a bank-by-bank basis. What it is possible to instead do is to calculate the value of equity and deposits as a share of assets at each bank. This can serve as a proxy measure for the level of wholesale borrowing and thus exposure to wholesale funding markets. This is because bank balance sheet assets must match balance sheet liabilities, which, in turn, means that any shortfall in deposits and equity relative to assets must be compensated for through wholesale borrowing. Figure 3 shows the percentage point increase or decrease in the value of equity and deposits relative to assets across nineteen banks between 2005 and 2015 (Goldman Sachs and Morgan Stanley are excluded here because although they converted to bank holding status in 2008, they essentially remain investment banks with very low deposit bases). ING Bank, BNP Paribas, State Street, Citigroup and Credit Suisse have increased their equity and deposit base relative to the size of their assets by more than 15 percentage points. On the other end of this scale, Standard Chartered, Bank of America, Société Générale and RBS have not significantly reduced their dependence upon wholesale funding, whilst the Danish bank Nordea has significantly increased it. Overall, there has been a tangible improvement, with, on average, a 9-percentage point increase in deposits and equity as a share of assets. This finding supports recent analysis by the Bank for International Settlements (BIS) on banks’ reduced exposure to wholesale funding (BIS, 2016: 103; BIS, 2017, 84).

Figure 3 Percentage point increases/decreases in Equity and Deposits as a % of Assets, 2005–2015.

Extending this analysis, figure 4 shows absolute levels of total equity and deposits as a share of total assets at the same set of banks in 2015. Once again, what is immediately apparent here is the significant level of variation across the banks. At State Street, Wells Fargo, Bank of America, ING Bank, Citigroup, JP Morgan Chase, Standard Chartered and HSBC, equity and deposits amount to more than 60% of the value of total assets. On the other hand, in the European banks – BNP Paribas, Deutsche, Nordea and Société Générale—equity and deposits account for less than 40% of assets. There is, once again, an obvious geographic and regulatory basis to these differences. In the American banks, equity and deposits are on average 72% of assets. In the British banks, they are 54% of assets and in the Eurozone banks just 43% of assets.

Figure 4 Total Equity and Deposits as a % of Total Assets in 2015.

Judged in terms of their capital and liquidity positions, our overall assessment here is that whilst there is a great deal of bank-level variation, the balance sheets of the largest banks have, overall, become somewhat safer. But there are important political and institutional caveats to add to this conclusion even before we come to discuss broader market and structural conditions.

Despite hard-won gains, studies have shown how regulatory reform efforts across a range of issues have frequently been stymied by successful lobbying by the banks (Pagliari and Young 2014); by the desire of politicians to protect their own national banks and financial trading centres (Howarth and Quaglia 2013); by gaming and regulatory arbitrage (Bell and Hindmoor 2014a); and by a neoliberal backlash which maintains that the financial crisis was caused not by too little but by too much government regulation (Wallison and Burns 2011). Efforts to roll back banking regulation in the US by President Trump reflect such pressures and values.

Institutionally, bank regulators also face problems. Former Bank of England Governor, Mervyn King (2009), has warned about the ‘sheer creative imagination of the financial sector in dreaming up new ways of taking risks’: leading him to conclude that ‘the belief that appropriate regulation can ensure that speculative activities do not result in failures is a delusion’. The danger here is that regulators and supervisors, given the approach they have adopted, are being forced into an endless game of catch-up, attempting to keep abreast of growing complexity and the evolving minutiae and innovations in the financial world. The President and CEO of the Federal Reserve Bank of Dallas, Richard Fisher (2013), argues that ‘regulatory supervision, by definition, is always at least one step behind the actions taken by market participants. The more complex the rules, the more difficult it is to bridge the gap due to the complexities of financial markets’. This is significant because, in relation to capital, liquidity and

financial trading, regulations have become more complex. For example, the Basel I standards ran to 30 pages, whilst Basel III runs to over 600 pages of rules. The Dodd–Frank Act in the US is 2,330 pages long, with over 22,000 pages of detailed regulations currently issued and with more coming. Banks and financial institutions have also been able to outspend the regulators in political and court battles and have often poached key regulators. In such circumstances, as Geithner (2017: 60) argues, ‘regulation can adapt, but it will always be behind the curve’. And as Kenneth Rogoff (2012) argues, ‘as finance has become more complicated, regulators have tried to keep up by adopting ever more complicated rules. It’s an arms race that underfunded regulatory agencies have no chance of winning.’ According to *The Economist* (2012), a banker close to the action in the US has predicted, ‘a decade of grind, with constant disputes in courts and legislatures, finally producing a regime riddled with exemptions and nuances that may, because of its complexity, exacerbate systemic risks rather than mitigate them’.

The current reliance on balance sheet regulation thus faces significant political and institutional headwinds. But more importantly, there are key sources of banking risk that stem from broader structural forces in banking and financial markets. Compared to balance sheet issues and the regulatory focus on bank capital and liquidity, these structural factors have not been a key focus of debate or regulation.

Banking in a Market Context

There were major structural changes in banking markets in the core crisis–hit economies in the run–up to the 2008 crisis. Structural factors here are understood essentially as material force, and incentives emanating from markets and primarily include the changing nature of banking markets as well as bank exposure to the pressures from equity markets. Structures have institution–like effects in the way they shape the incentives and options available to agents. Structural effects will also typically be mediated by agency and institutions and hence, from the perspective of given agents such as bankers, the impact and indeed the meaning of structural forces will be partly shaped by the institution in which they are located.

The standard structural predicament faced by banks which makes them inherently unstable is that they are subject to panics and runs, largely because they confront a ‘maturity mismatch’ based on lending long but borrowing short. In recent decades there have been further structural changes to banking markets that have increased vulnerability. Hardie et al. (2013) have pointed to an uneven pattern of convergence in banking systems across G7 countries prior to the crisis, towards a system of ‘market–based banking’ featuring, in particular, originate and distribute mortgage trading and highly leveraged financial trading. This marked a shift away from ‘traditional banking’ where commercial banks focussed on loans retained on their balance sheets. This shift has also placed pressure on coordinated, bank–based systems (such as in Germany) where banks ‘are unable to perform the role of bulwarks against market pressures that is assigned to them by the concept of a bank–based system’ (Hardie et al. 2013: 708).

Whilst useful, the analysis by Hardie et al. is largely focussed on pre-crisis developments. It is also too generalised to discriminate between quite different banking markets across a number of advanced economies, all of which are broadly ‘market-based’ but which behave differently. For example, amidst the 2008 crisis, many banks in the financial heartlands of the US and UK (as well as some major European banks that traded in the London and New York markets) imploded, whilst banks in countries such as Australia and Canada largely avoided the risky highly-leveraged trading at the centre of the crisis (Bell and Hindmoor 2015).

Market Competition and Tough Conditions

Bell and Hindmoor (2015) argue that the crucial structural difference across such markets centres on the level of competition; particularly equity market pressures for high returns and similarly derived pressures from hostile takeovers; all of which is associated with the growing ‘financialisation’ of markets (Zwan 2014). The banks that imploded in 2008 were generally led by bankers who were ‘true believers’ in the new banking markets (Bell 2017). But, more fundamentally, it was the intense competitive pressures in core crisis-hit banking markets that generated strong incentives to record, on a quarterly basis, sector-beating profits and returns-on-equity (Bell and Hindmoor 2015).³ By contrast, Australia and Canada have more regulated and structured markets that prevent the take-over of the major banks, thus reducing competitive pressure to well below that found in the crisis-hit markets where hostile takeovers and equity market pressures acted as a stern discipline on banks. As Gowan (2009: 9) argues, ‘ensuring the safety of the system requires that competition between banks be suppressed’. Yet official opinion and policies after 2008 still endorse market competition in banking as an efficiency stimulus. As Goodhart argues:

How much competition within our banking systems do we actually want? Remember that the measures taken after the Great Depression in the United States were primarily and intentionally anti-competitive... one of the reasons why the Australian and Canadian banking systems have done so much better was... in part because the Australian and Canadian banking systems (at least domestically) were in some part protected from competition (RBA 2010).

The former Governor of the Reserve Bank of Australia, Ian Macfarlane (2009: 42), argues that by reducing the threat of corporate take-over, Australia’s so-called four pillars banking policy reduced the pressure upon the largest banks to protect their share price and short-term profits by engaging in ‘excessive lending and risk taking’. The policy reduced competition ‘to a sustainable level and thus prevented our banks from moving too far in the risky direction... that saved us from the worst excesses that characterised banking systems overseas’. A senior Australian banker agrees: ‘in a market

³ There is a tangled literature on the relationship between market competition and stability with economists maintaining that increased competition is associated with financial stability and with financial instability (see Vives 2016 for a recent review).

dominated by the four major banks none of us had compelling incentives to go down the risk curve and grow our books as much more contested markets have' (quoted in Bell and Hindmoor 2015: 263).

By contrast, in the crisis-hit markets, financial deregulation in the two decades prior to the crisis had increased competition and shaved lending margins, greatly increasing the pressure upon bank executives to secure alternative sources of profit. The rise of financialisation and share-holder power in equity markets and associated changes in corporate governance also occurred during this period and further increased profit pressures. Concurrent changes in executive compensation also worked in this direction, creating a de facto alliance between bank executives and share-holders for increases in share value and high short-term profits. The banks in the core markets generally responded robustly to these institutional pressures, producing ever-higher profits through financial innovation and securitisation, involving expanded, re-engineered and leveraged-up balance sheets. This shift, and a wave of M&A activity, also saw banks become too big to fail. Increasingly globalised links in securitisation and wholesale funding markets also meant that the largest banks became too interconnected to fail. The market environment as a structural context thus changed profoundly, strongly shaping banking behaviour, eventually leading to crisis.

Some important structural characteristics in banking markets have not altered significantly since the crisis. This certainly applies to competitive pressures. True, partly because of bankruptcies, mergers, and a 'flight to safety', there has been growing market concentration in banking in some countries. Between 2005 and 2015, the value of the assets of the five largest banks in the UK as a share of total commercial banking assets increased from 69% to 71%, whilst in the US—traditionally a highly-fragmented market—it increased from 39% to 46% (in Germany it fell from 86% to 84%, in Switzerland from 92% to 89% and in France it remained at 73%) (World Bank 2017) (indicator GFDD.01.06). Nevertheless, in the post-crisis era, competitive pressures remain intense. In August 2016, the London-based 'rogue' trader, Kweku Adoboli, who had lost UBS over £1.5bn, argued that, post-crisis, financial traders working within the banks still faced the same pressure to make profits 'no matter what' and that 'if investment banks continue to chase the same level of profitability as they have in the past, the only way to generate those profits is to take more risk' (Chapman 2016). At an executive level, the pressure to sustain high profits is well illustrated by the travails of Barclays. Having, in 2012, committed itself to significantly pruning its investment banking operations, Barclays then appeared to reverse course and terminated the contract of its new Chief Executive, Anthony Jenkins, in 2015, amidst reports that investors were concerned about falling profits and share dividends. A report in Business Insider UK noted, at the time, that:

Barclays sacked CEO Antony Jenkins for effectively doing the job he was originally called in to do ... when he took the top job in 2012, Jenkins was charged with repairing the tattered reputation of the bank by tackling its 'toxic culture,' downsizing the investment bank, and focusing more on retail operations. And he did just that — except

maybe too quickly, and by too much. Crucially, he did it without boosting earnings at the same time (Brinded 2015).

In a market environment which remains highly competitive, the problem the banks collectively face is that, post-crisis, profit opportunities have diminished. Martin Taylor (2016), an external member of the Bank of England's Financial Policy Committee, describes banks as now operating in a 'tundra-like' environment in which 'it's cold ... the landscape is very flat, and trees do not even pretend to grow to the sky'. By 2015, banks had already been hit by litigation costs exceeding \$260bn (Noonan, 2015). Interest margins have also declined in an environment in which central bankers have held interest-rates at close to zero per cent. In 2005 the average interest-rate margin across our sample of 21 banks was a low 1.5% but by 2015 this had fallen to 1.46% (with the highest spreads of 2.9% at Wells Fargo and Citigroup and the lowest margins of 0.8% at Société Générale and Nordea). A further challenge has been the sluggish rate of economic growth in the core economies since 2009. In its 2016 Global Financial Stability Report, the IMF (2016: 33) warns that: 'cyclical pressures have hurt the outlook for bank earnings generation. Low inflation and low growth act to reduce loan demand and therefore the outlook for future bank earnings'. Across the OECD, GDP growth averaged 2.6 % from 2001 to 2007, but from 2008–2014 it averaged only 0.9%. This has put a damper on credit growth and lending. In the US and UK, credit growth averaged just over 3% between 2009 and 2016: compared with 8% between 2001 and 2007. Within the Eurozone, credit growth was negative between 2012 and 2015 (Khan 2016).

Bank Responses and Re-positioning

How have the largest banks responded to the challenges of the new market environment in which they find themselves?

In the post-crisis context, the IMF (2014a: 25) reports that many banks have reduced their global footprint and financial trading exposures and have placed a greater emphasis upon traditional commercial and mortgage lending in their domestic markets. Many banks are thus attempting to recolonize the traditional banking space. The problem, however, is that this has become a very crowded and low return space. Investment banks have also pulled back and refocused on more traditional wealth management and mergers and acquisitions activity. UBS (Sibun 2011), Credit Suisse (Treanor 2012), Deutsche (Reuters 2015), Citibank (Kapner 2012), RBS (McEwan 2014; Scuffham 2014), Citigroup (Kapner 2012) and Barclays (Economist 2009; Arnold 2015) have all announced plans to either significantly scale-back or eliminate their investment banking and financial trading activity. The former Chairman of the Royal Bank of Scotland, Sir Philip Hampton argues that, as a consequence, in the post-crisis era, the largest global banks increasingly look and behave like traditional utility companies: operating under high levels of regulation with low returns on equity, a premium on safety, and constrained growth prospects (Jenkins 2016).

In part, this change in strategy reflects the impact of reduced profit opportunities stemming from the flat markets and the continued reduced demand for asset securitisation. It also, however,

reflects the impact of regulatory changes. The so-called Volcker Rule, in the US, limits the capacity of the largest banks to engage in proprietary trading (Federal Reserve Bank 2013). The Securities and Exchange Commission (2014) has also approved risk-retention rules which require the sponsors of asset-backed securities to retain at least a 5% interest in the assets they sell. In the European Union, attention has mainly focussed on a Financial Transaction Tax (Brunsdon, 2016). In the UK, the introduction of an internal 'ring-fence' aims to shield retail banking from potentially riskier investment banking activities (Bell and Hindmoor 2014b). A report in the Wall Street Journal notes that: 'Trading revenues globally have shrunk, [and] more stringent regulation has forced firms out of once-lucrative businesses' (Hoffman 2016). Geithner (2017: 59) notes reductions in funding markets such as the Repo market. 'The size of the market is smaller, the collateral is much safer, and the amount financed overnight is much smaller. Whole classes of risky funding vehicles were washed out in the crisis and have not remerged.'

One indirect measure of the dependence of banks upon trading is the proportion of income derived from non-interest sources. Figure 5 shows the percentage point difference in the proportion of income derived from non-interest sources by the banks in our sample between 2005 and 2015, illustrating reduced reliance on such sources. On average, the share of income derived from non-interest sources fell by 7 percentage points from 58% to 51%. The largest falls in non-interest income were recorded at UBS (a 30-percentage point fall), ING (-26 points), Deutsche (-25 points), RBS (-22 points) and Credit Suisse (-18 points) On the other hand, some banks increased their relative dependence upon non-interest income: Bank of America (+25 percentage points), Standard Chartered (+12 points), Morgan Stanley (+ 5 points), Wells Fargo and Nordea (+ 4 points), Goldman Sachs (+ 3 points) and HSBC (+ 1 point).

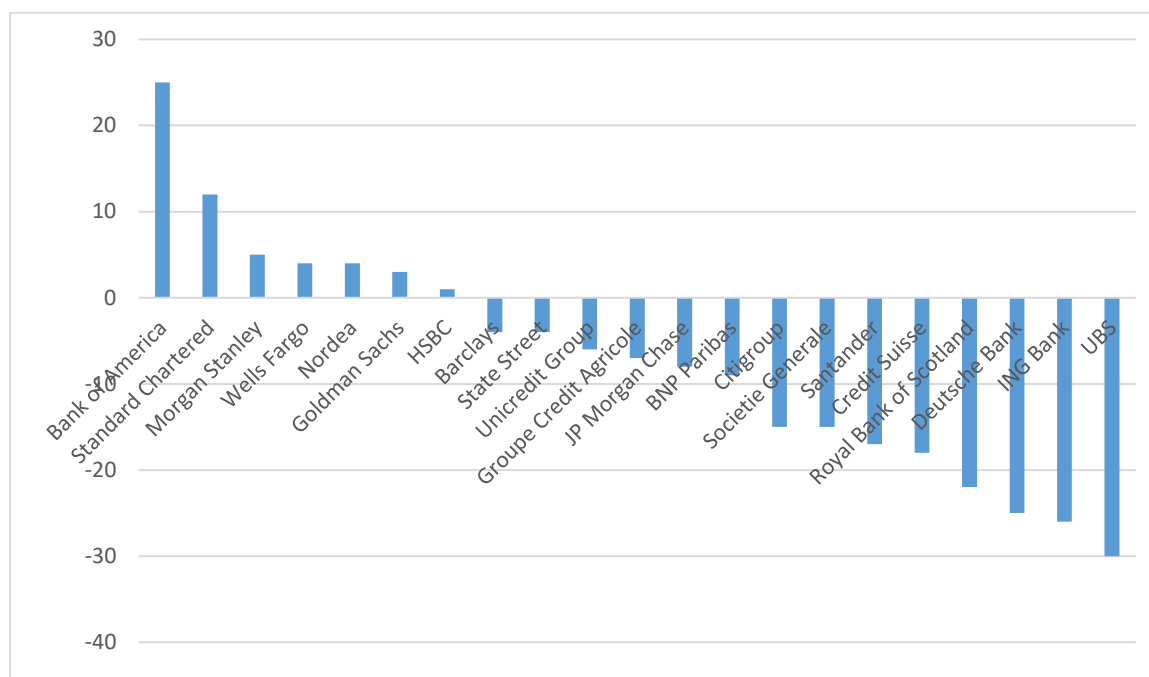
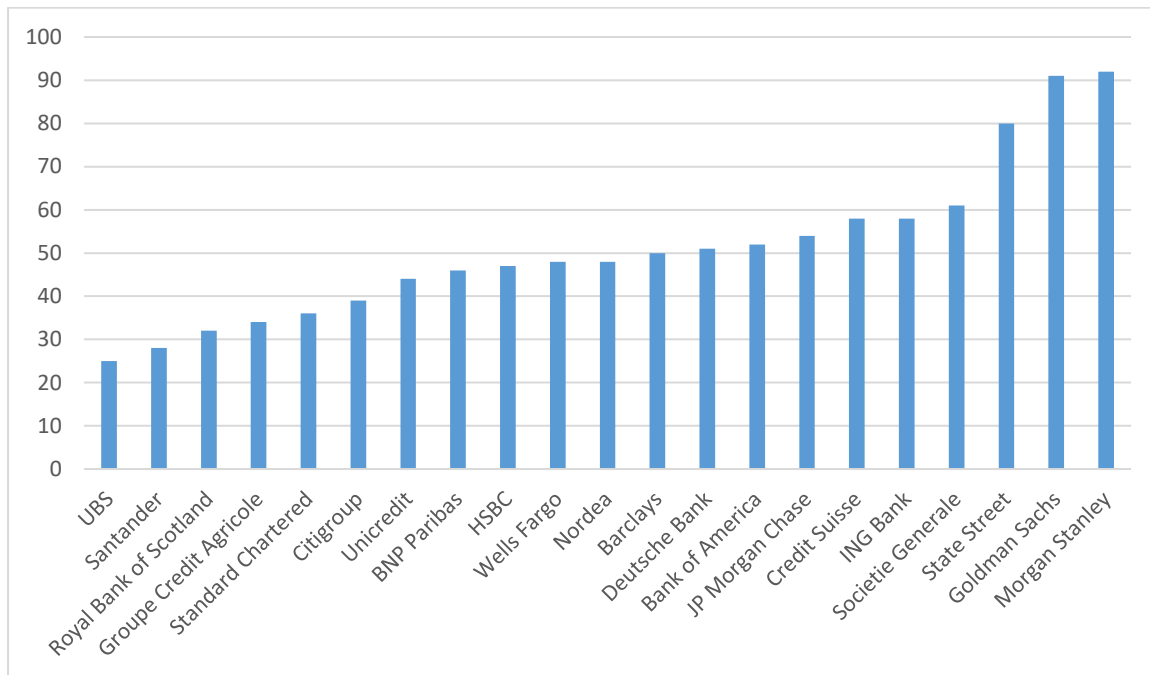
Figure 5 Percentage Point Change in Income Derived from Non-Interest Sources, 2005–2015.

Figure 6 shows the absolute proportions of income derived from non-interest sources for our sample of banks in 2015. UBS and RBS, which rushed headlong into trading in the 2000s, have significantly reduced their dependence upon non-interest income to 25% and 32% respectively. On the other hand, and despite converting to bank holding status in 2008, the former investment bank, Morgan Stanley, continues to derive most of its income from non-interest sources, though mainly now in advising and wealth management. It is also notable that Wells Fargo, Bank of American, Standard Chartered, and HSBC, all banks which entered the 2008 crisis with strong and relatively conservative balance sheets, have now not only expanded significantly in size but derive a larger proportion of their income from non-interest sources. In 2008 Bank of America, which had largely eschewed investment banking and financial trading during the boom years, acquired the investment bank Merrill Lynch. Wells Fargo, for its part, acquired Wachovia in 2008, which also had a significant trading desk. Executives at Wells Fargo initially said that they would wind-down this business and focus on Wachovia's lending book. This has not yet happened (Economist 2016).

Figure 6 % of Income Derived from Non-Interest Sources, 2015.

Poor lending was a contributor to the 2008 crisis, so to what extent does this problem persist as banks attempt to re-position themselves? Reflecting more difficult credit conditions, the proportion of impaired loans in our sample has risen from an average of 1.53% in 2005 to 3.6% in 2015: though with considerable intra-bank variation. At UBS, Credit Suisse and Deutsche, banks which have wound-back their financial trading exposures, impaired loans constitute respectively, just 0.5%, 0.7% and 1.9% of all loans. These banks have not apparently sought to compensate for the loss of trading profits by rushing into high-risk lending activity. Indeed, a large part of the Deutsche's recent share price problems stems from the fact that its increasingly low-risk loan book does not generate sufficient profits (Oltermann and Treanor 2016). At the other end of the scale, at BNP Paribas and Société Générale, impaired loans account for, respectively, 5.9% and 6.1% of loans. At Unicredit, impaired loans now account for fully 16% of the value of all loans and 149% of total equity of the bank: a significant financial risk.⁴

The largest banks have, collectively, responded to changing market and regulatory conditions by reducing their investment banking activity and they have not, on the whole, so far at least, sought to compensate for this by engaging in high-risk lending activity. These are, in terms of financial stability, positive outcomes.

⁴ Note that no data was available through Bankscope for the proportion of impaired loans at Unicredit Group in 2005 (or adjacent years). The figure of an average of 1.53% of impaired loans in 2005 is therefore exclusive of Unicredit. The 2015 figure of 3.6% is inclusive of Unicredit.

Retreating into the Shadows

Yet, on the other side of the ledger, the sources of systemic risk are increasing in various ways. Flat markets, increased bank regulation, competition and the relentless search for yield, and financial innovation have encouraged a shift of activities into the less regulated shadow banking sector. For example, the (IMF 2014b: x) reports that ‘Capital markets have become more significant providers of credit since the crisis, shifting the locus of risks to the shadow banking system. The share of credit instruments held in mutual fund portfolios, for example, has been growing, doubling since 2007, and now amounts to 27% of global high–yield debt’. Structural developments in financial markets of this kind and strong links between the main banks and off–balance sheet shadow entities saw the crystallization of systemic risk in 2008. The panic induced by the failure of poorly managed banks like Bear Stearns (Cohan 2009), Lehman Brothers (McDonald 2009) and RBS (Fraser 2014) came close to destroying a series of other banks whose balance sheets, looked at in isolation, appeared much stronger. The fact remains that financial systems are often not much stronger than their weakest link and inevitably the main banks will remain exposed to risk in the shadow sector.

There have been some positive developments however. Securitisation markets that were at the centre of the 2008 crisis are now about a quarter of their size compared to pre–crisis levels (Financial Stability Board 2017: 2). Other activities in money market funds and repo markets have also declined somewhat since the crisis, non–bank financial entities reliant on short–term funding have declined, and bank reliance on shadow entities for wholesale funding has declined somewhat (Financial Stability Board 2017: 9, 13). As the FSB (2017: 1) comments, ‘aspects of the shadow banking activities generally considered to have made the financial system most vulnerable and that contributed to the crisis have declined significantly’. On the other hand, the FSB (2017: 3) reports growth in collective investment vehicles – fixed income funds, credit hedge funds and real estate funds – that face ‘a relatively high degree of credit risk’ and are potentially subject to runs. There has also been the growth of ‘DIY’ investment banking which is posing a competitive threat as asset management funds and hedge funds are increasingly running their own operations. These competitors often have lower overheads and are using in–house algorithmic trading programs to by–pass investment bank trading desks, which have been the locus of increased regulation since the crisis (Morel et al. 2016: 5–8; Economist 2013). On this note, Geithner (2017: 60) argues that ‘the shrinking market share of the banks through regulation can leave the financial system more fragile in the case of an extreme event’.

The growth in the shadow banking sector since the crisis, therefore, continues to pose systemic risks. The IMF (2014b: 67) argues that growing risks in the US shadow system, in particular, have seen risks rise to a point ‘slightly below pre–crisis levels’. A Group of Thirty Report, chaired by Adair Turner, has recently argued that some of the older pre–crisis risks have moderated but that ‘overall, the risks from the combination of high leverage and the ways in which credit is intermediated may be as great now as they were before the 2007–08 crisis’ (Group of Thirty 2017: xii). A further problem is that these risks are not well understood given complexity, fast moving change and data limitations. The IMF

(2014: 73) notes that ‘in the advanced economies, shadow banking seems to be shifting to less well-monitored activities.’ Tellingly, the (IMF 2014b: 67) also admits that, ‘assessing risks associated with recent developments in shadow banking remains difficult, largely because of a lack of detailed data’. The FSB (2017 29) concurs: ‘continued data gaps and lack of risk granularity hampers more forward-looking identification of potential financial instability.’ Systemic risk stemming from the shadow sector thus remains an issue, and, as in the formal banking sector, regulators face an uphill battle in fully understanding financial risk in complex and rapidly evolving systems.

Still too Big

A further structural feature is the continuance of the ‘too-big-to-fail’ problem. During the 1990s and 2000s, some large banks trebled the value of their balance sheet assets. By 2007, the total assets of the US banking sector were the equivalent of around 110% of GDP, in Switzerland 160%, and in the UK over 500% of GDP (Haldane and Allesandri 2009). Many banks became both too large to fail, too large and complex to manage, and too interconnected, heightening systemic risk. Prior to the crisis, many executives were unable to effectively track and calibrate risk exposures on their balance sheets (Haldane 2012; Bell and Hindmoor 2015), whilst the bankruptcy of any one major bank threatened the stability of the entire financial system.

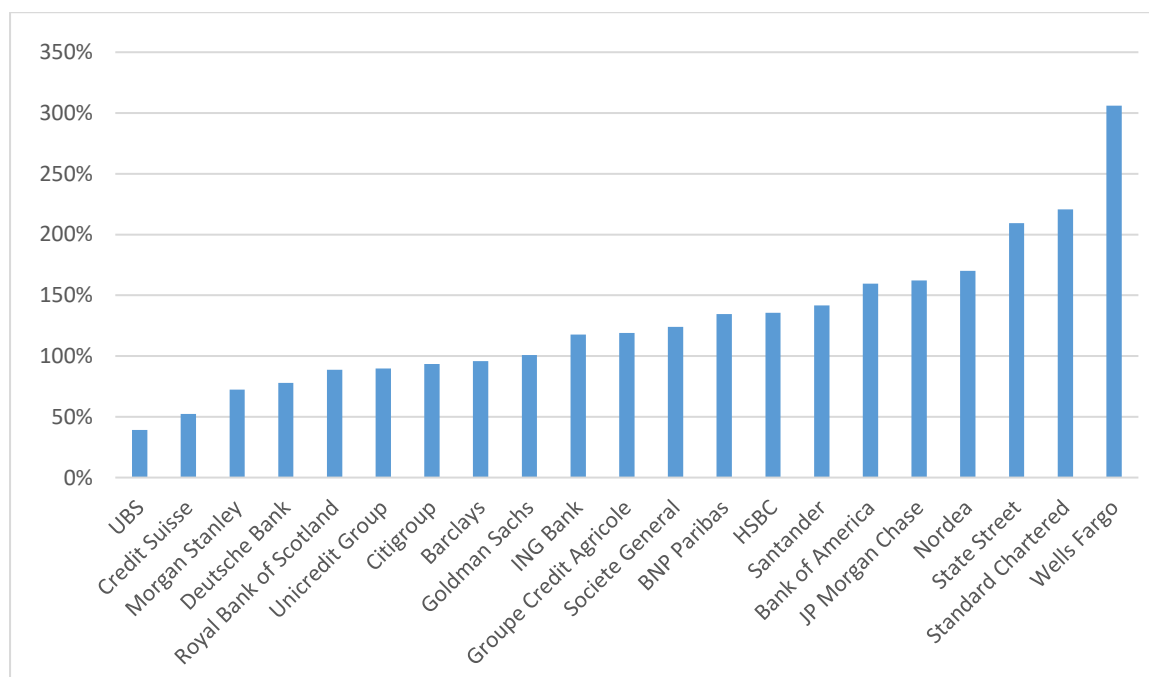
In the immediate aftermath of the crisis, some commentators called for the largest banks to be broken-up. European competition authorities have since required some banks which received state aid in 2008 to sell some of their subsidiaries or branches. In the US, the Dodd-Frank Act aims to limit the maximum deposit market share held by individual banks to 10%. The Financial Stability Board has imposed additional capital requirements upon systemically important banks. In the US, regulators run more extreme stress tests on banks with assets of over \$250bn (McLannahan 2016). In the UK, the assets of the largest commercial banks are being ‘ring-fenced’. Yet politicians and regulators have resisted calls to break-up the largest banks and many banks have responded to this opportunity by continuing to grow. This is partly because a post-crisis flight-to-safety has increased the market share of the largest banks. It is also because, even with the introduction of higher capital buffers, it still pays banks to grow their balance sheets in a situation in which market investors believe, reasonably, that the state will not allow the largest banks to fail, and so are prepared to lend to the largest banks at a lower interest rate. Haldane (2012) estimates that this de facto state subsidy is worth more than \$700bn for the largest banks collectively.

Figure 7 shows the real (inflation-adjusted) value of bank assets in 2015 as a percentage of their assets in 2005.⁵ It shows that 13 of the major banks in our sample had grown by 2015, with overall bank assets rising to 110% of their 2005 level. Those banks which have significantly reduced the size

⁵ In the UK, the real, that is inflation-adjusted, value of £1 of assets in 2005 at 2015 prices would be £1.35. In the US, \$1 of assets in 2005 would have been worth \$1.21 in 2015 prices. In the Eurozone, €1 of assets in 2005 be worth €1.17.5 in 2015 prices.

of their trading exposures, UBS, Credit Suisse, Deutsche and RBS, have also significantly contracted their balance sheets. On the other hand, Wells Fargo, JP Morgan Chase, HSBC and Standard Chartered, banks which performed relatively well during the crisis, have grown significantly. By 2015, Wells Fargo held over \$1,781bn in recorded balance sheet assets, over 300% of the inflation-adjusted value of its assets in 2005. Standard Chartered saw the value of its assets rise by 221%, whilst by 2015, JP Morgan's assets had increased by 162%. As the President of the Federal Reserve Bank of Minneapolis argues: 'The biggest banks are still too big to fail and continue to pose a significant, ongoing risk to our economy' (Kashkari 2016).

Figure 7 2015 Assets as a % of 2005 Assets.

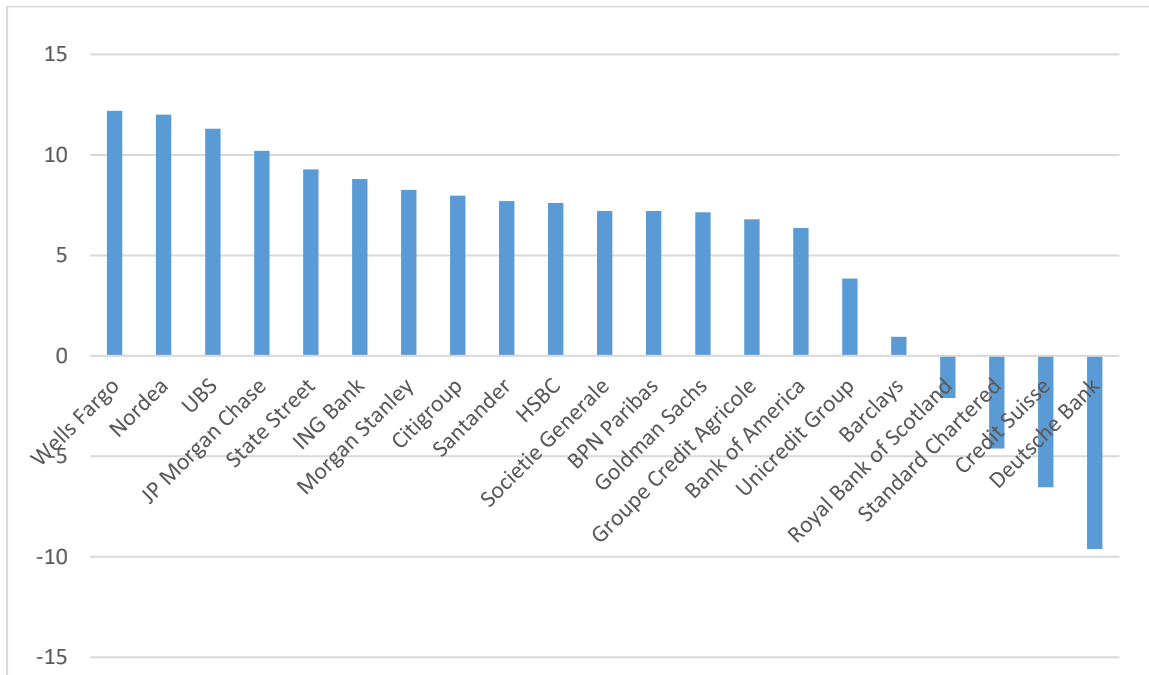


Profits and Return on Equity:

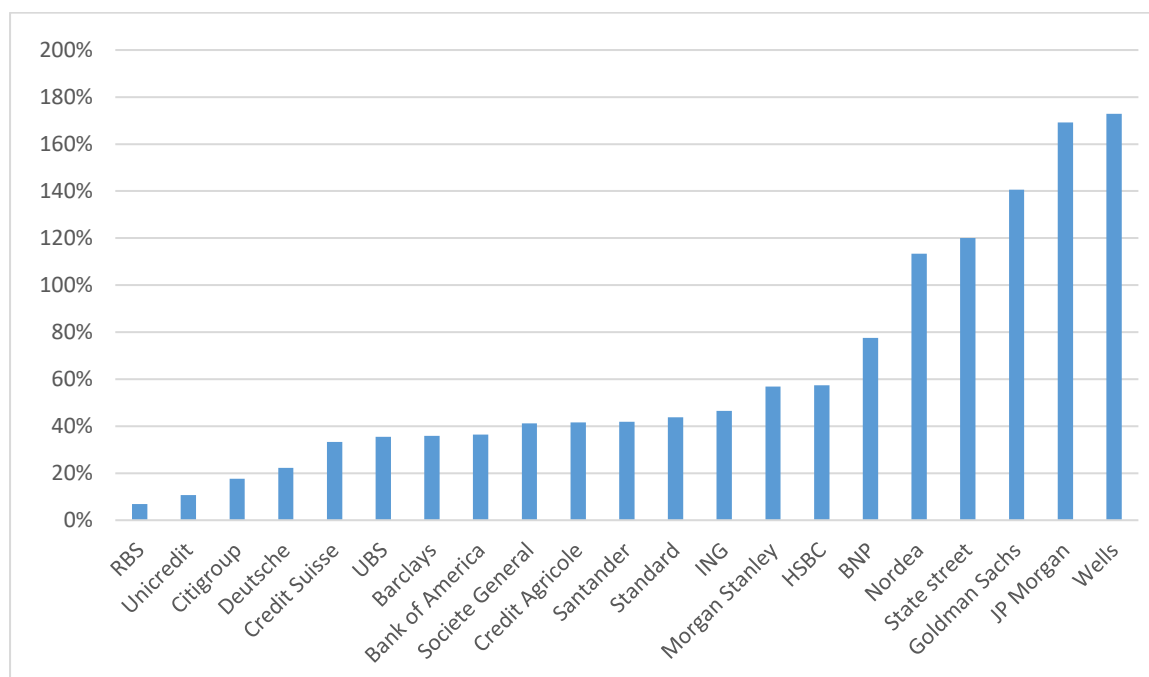
Most banks, however, have struggled to record significant profits in a market environment which, as we have noted, remains extremely challenging. One standard measure of profitability is return-on-equity (ROE). In 2005, across our sample of banks, average ROE was 16.4%. At Goldman Sachs and Wells Fargo, ROE was over 19%. At Citigroup, it was 22% and at UBS a staggering 32%. By 2015, average (ROE) had fallen dramatically to just 5.3%, less than a third of returns in 2005. As a rule of thumb, the cost of capital in the banking sector is estimated to be around 10% (Morel et al. 2017: 7; Braithwaite and Alloway 2012). This implies that any bank which is earning a return on equity of less than 10% is performing at a less than break-even level and that its business model is failing. In 2005, amidst the boom, only two banks, JP Morgan (8.06%) and Unicredit (6.9%), failed to meet this target: with executives at JP Morgan receiving, in their own words, a 'world of shit' from investors for their poor (read cautious) performance (McDonald 2009, 214; Bell and Hindmoor 2015). In 2015, on the

other hand, and as Figure 8 shows, only four banks, Wells Fargo (12.2%), Nordea (12%), UBS (11.3%) and JP Morgan (10.2%), met the 10% target, whilst the Royal Bank of Scotland, Standard Chartered, Credit Suisse and Deutsche Bank recorded negative returns. It is difficult to see, in this environment, and even in the absence of another exogenous shock, how many banks can continue to function on their current scale or with their current business models.

Figure 8 Average Return on Equity, 2015.



Equity markets have, unsurprisingly, reacted negatively to falling ROE, leading to a sustained fall in share prices. Figure 9 shows bank share prices at the end of 2015 as a % of their end-of-year 2005 price. On average, bank share prices are 63% of the level they were in 2005, although this figure is skewed somewhat by the strong performance of a few banks at the top. In 2015, for example, JP Morgan's share price was 169% of its 2005 level. However, if we look at the bottom 16 banks in our sample of 21, we find banks running with equity prices at only 38% of the level they were in 2005: with the share price of RBS, Unicredit and Citigroup less than 20% of their 2005 levels. Only 5 banks in our sample had share prices in 2015 that exceeded their 2005 level.

Figure 9 2015 Share Price as % of 2005 Share Price.

Standard regulatory approaches place little value on bank equity prices and market valuations in assessing banking risk. Yet as Haldane and Madouros (2012) argue, the standard regulatory focus on bank capital levels is a poor predictor of bank vulnerabilities and failure. They point out that a simple market measure of risk (the market value of bank equity relative to unweighted assets) is ten times better at predicting bank failures than the standard Basel III focus on Tier I capital. Sarin and Summers (2016) explore the implications of this insight about market valuations as a guide to bank risk and examine the reaction of equity markets and other financial indicators for a sample of large US and international banks. Contrary to expectations that more capital and liquidity would sooth equity markets, they find instead more market volatility and weakened equity values. Most centrally, Sarin and Summers (2016) focus on price to book value ratios that measure the market value of equity relative to the book value recorded on bank balance sheets. They show that, notwithstanding increases in the recorded book value of capital, the value of capital as assessed by markets has decreased substantially. The market value of bank capital relative to assets has also fallen substantially since the crisis. As the BIS (2016: 104) notes, ‘Price-based indicators highlight that bank equity valuations of many advanced economy banks, in particular, have yet to recover from their collapse during the Great Financial Crisis’. Hence, rather than being better capitalised, bank capital on a market valuation basis is, in fact, weaker than prior to the crisis, implying a greater reliance on leverage. As the IMF (2016: 36) points out, ‘banks with the lowest returns on assets also have a large discount to book value, pointing to business model challenges’. According to the BIS (2017: 85), part of the reason for equity market skepticism ‘reflects the macroeconomic outlook and unresolved NPL [non-performing loans] problems in some countries’. Sarin and Summers (2016) argue that because of tougher regulation and poor market conditions, equity

markets see more risk and weaker future returns in banking and that this has seriously undermined the ‘franchise value’ of the major banks. They therefore see

little basis for supposing that the risks of major institutions becoming insolvent are substantially lower than they were before the crisis. Measured at market value, equity buffers are smaller even than they were even in the early part of the last decade (2016: 103)

In other words, and stepping back, whilst, as we saw in the first part of this paper, the capital and liquidity levels recorded on bank balance sheets are now higher than they were prior to the 2008 crisis, low profits and returns on equity have actually undermined capital buffers and re-emerged as a significant source of systemic financial risk. In this respect, the panic in share markets in early 2016 which shattered Deutsche Bank’s share price and damaged, amongst others, Barclays, UBS and Société Générale, might be a harbinger of future troubles (Elliot and Treanor 2016). This episode centred not upon financial trading or the costs of regulation, but upon fears of reduced growth forecasts and weak banking returns (Treanor 2016). As the IMF (2016: 31–32) has warned, low levels of return within the banking industry impair the ability of individual banks to secure equity funding which, ‘could work to erode bank soundness and increase systemic risk’.

A similar picture of risk emerges in market valuations in the markets that insure against bank defaults, the Credit Default Swap (CDS) market. If banks are less likely to fail, their CDS spreads should be lower, but in fact they are now much higher, suggesting that markets remain sceptical of reduced risk in the banking system (Sarin and Summers 2016: 78). Bankers have thus been exposed to powerful structural shifts in the form of pressures from the markets and the economy. The overall weakness in bank balance sheets and the risk assessments now being imposed by equity and CDS markets suggests that systemic risk remains a significant threat.

In this respect, a number of European banks are of particular concern. Regulatory activism has been more pronounced in the US and UK than in Europe. The largest Eurozone banks have been buffeted by particularly intense structural pressures as well, especially weak macroeconomic conditions and more recently the European debt crisis, leaving excess banking capacity, high levels of non-performing loans and weak profits. The excess capacity problem or what the IMF (2017: 32) calls ‘overbanking’ in Europe, intensifies competition and decreases profitability; with ‘too many banks chasing too few profitable and sound lending opportunities’. The Eurozone banks have, on average, the highest absolute levels of leverage; the highest levels of dependence upon wholesale borrowing; amongst the highest levels of dependence upon non-interest sources of income; and (relative to the American banks but not the British banks) the lowest levels of profit and returns on equity. There are some exceptions to this general rule which are suggestive of the capacity of executives in at least a few banks to sometimes formulate effective growth strategies. The Swedish-based bank Nordea has, for example, posted high ROE returns even with its high levels of leverage and dependence upon wholesale funding. On the whole, however, the European banks are a troubled group. The IMF (2017: 29) warns

that a group of structurally weak European banks with over \$8.5 trillion in assets (or about a third of European banking assets), even after a cyclical recovery, would be stuck with a return on equity of less than 8%, thus making them more vulnerable to a future downturn and hence increasing systemic risk. It is also concerning that overall leverage levels at Deutsche Bank and ING Bank in 2015 were higher than the average leverage level of all banks in 2005; that deposits and equity at Deutsche Bank and Société Générale are less than 40% of the value of their assets; that Société Générale continues to derive more than 60% of its income from non-interest sources; and that impaired loans are running at such a high level across a number of banks, especially at Unicredit Group. The IMF (2016: ix) warns that ‘a more complete solution to the European bank’s problems cannot be further postponed’, arguing in particular that ‘elevated non-performing loans need to be tackled urgently’, and that ‘excess capacity in the euro area banking system will have to be addressed.’

Institutional Incrementalism and the Reluctant Restructurers

This leaves us with a puzzle. Given the scale of the 2008 crisis and subsequent banking weaknesses, why have governments and regulators remained largely focussed on narrower institutional reforms and given less attention to broader structural reforms in banking markets? The question is even more pertinent because governments in the past have adopted structural approaches. For example, as noted, the US reforms to banking in the 1930s targeted the nature of banking markets by radically reducing the size of banks, limiting market scale and activities, and adopting measures to reduce banking competition.

Instead of more ambitious structural approaches, Fioretos (2016) characterises post-crisis bank reform as ‘intense incrementalism’. There are ideational reasons for this. A good deal of the discourse on banking safety has focussed in recent decades on bank capital. Given wafer-thin capital buffers prior to the crisis, as well as the perceived costs of bank bailouts after the crisis, strengthening capital buffers was an obvious policy target in the post-crisis period. There are also institutional reasons. The reforms have displayed a degree of institutional path-dependence, with the pre-existing institutional focus on bank balance sheets and bank capital extended and deepened; all supported by pre-existing Basel institutional arrangements and practices, including substantial international coordination and agreements.

There are also broader material and political reasons why the reform agenda has adopted a narrow institutional focus. Eichengreen (2015) argues that the very fact that national governments saved most of the largest banks in 2008 and kept the financial system afloat has reduced the long-term pressure upon politicians to undertake far-reaching regulatory reform. The scale and power of the banking and financial sector is now also massive and globally interconnected. Bell and Hindmoor (2017) have shown that regulators have been willing to confront the banks over issues such as bank capital. But reforming entire banking markets in a structural sense or scaling back the size of the sector is another level of magnitude in difficulty. A further problem which increases the structural power of

large banks and financial markets is that governments remain aligned with the interests of ‘big finance’, especially in working to preserve large, complex financial sectors. Reform debates on both sides of the Atlantic have been peppered with caveats by government leaders that the reforms should not be allowed to undermine the strength or the competitiveness of domestic financial markets. One reason why is that heavily indebted governments have come to rely on banks and financial markets to support sovereign debt markets. Gabor (2016a; 2016b) argues that government and central bank reliance on embedded public–private networks of finance in areas such as repo markets, help explain resistance to regulation of government collateral in repo markets and why repo markets were exempted in Europe from new taxation measures. As Gabor (2016a: 993) concludes, ‘The evolution of the FSB regulatory agenda on repo markets suggest that financial dominance bites hard for states.’ Government leaders also continue to support the idea of having ‘internationally competitive’ financial systems and some worry that reforms might destabilise fragile banks. Politicians in France, Germany and Japan have been particularly active in attempting to water down reforms efforts (Admati and Hellwig 2013: 193). As Rixen (2013: 20) argues, in a world of mobile capital:

Regulation is hampered by intensive jurisdictional competition. Governments fear losing internationally mobile financial activity to competitor states. They are not able to solve collective action problems to curb or ease competition amongst each other because they are influenced, even captured, by domestic financial interest groups... Subject to these different pressures, governments can only agree on incremental and ineffective reforms, which are symbolically potent enough to soothe popular concerns.

Although governments and regulators have become more sceptical about banks and financial markets, they have not, for the most part, taken the next step and much questioned the value or structure of financial and banking systems as whole (although see Turner 2015). The UK 2012 White Paper on bank reform thus insists on the need to ‘enhance the UK’s reputation as the world’s leading financial centre’, pointing out that the ‘the financial services sector is an important part of the UK economy, employing around 1.4 million people and, in 2010/11, contributing 63bn in tax (BIS 2012: 3). The key problem is that prevailing regulatory approaches do not address some of the main drivers of banking risk, which stem fundamentally from the structural characteristics of banking markets.

Conclusion

In important ways, the major global banks have changed their spots, especially compared to their general behaviour in the run up to the 2008 crisis. The main change is that they are currently far less focussed on leveraged financial trading and other forms of financial wizardry. The banks also face more stringent regulation. The regulatory onslaught has however not been the main source of change in the system. Instead, as we have argued, the banks are being influenced by powerful structural forces in banking and financial markets. Here, competitive pressures remain important, driving an endless search for yield. Structural change has further increased the size of the shadow banking sector with new forms

of emergent risk. The largest banks are now in most cases larger, and are still too big and too interconnected to fail. Yet one key source of risk has changed, with banks now facing ‘tundra like’ trading conditions where profits are scarce and equity market valuations are often extremely weak. This is a major source of vulnerability. The IMF (2016: ix) sees ‘weak bank profitability... as a looming financial stability challenge for many advanced economy banks’. Indeed, as we have seen, weak market valuations for bank capital have challenged the formal regulatory gains on this front. The new structural conditions leave many banks scrambling for profits and market share, potentially tempted by new forms of risk taking, and certainly more vulnerable to a downturn.

The implication for policy is for more active steps in structuring banking markets to reduce excessive competitive pressures, as in US banking reform during the 1930s. Steps to encourage bank rationalisation in overbanked markets and more action in dealing with the too big and too complex to fail problems are also suggested. The problem, however, is that governments and regulators remain focussed on narrower institutional dimensions of banking behaviour and seem unwilling or unable to embrace wider structural reforms.

References

- Admati, A. (2015) 'The Missed Opportunity and Challenge of Capital Regulation', *National Institute Economic Review* 235 (1): 4–14.
- Admati, A., and Hellwig, M. (2013) *The Bankers' New Clothes: What's Wrong with Banking and What to Do about It*, Princeton, NJ: Princeton University Press.
- Arnold, M. (2015) 'New Barclays chief backs push to focus investment bank on its core markets', *Financial Times*, 17 October, Asia Edition, p. 1.
- Arnold, M. (2016) 'Bank of England Rebuffs Vickers Criticism', *Financial Times*, February 15th, accessed at <https://www.ft.com/content/9d4dbaa6-d434-11e5-8887-98e7feb46f27>, 12 July 2017.
- Baker, A. (2013) 'The New Political Economy of the Macprudential Ideational Shift', *New Political Economy*, 18 (1): 112–139.
- Barwell, R. (2013) *Macprudential Policy*, London: Palgrave Macmillan.
- Basel Committee on Banking Supervision. (2013) *Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools*, Basel, Switzerland: Bank of International Settlements, accessed at <https://www.bis.org/publ/bcbs238.pdf>, 17 May 2017.
- Bell, S. (2011) 'Do we Really need a New Constructivist Institutionalism to Explain Institutional Change?', *British Journal of Political Science*, 41 (4): 883–906.
- Bell, S. (2017) 'Historical Institutionalism and New Dimensions of Agency: Bankers, Institutions and the 2008 Crisis', *Political Studies*, 65 (3): 724–739.
- Bell, S., and Feng, H. (2013) *The Rise of the People's Bank of China: The Politics of Institutional Change*, Cambridge, Mass: Harvard University Press.
- Bell, S. and Hindmoor, A. (2014a) 'The Ideational Shaping of State Power and Capacity: Winning Battles but Losing the War over Bank Reform in the US and UK', *Government and Opposition*, 49 (3): 342–368.
- Bell, S. and Hindmoor, A. (2014b) 'Taming the City? Ideas, Structural Power and the Evolution of British Banking Policy Amidst the Great Financial Meltdown', *New Political Economy*, 20 (3): 454–74.
- Bell, S. and Hindmoor, A. (2015) *Masters of the Universe, Slaves of the Market*, Cambridge, Mass: Harvard University Press.
- Bell, S. and Hindmoor, A. (2017) 'Structural Power and the Politics of Bank Capital Regulation in the UK', *Political Studies*, 65 (1): 103–21.
- BIS (Department for Business Innovation & Skills). (2012) *Banking Reform: Delivering Stability and Supporting a Sustainable Economy*, (Cmnd 8356), London: Department for Business Innovation & Skills, HM Treasury, accessed at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/32556/whitepaper_banking_reform_140512.pdf, 24 September 2017.

BIS (Bank for International Settlements). (2016) 86th Annual Report: 1 April 2015–31 March 2016, Basel, Switzerland: Bank of International Settlements, accessed at: https://www.bis.org/publ/arpdf/ar2016e_ec.pdf, 20 May 2017.

BIS (Bank for International Settlements). (2017) 87th Annual Report: 1 April 2016–31 March 2017, Basel, Switzerland: Bank of International Settlements, accessed at: https://www.bis.org/publ/arpdf/ar2017e_ec.pdf, 29 July 2017.

Braithwaite, T., and Alloway, T. (2012) ‘In His Own Words; James Gorman’, *Financial Times*, October 5th, accessed at: <https://www.ft.com/content/0535dc2e-0e3c-11e2-8b92-00144feabdc0>, 26 April 2017.

Brinded, L. (2015) ‘Barclays Staff are Happy that Antony Jenkins, ‘Mr Nice,’ was finally fired’, *Business Insider UK*, 8th July, accessed at: <https://www.businessinsider.com.au/barclays-ceo-antony-jenkins-left-because-of-his-lack-of-investment-banking-understanding-2015-7?r=UK&IR=T>, 20 May 2017.

Brunsdon, J. (2016) ‘EU Financial Transaction Tax Progress Stalls’, *Financial Times*, 5th June, accessed at: <https://www.ft.com/content/ab4ad04c-29ae-11e6-8ba3-cdd781d02d89>, 30 June 2017.

Chapman, B. (2016) ‘UBS Rogue Trader says £1.4bn Fraud ‘Could Happen Again’ Because of Pressure to Make Profits’, *The Independent*, 1st August, accessed at: <http://www.independent.co.uk/news/business/news/ubs-rogue-trader-fraud-could-happen-again-kweku-adoboli-a7165771.html>, 21 June 2017.

Cohan, W. (2009) *House of Cards: A Tale of Hubris and Wretched Excess on Wall Street*, New York: Doubleday.

Culpepper, P. (2011) *Quiet Politics and Business Power: Corporate Control in Europe and Japan*, Cambridge, UK: Cambridge University Press.

Draghi, M. (2016a) ‘IMFC Statement’, Washington D.C., 15th April, accessed at: <https://www.ecb.europa.eu/press/key/date/2016/html/sp161007.en.html>, 4 August 2017.

Darghi, M (2016b) ‘Introductory Statement’, Hearing at the European Parliament’s Economic and Monetary Affairs Committee, 15th February, accessed at: <https://www.ecb.europa.eu/press/key/date/2016/html/sp160215.en.html>, 4 August 2017.

Economist, The. (2009) ‘Barclays Sells BGI: Black Rock and a Hard Place’, *The Economist*, The Economist Group Limited, 12th June, accessed at: <http://www.economist.com/node/13848711>, 16 July 2017.

Economist, The. (2012) ‘The Dodd-Frank Act: Too big not to fail, 18 February’ *The Economist*, The Economist Group Limited, accessed at <http://www.economist.com/node/21547784>, 20 August 2017.

Economist, The. (2013) ‘Special Report: International Banking—Twilight of the Gods’, *The Economist*, The Economist Group Limited, May 9th, accessed at: <https://www.economist.com/blogs/schumpeter/2013/05/special-report-international-banking>, 26 July 2017.

Economist, The. (2016) ‘Diving Into the Mire’, *The Economist*, The Economist Group Limited, June 16th, accessed at: <https://www.economist.com/news/finance-and-economics/21700671-wells-fargo-leaps-swamp-which-most-banks-are-retreating-diving>, 20 July 2017.

- Eichengreen, B. (2015) *Hall of Mirrors: The Great Depression, The Great Recession, and the Uses and Misuses of History*, Oxford: Oxford University Press.
- Elliot, L., and Treanor, J. (2016) ‘Stock Markets Hit by Global Rout Raising Fears for Financial Sector’, *The Guardian*, 11th February, accessed at: <https://www.theguardian.com/business/2016/feb/11/stock-markets-hit-by-global-rout-raising-fears-for-financial-sector>, 21 July 2017.
- Federal Reserve Bank. (2013) ‘Agencies Issue Final Rules Implementing the Volcker Rule’, Joint Press Release, 10th December, accessed at: <https://www.federalreserve.gov/newsevents/press/bcreg/20131210a.htm>, 20 May 2017.
- Financial Stability Board. (2015) *Global Shadow Banking Monitoring Report*, Basel: Financial Stability Board, 12th November, accessed at <http://www.fsb.org/2015/11/global-shadow-banking-monitoring-report-2015/>, 26 July 2017.
- Financial Stability Board. (2016) *2016 List of Global Systemically Important Banks*, Basel: Financial Stability Board, 21st November, accessed at: <http://www.fsb.org/wp-content/uploads/2016-list-of-global-systemically-important-banks-G-SIBs.pdf/>, 26 July 2017.
- Financial Stability Board. (2017) *Assessment of Shadow Banking Activities, Risks and the Adequacy of Post-Crisis Policy Tools to Address Financial Stability Concerns*, Basel: Financial Stability Board, 3 July, accessed at <http://www.fsb.org/wp-content/uploads/P300617-1.pdf>, 8 July 2017.
- Financial Stability Forum. (2008) *Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience*, Basel: Financial Stability Board, 8 April, accessed at: http://www.fsb.org/wp-content/uploads/r_0804.pdf?page_moved=1/, 9 July 2017.
- Fioretos, O. (2016) ‘Retrofitting Financial Globalisation: The Politics of Intense Incrementalism’, in T. Rixen, L. A. Viola, and M. Zürn (eds) *Historical Institutionalism and International Relations*, Oxford, Oxford University Press.
- Fisher, R. W. (2013) ‘Correcting ‘Dodd-Frank to Actually End ‘Too Big to Fail’’, statement to the Committee on Financial Services U.S. House of Representatives, Washington D.C., 26th June, accessed at <https://financialservices.house.gov/uploadedfiles/hrg-113-ba00-wstate-rfisher-20130626.pdf>, 3 June 2017.
- Fraser, I. (2014) *Shredded: Inside RBS: The Bank that Broke Britain*, Edinburgh, UK: Birlinn.
- Gabor, D. (2016a) ‘The (impossible) Repo Trinity: The Political Economy of Repo Markets’, *Review of International Political Economy*, 23 (6): 967–1000.
- Gabor, D. (2016b) ‘A Step Too Far? The European Financial Transactions Tax on Shadow Banking’, *Journal of European Public Policy*, 23 (6): 925–45.
- Geithner, T. (2017) ‘Are we Safe Yet: How to Manage Financial Crises?’, *Foreign Affairs*, 96 (1): 54–72.
- Goodhart, C. (2011) *The Basel Committee on Banking Supervision—A History of the Early Years 1974 to 1997*, Cambridge, UK: Cambridge University Press.
- Gowan, P. (2009) ‘Crisis in the Heartland’, *New Left Review*, 55 (Jan/Feb): 5–30.
- Haldane, A. (2012) ‘On Being the Right Size’, Institute of Economic Affairs’ 22nd Annual Series, The 2012 Beesley Lectures, Institute of Directors, London, 25th October.

Group of Thirty. (2007) *Shadow Banking and Capital Markets: Risks and Opportunities*, Washington, DC: The Group of Thirty, accessed at: http://group30.org/images/uploads/publications/ShadowBankingCapitalMarkets_G30.pdf, 6 June 2017.

Haldane, A., and Alessandri, P. (2009) 'Banking on the State', paper presented to the Federal Reserve Bank of Chicago Twelfth Annual International Banking Conference, accessed at: <https://www.bis.org/review/r091111e.pdf>, 28 May 2017.

Haldane, A., and Madouros, V. (2012) 'The Dog and the Frisbee', Speech at the Federal Reserve Bank of Kansas City's 366th Economic Policy Symposium "The Changing Policy Landscape", Jackson Hole, Wyoming, 31st August, <https://www.bis.org/review/r120905a.pdf>, 3 May 2017.

Hardie, I., Howarth, D., Maxfield, S., and Verdun, A. (2013) 'Banks and the False Dichotomy in the Comparative Political Economy of Finance', *World Politics*, 65 (4): 691–728.

Helleiner, E. (2014) *The Status Quo Crisis: Global Financial Governance after the 2008 Meltdown*, Oxford: Oxford University Press.

Hoffman, L. (2016) 'Goldman Sachs, Morgan Stanley Take a Tough Assignment: Reinventing Themselves', *Wall Street Journal*, 28th August, accessed at: <https://www.wsj.com/articles/goldman-sachs-morgan-stanley-take-a-tough-assignment-reinventing-themselves-1472378401>, 13 June 2017.

Howarth, D., and Quaglia, L. (2013) 'Banking on Stability: The Political Economy of New Capital Requirements in the European Union', *Journal of European Integration*, 35 (3): 333–346.

IMF (International Monetary Fund). (2014a) 'Moving from Liquidity to Growth-Driven Markets: April 2014', *Global Financial Stability Report*, Washington D.C.: International Monetary Fund, accessed at: <https://www.imf.org/en/Publications/GFSR/Issues/2016/12/31/Moving-from-Liquidity-to-Growth-Driven-Markets>, 20 August 2017.

IMF (International Monetary Fund). (2014b) 'Risk Taking, Liquidity, and Shadow Banking—Curbing Excess While Promoting Growth: October 2014', *Global Financial Stability Report*, Washington D.C.: International Monetary Fund, accessed at: <https://www.imf.org/en/Publications/GFSR/Issues/2016/12/31/Risk-Taking-Liquidity-and-Shadow-Banking-Curbing-Excess-While-Promoting-Growth>, 20 August 2017.

IMF (International Monetary Fund). (2016) 'Potent Policies for a Successful Normalization: April 2016', *Global Financial Stability Report*, Washington D.C.: International Monetary Fund, <https://www.imf.org/en/Publications/GFSR/Issues/2016/12/31/Potent-Policies-for-a-Successful-Normalization>, 20 August 2017.

IMF (International Monetary Fund). (2017) 'Getting the Policy Mix Right: April 2017', *Global Financial Stability Report*, Washington D.C.: International Monetary Fund, <https://www.imf.org/en/Publications/GFSR/Issues/2017/03/30/global-financial-stability-report-april-2017>, 20 August 2017.

Institute of International Finance. (2010) *Interim Report on the Cumulative Impact on the Global Economy of Proposed Changes in the Banking Regulatory Framework*, Washington D.C.: Institute of International Finance, accessed at: https://www.ebf-fbe.eu/uploads/10-Interim%20NCI_June2010_Web.pdf, 23 August 2017.

Jenkins, P. (2016) 'Banks: Too Dull to Fail?', *Financial Times*, September 6th, accessed at: <https://www.ft.com/content/63fdcdcc-6f84-11e6-9ac1-1055824ca907>, 20 May 2017.

Johal, S., Moran, M., and Williams, K. (2014) 'Power, Politics and the City of London after the Great Financial Crisis', *Government and Opposition*, 49 (3): 400–425.

Kapner, S. (2012) 'Citi's New Chief Launches First Cost-Cutting Salvo', *Wall Street Journal*, December 6th, accessed at: <https://www.wsj.com/articles/SB10001424127887323501404578161031803891150>, 21 June 2017.

Kashkari, N. (2016) 'Lessons from the Crisis: Ending Too Big to Fail', Speech at the Brookings Institution, Washington, D.C., February 16th, accessed at: <https://www.minneapolisfed.org/news-and-events/presidents-speeches/lessons-from-the-crisis-ending-too-big-to-fail>, 12 June 2017.

Khan, M. (2016) 'Eurozone Loan Growth Inches up in July', *Financial Times*, 26th August, accessed at: <https://www.ft.com/content/cfd1fd6e-d717-3bf4-8025-9b9c6a098c41>, 14 August 2017.

King, M. (2009) 'Finance - a return from risk'. Speech to the Worshipful Company of International Bankers, London, 17th March, <http://www.bankofengland.co.uk/archive/Documents/historicpubs/speeches/2009/speech381.pdf>, accessed 17 May 2017.

Leonhardt, D. (2010) 'Heading Off the Next Financial Crisis', *New York Times*, March 25th, accessed at: <https://www.nytimes.com/2010/03/28/magazine/28Reform-t.html>, 19 June 2017.

Macfarlane, I. (2009) 'The crisis: causes, consequences and lessons for the future—The Australian perspective', in ASIC, *Global Crisis: The Big Issues for our Financial Markets*, ASIC Summer School, 2–3 March 2009. Sydney: ASIC, 41–41, accessed at: <http://download.asic.gov.au/media/1311565/ASIC-summer-school-report-may-2009.pdf>, 21 June 2017.

McDonald, D. (2009) *Last Man Standing: The Ascent of Jamie Dimon and JP Morgan Chase*, New York: Simon & Schuster.

McDonald, L. (2009) *A Colossal Failure of Common Sense: The Inside Story of the Collapse of Lehman Brothers*, Crown, New York.

McEwan, R. (2014) 'Speech in Full', 27th February, accessed at: <http://www.bbc.co.uk/news/business-your-money-26365616>, 16 July 2017.

McLannahan, B. (2016) 'Stress Tests Cloud Future for Bank Stocks', *Financial Times*, 8th July, accessed at: <https://www.ft.com/content/e4e772cc-44cc-11e6-9b66-0712b3873ae1>, 13 May 2017.

Mirowski, P. (2013) *Never Let a Serious Crisis go to Waste*, London: Verso.

Morel, P., Teschner, C., Saumua, S., Veissid, A., Worrell, I., Rhode, W., Le Boulay, G., Gubelt, C., and Strauß, M. (2016) *Global Capital Markets, 2016: The Value Migration*, Boston: The Boston Consulting Group, accessed at: http://image-src.bcg.com/Images/BCG-The-Value-Migration-May-2016_tcm87-149845.pdf, 23 August 2017.

Morel, P., Teschner, C., Saumua, S., Veissid, A., Rhode, W., Berlin, S., Hildebrandt, N., Reasons, T., Le Boulay, G., and Gublet, C. (2017) *Global Capital Markets 2017: Mastering the Value of Migration*, Boston: The Boston Consulting Group, accessed at: http://image-src.bcg.com/Images/BCG-Mastering-the-Value-Migration-May-2017_tcm87-153443.pdf, 29 August 2017.

Moschella, M., and Tsingou, E. (eds) (2013) *Great Expectations, Slow Transformations: Incremental Change in Post-Crisis Regulation*, ECPR Press: Colchester.

Mügge, D. (2014) 'Policy Inertia and the Persistence of Systemic Fragility', *Political Quarterly*, 85 (4): 413–416.

Noonan, L. (2015) 'Banks Fine Tally Since Crisis Hits \$260bn', *Financial Times*, Asia Edition, August 23rd, p.17.

Obama, B. (2016) 'Weekly Address: Protecting the Progress We've Made with Wall Street Reform', Press Release, Office of the Press Secretary, The White House, 23rd July, accessed at: <https://obamawhitehouse.archives.gov/the-press-office/2016/07/23/weekly-address-protecting-progress-weve-made-wall-street-reform>, 26 June 2017.

Oltermann, P. and Treanor, J. (2016) 'Deutsche Bank: Germany's Financial Colossus Stumbles', *The Guardian*, 10th February, accessed at: <https://www.theguardian.com/business/2016/feb/10/deutsche-bank-germany-financial-colossus-stumbles>, 3 June 2017.

Osborne, G. (2015) 'Mansion House Speech', HM Treasury, 10th June, accessed at: <https://www.gov.uk/government/speeches/mansion-house-2015-speech-by-the-chancellor-of-the-exchequer>, 21 May 2017.

Pagliari, S. and Young, K. (2014) 'Leveraged Interests: Financial Industry Power and the Role of Private Sector Coalitions', *Review of International Political Economy*, 21 (3): 576–610.

RBA (Reserve Bank of Australia). (2010) 'Panel Discussion'. Conference Volume 2010. Sydney: Reserve Bank of Australia, accessed at: <http://www.rba.gov.au/publications/confs/2010/caruana-disc.html>, 2 May 2017.

RBS (Royal Bank of Scotland). (2015) 'Annual Report and Accounts 2015: Building a strong, simply, fair bank', Annual Report and Accounts, Edinbrough: Royal Bank of Scotland, accessed at: <https://investors.rbs.com/~media/Files/R/RBS-IR/results-center/annual-report-2015.pdf>, 20 August 2017.

Reinhart, C., and Rogoff, K. (2009) *This Time is Different: Eight Centuries of Financial Folly*, Princeton, NJ: Princeton University Press.

Reuters. (2015) 'Deutsche Bank to Slash Investment Banking Assets and Float Postbank', *The Guardian*, 27th April, accessed at: <https://www.theguardian.com/business/2015/apr/27/deutsche-bank-to-slash-investment-banking-assets-and-float-postbank>, 24 August 2017.

Rixen, T. (2013) 'Why reregulation after the crisis is feeble: Shadow banking, offshore financial centres, and jurisdictional competition', *Regulation and Governance*, 7 (4): 435–459.

Rogoff, K. (2012) 'Financial Regulation Isn't Fixed, it's Just More Complicated'. *The Guardian*, 10th September, accessed at: <https://www.theguardian.com/business/economics-blog/2012/sep/10/financial-regulation-not-fixed-more-complicated>, 4 August 2017.

Rosengren, E. S. (2013) 'Bank Capital: Lessons from the US Crisis', keynote address to the Bank for International Settlements Forum on Key Regulatory and Supervisory Issues in a Basel III World, Seoul, Korea, 25th February, Boston: Federal Reserve Bank of Boston, accessed at: <https://www.bostonfed.org/news-and-events/speeches/bank-capital-lessons-from-the-us-financial-crisis.aspx>, 12 June 2017.

Sarin, N., and Summers, L. H. (2016) 'Understanding bank Risk Through Market measures', *Brookings Papers on Economic Activity*, Fall: 57–109.

Scuffham, M. (2014) 'RBS to Shrink Investment Bank and Cut 30,000 Jobs', Reuters, February 21st, accessed at: <https://uk.reuters.com/article/uk-rbs-restructuring-idUKBREA1K0FR20140221>, 3 August 2017.

Securities and Exchange Commission. (2014) 'Six Federal Agencies Jointly Approve Final Risk Retention Rule', Washington D.C.: Securities and Exchange Commission, October 22nd, accessed at: <https://www.sec.gov/News/PressRelease/Detail/PressRelease/1370543240441>, 26 June 2017.

Sibun, J. (2011) 'UBS Takes Axe to Investment Bank', Daily Telegraph, 17th November, accessed at: <http://www.telegraph.co.uk/finance/newsbysector/banksandfinance/8897858/UBS-takes-axe-to-investment-bank.html>, 16 May 2017.

Taylor, M. (2016) 'Banking in the Tundra', Official Monetary and Financial Institutions Forum City Lecture, London, Bank of England, 25th May, accessed at: <http://www.bankofengland.co.uk/publications/Documents/speeches/2016/speech910.pdf>, 26 May 2017.

Treanor, J. (2012) 'Credit Suisse Splits off Investment Bank', The Guardian, 20th November, accessed at: <https://www.theguardian.com/business/2012/nov/20/credit-suisse-splits-investment-bank>, 27 June 2017.

Treanor, J. (2016) 'Shares Dive as Fears Mount for Health of Global Banking', The Guardian, 9th February, accessed at: <https://www.theguardian.com/business/2016/feb/09/shares-dive-as-fears-mount-for-health-of-global-banking>, 27 June 2017.

Tsingou, E. (2014) 'The Club Rules in Global Financial Governance', *Political Quarterly*, 85 (4): 417–419.

Tucker, P., Hall, S., and Pattani, A. (2013) 'Macroprudential Policy at the Bank of England', *Bank of England Quarterly Bulletin*, Q3: 192–200.

Turner, A. (2009) *The Turner Review: A Regulatory Response to the Global Banking Crisis*, London: FSA.

Turner, A. (2015) *Between Debt and the Devil: Money, Credit and Fixing Global Finance*, Princeton, NJ: Princeton University Press.

Vickers, J. (2016) 'The Bank of England must Think Again on Systemic Risk', *Financial Times*, 14th February, accessed at: <https://www.ft.com/content/674b16b8-d184-11e5-831d-09f7778e7377>, 29 May 2017.

Vives, X. (2016), *Competition and Stability in Banking: The Role of Regulation and Competition Policy*, Princeton, NJ: Princeton University Press.

Wallison P., and Burns, A. (2011) *Financial Crisis Inquiry Commission: Dissenting Statement*, accessed at: https://cybercemetery.unt.edu/archive/fcic/20110310173535/http://c0182732.cdn1.cloudfiles.rackspacelcloud.com/fcic_final_report_wallison_dissent.pdf, 21 May 2017.

Wolf, M. (2014) *The Shifts and the Shocks: What We've Learned - And Have Still to Learn from the Financial Crisis*, London: Allen Lane.

World Bank. (2017) Global Financial Development Database, Washington D.C.: The World Bank Group, accessed at: <http://data.worldbank.org/data-catalog/global-financial-development>, 16 May 2017.

Young, K., and Park, S. H. (2013) 'Regulatory Opportunism: Cross-National Patterns in National Banking Regulatory Responses Following the Global Financial Crisis', *Public Administration*, 91 (3): 561–581.

Zwan, N, van der (2014) 'Making Sense of Financialisation', *Socio-Economic Review*, 12: 99–129.