Economics
The Open-Access, Open-Assessment E-Journal

Vol. 7, 2013-27 | June 07, 2013 | http://dx.doi.org/10.5018/economics-ejournal.ja.2013-27

Organizational Form as a Source of Systemic Risk

David Bholat and Joanna Gray

Abstract
"Systemic risk" now occupies centre stage in discussions of bank regulatory reform. Systemic risk is often seen as a problem of size, operational complexity, interconnectivity and contagion. It is less often discussed in terms of the institutional framework of legal rules and principles within which financial intermediation takes place, and the organizational culture promoted by those structures. In this article we redress this deficit through an appraisal of Northern Rock, illustrating the consequences of its transformation from mutually owned building society to publicly held company on organisational culture. These changes had profound effects on the incentive structure of its owners and managers, as profit-maximisation and shareholder value became the driving force within the firm, as in much of the rest of the UK banking sector. Thus, in addition to grappling with risk and uncertainty—and taking care to distinguish between the two—current efforts to construct a new macro-prudential regulatory paradigm should recognise the importance of Frank Knight's third key conceptual category–profit. Furthermore, in seeking to understand systemic risk, it becomes necessary to delve into micro-legal concepts such as property, trust, and contract that govern different forms of business to discern whether or not some modes of financial association create a greater degree of systemic risk than others. This is especially so when one organizational model comes to dominate retail markets, as did the publicly held company in the UK banking sector at the turn of the twenty-first century.

Published in Special Issue Coping with Systemic Risk

JEL K N
Keywords Northern Rock; systemic risk; banks; building societies; UK residential mortgages

Authors
David Bholat , ✉ Newcastle University, david.bholat@newcastle.ac.uk
Joanna Gray, Newcastle University

This article does not necessarily reflect those of any of our employers.

Citation David Bholat and Joanna Gray (2013). Organizational Form as a Source of Systemic Risk. *Economics: The Open-Access, Open-Assessment E-Journal*, Vol. 7, 2013-27. http://dx.doi.org/10.5018/economics-ejournal.ja.2013-27

Received July 10, 2012 **Published as Economics Discussion Paper** July 24, 2012
Revised April 15, 2013 **Accepted** May 7, 2013 **Published** June 7, 2013

> The premise in antitrust analysis is that more competition is good for welfare, especially given its focus on consumers. Could banking, however, be special in this sense? Is more competition always good? Is it possible that too much competition is problematic in banking, where externalities on risk taking may lead to systemic crises? (Dick and Hannan 2012: 425)

1 Introduction

In his influential *Economics*, Paul Samuelson defined the discipline per tradition as the scientific study of efficiently dealing with scarcity (2010: 4). Today that definition of economics appears antiquated. Instead 'risk' has replaced 'scarcity' as the key concept around which much of the literature is organized. Here the shifting emphasis placed on these theoretical categories can be understood historically, as more generally reflecting the changing ways business is conducted in practice. In particular, modern risk discourse gained prominence following the economic crisis of the 1970s, which weakened the salience of both post-War Keynesian macroeconomics and the government-centred growth plans that paradigm intellectually underpinned (Postone 2012: 227). Set against the subsequent background of capital liberalisation and the globalisation of production, private risk management strategies emerged to replicate the investment predictability previously afforded by sovereign state regulation (most notably fixed currency exchange rates) but which, by the 1980s, for various reasons, had lost both political persuasiveness and economic efficacy (LiPuma and Lee 2004). Insofar as financial contracts such as derivatives became the main instruments by which big businesses started managing risk, this perforce bolstered the role played by the financial sector in the economy and thus the prominence of concepts from finance in economic theory (Crouhy et al. 2006: 37). And what makes the financial sector unique is that its products are not constrained by naturally scarce inputs. For instance, when a bank writes contingent commitments like credit cards, it does not do so primarily by reference to scarce savings but by evaluating the trade-off between expected profits and default risk (Moore 1979; Lavoie 1984; Wray 1990; Desai 1991; Goodhart 2010).

Taking care to observe the contingent and context-specific conditions favouring the recent success of modern risk discourse is not an arcane matter for intellectual historians but directly relevant to the future of the economy. Arguably the current crisis has as one of its sources an insufficient sensitivity to history among financial agents who wrongly believed that 'this time was different,' to invoke the fortuitous phrase of Reinhart and Rogoff (2009). In part, the forgetting of economic history by financial agents, as well as an inadequate self-understanding of the partiality and thus incompleteness of their own taken-for-granted terms, can also be understood within context, as exacerbated in the last thirty years by the predominant shift of economics away from the study of large-scale historical patterns to focus instead on apparently timeless problems in microeconomics such as asymmetric information and adverse selection (Postone 2012: 246).

Noting the historical specificity of risk discourse thus matters to the extent that it marks the non-necessity of this framing and raises awareness that the real world facts which "systemic risk" is meant to capture could be described otherwise.[1] The terms in which problems are cast matters because they suggest certain remedial actions rather than others (Hayek 1973: 61). For instance, if recent events are a "business cycle," this terminology naturalises them and suggests they are unpreventable.[2] By contrast, employing the term "systemic risk" implies that crises are manageable and measurable with the proper forecasting and macro-prudential tools. The fundamental question this special issue of *Economics* thus raises is whether "systemic risk" grasps the problem it purports to do, or recapitulates a paradigm that itself has conceptual problems. There are reasons for scepticism. For instance, in the period immediately preceding the crisis, the risk-weighted assets (RWAs) of the four largest UK-headquartered banks were falling precisely when it appears risks to the banking system and for the broader economy were building (Independent Commission on Banking 2011: 98). Thus in the same historical moment when risk-based discourse has proliferated, there has ironically been an increasing incidence of financial crises or "systemic risk" (Wolf 2008; cf. Laeven and Valencia 2008).

---

[1] The roots of risk discourse (as distinct from its preponderance) can be found in the nineteenth century, part and parcel of a larger embrace of probabilistic reasoning in the Anglo-American world (Hacking 1990; Bernstein 1998).

[2] In fact, banking crises are institutionally contingent. As the distinguished British banking historian Forrest Capie (2011: 4) has pointed out, "Fractional reserve banking is a pre-requisite for financial crises…it is difficult to see how a banking crisis…gets underway before there has developed a banking multiplier of some significance…In England it is not until the beginning of the nineteenth century that that point is reached."

In particular, one of the problems with the concept of "systemic risk" is the analytical imprecision which arises from the multiple meanings currently attached to it. As a recent Bank for International Settlements paper noted "a precise definition of systemic risk is still lacking" (Cerutti et al. 2012: 1, fn. 2). However, although it remains a contested term, there is some convergence toward common usage in the literature.[3] Specifically, many scholars define "systemic risk" as the chance that all or a large portion of the financial system fails (Beale et al. 2011). In many instances, the sources of "systemic risk" are identified as common exposures that propagate problems at a single firm across several. The exact channels of contagion can be direct or indirect (Dow 2000: 5).[4] For example, direct channels of contagion include payment settlement delays and interbank exposures, particularly when firms have interconnected, concentrated funding. Viewed from the other side of the ledger, indirect channels of contagion also exist. In many stylized models of systemic risk, solvency shocks at one firm can lead to their selling assets, depressing their market price more generally, leading to losses at other firms similarly exposed, particularly under a mark-to-market accounting regime (Allen and Carletti 2008). At the same time, declines in asset prices reduce the value of collateral and thus the availability of bank loans to borrowers (Bernanke et al 1998). Cumulatively, this can cause the banking system to deleverage, shrinking the money supply, with spill-over effects on output and employment in other sectors of the economy because of declines in the volume and increases in the price of credit, given sticky wages and nominally fixed liabilities.[5]

Although illuminating, the key limitations with these stylized models of systemic risk is their identifying mechanisms which magnify shocks but often without explaining their fundamental source. Furthermore, the crisis is grasped belatedly and superficially if primarily understood as a "credit crunch." On the

---

[3] A common but crude use of the term 'systemic' is to attach that label to particular firms because they are large in terms of their assets or because of their role in the payment system. However, the conflation of particular firms with the system undermines its intent by creating an implicit subsidy for those firms, potentially contributing to the very problem such labeling is meant to identify. More generally, the equation of systemic risk with risk to "systemically important financial institutions" overlooks the fact that what constitutes a systemically important institution depends on context; the insolvency of even a small or medium sized bank can have large-scale ramifications in a heightened period of financial stress.

[4] The term 'contagion' signals a shift in economics away from metaphors like equilibrium drawn from physics and toward those drawn from biology (Erturk et al. 2011).

[5] Here the recent literature owes an often unacknowledged debt to Fisher (1933).

contrary, there is an emerging consensus that the crisis was caused in the first instance by asset price inflation, particularly in the financial, insurance, and real estate (FIRE) sectors (Pozsar et al. 2010; International Monetary Fund 2011; Lo Duca and Peltonen 2011; Schularick and Taylor 2011).[6] Within global financial markets, sources of asset price inflation included practices such as re-hypothecation, pyramiding, stock repurchases, and double leverage (Gorton 2010; Geanakoplos 2010; Lazonick 2012).[7] As well—and with particular acuity in the UK—asset price inflation has been correlated with a rapid expansion of bank credit to the economy, captured by a ratio of credit-to-GDP exceeding long-term trends (Bank of England 2011: 11).[8] Consequently, the balance sheets of British banks now exceed the size of other UK financial sectors, with much of this growth starting just prior to the millennium (Davies et al. 2010: 325). The critical question is why.

Here we take inspiration from the father of modern risk discourse, Frank Knight. As is well-known, Knight (2010) posited an analytical distinction between risk and uncertainty, defining the former as events reducible to a probability distribution with a high confidence interval, while denoting by the latter events whose frequency and timing are unknown and possibly unknowable (Herring 2011). In subsequent iterations of Knight's ideas this distinction has been blurred. In banking this has in part occurred because of the proliferation of value-at-risk (VaR) calculations that try specifying probability values and numerical thresholds of *unexpected* losses (Sollis 2009). Consequently much of what is ordinarily encompassed under the category of risk is really uncertainty (King 2004). But even less minded than the subtle distinction between risk and uncertainty is their relation to the third but often neglected term in Knight's troika—profit.[9]

---

[6] Between 1998 and 2008 sterling loans from British banks to financial companies grew by over 200 percent relative to GDP, compared to 50 and 60 percent for the household and private non-financial sectors, respectively (Independent Commission on Banking 2011: 50).

[7] Pyramiding involves using the increasing value of assets to purchase more assets. Re-hypothecation is the reuse by a creditor of collateral pledged by a borrower to secure the creditor's own borrowings (Kettering 1999). Stock repurchases involve a corporation buying back its own shares so as to increase the price and trading volume of the stock. Double leverage describes a situation where holding companies raise debt on top of the debt raised by their subsidiaries.

[8] The 'Great Moderation' may also have been its own undoing, with stability breeding instability in the form of over-exuberant optimism which also contributed to rising asset prices (Minsky 1991).

[9] According to Knight, the intractable endurance of uncertainty—even at the level of our own personal preferences, which are often revised by "stimulus and suggestion" (1997: 42)—explains why some

In response, this article seeks to link the concept of "systemic risk" to the issue of the profit rate in the banking system. In particular, we observe that material changes in corporate governance and the competitive environment which place greater pressure on banks to return profits, while simultaneously or subsequently decreasing the actual profit rate of their banking books, create conditions ripe for crisis by inducing banks to assume new risks. As per convention, the profit rate of the banking book may be measured by net interest margin (NIM), a ratio expressing net interest income relative to average interest-earning assets. Thus although profits before tax for the Major British Banking Groups (MBBG) increased in the years leading up to the crisis, NIM across the sector actually decreased (Figure 1).[10] With the rate of return on their banking book reduced, MBBG responded by pursuing trading and fee income, which rose to nearly 60 percent of their profits, having been a minor component three decades ago (Davies et al. 2010: 324).[11] To the extent that non-interest income was generated via securitisation, these developments inflated the supply of credit which, viewed retrospectively as an equal and opposite accounting entry, generated debt in excess of obligors' capacity to make good on their promises to pay.

In this article we do not aim to add to the many excellent general surveys and formal models of systemic risk within the economics literature (De Bandt et al. 2012). Rather, our aim is to flesh out how systemic risk developed concretely in our historical period through changes in the management, organisation, and culture of British banks. In particular, our article focuses on how systemic risk crystallized at and through Northern Rock, a firm whose crisis we have both explored in-depth (Bholat et al. 2012; Gray and Akseli 2011). As Figure 1 reveals, Northern Rock had the lowest NIM among MBBG before the crisis. Northern Rock thus embodied, in highly concentrated form, a wider trend in British banking. Although Northern Rock was largely a domestic bank, its special significance in making the larger global

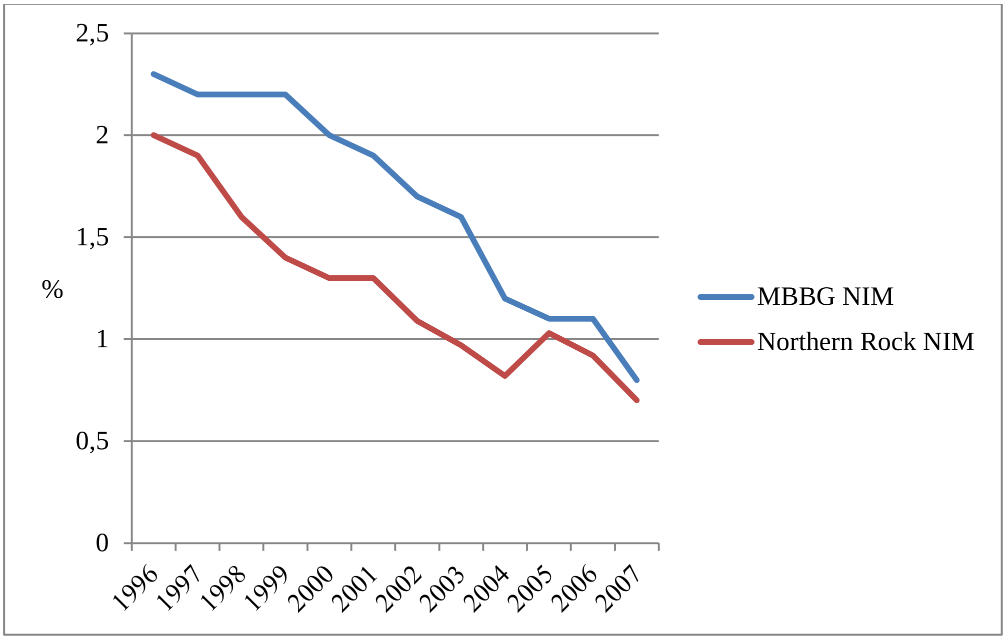
firms return profits and others loss (cf. Obrinsky 1983). Robb (2009) has written an innovative paper further developing the implications of Knightian uncertainty for microeconomics.

10 Major British Banking Groups is an aggregate category produced by the British Bankers' Association composed of Santander UK Group, Alliance & Leicester Group, Barclays Group, Bradford & Bingley Plc (up to and including 2009), HBOS Banking Group, Lloyds Banking Group, HSBC Bank Group, Lloyds TSB Group, Northern Rock, and the Royal Bank of Scotland Group.

11 Not coincidentally, as bank tellers were transformed into sellers of a myriad of financial products (Rogers 1999), conduct at the retail banking level appears to have suffered, with successive incidences of widespread mis-selling of retail financial products payment protection insurance being the most recent example (BBC News 9 May 2011).

crisis is widely recognized by scholars, with prominent Princeton economist Hyun Shin's (2009) commenting that Northern Rock was "the bank run that heralded the

Figure 1: Net Interest Margin, Major British Banking Groups and Northern Rock



Data Source: British Bankers' Association.
Notes: The data points between 1996-2003 are stated on a UK GAAP basis. From 2004 on the data is stated according to IFRS.

financial crisis." Northern Rock's crisis particularly resonated on local and national scales. At the time of its 2007 crisis, Northern Rock was the largest private sector employer in North East England (Walters 2008: xi) and the fifth-largest lender by mortgage assets in the UK (Brummer 2008: 12).

There already exists an established economics literature on Northern Rock, focused mainly on explaining the firm's crisis as a function of its dependence on wholesale funding and mortgage securitisation (Weale 2007; Chick 2008; Milne and Wood 2008; Rafferty 2008; Congdon 2009; Hamalainen 2009). But while this explanation is correct as regards the immediate cause, it begs the question when and why the firm developed this business model in the first place. Here what needs to be stressed is not only that Northern Rock sold mortgages in secondary markets, but also the relatively novel fact that equity in the firm was sold at all. Dating back to the nineteenth century, Northern Rock operated as a mutual building society for most of its history. As a mutual society, its shares were held by its users (depositors and borrowers) and the firm operated by legal statute on the philanthropic premise of increasing home ownership. But in 1997, Northern Rock converted to a corporation listed on the London Stock Exchange, part and parcel a larger demutualisation wave of British building societies. But the intervening years have shown a misplaced faith on the part of those who 'converted' (Warner 1997). All eleven building societies that demutualised in the 1990s have since lost their operational independence, either because they have been acquired by other banks, or because they have received public bailout, such as Bradford & Bingley and Northern Rock (Marshall et al. 2011: 26). The impact of these developments on the structure of the UK residential mortgage market has been profound. Between 1945 and 1980, building societies consistently originated over 80 percent of all mortgages in Britain (Watson 2004). But by 1997, the building societies' share of mortgages was reduced to one-quarter (Stephens 2001: 336) and 65 percent of the sector's assets had been transferred to the corporate banking sector (Drake 1997: 1).

In thus setting Northern Rock's crisis within the longer context of British building society demutualisation, this article aims to remedy some of the historical deficit in the systemic risk literature we made note of at the start. It also aims to add depth to the existing scholarship on Northern Rock by detailing the business model and management philosophies behind the firm's spectacular rise and fall on the basis of detailed analysis of annual reports and accounts, interviews, and archival research. In addition, by emphasising the historical novelty of British banks prominence in the UK residential mortgage market, the article has relevance for policy debates today. Many analysts have argued that the practice of mortgage securitisation was responsible for the crisis at Northern Rock and other banks. The basic argument is that securitization created perverse incentives for banks to originate mortgages without due regard to credit risk, since these loans could be sold off-balance sheet to investors (Morris 2008). However, as more acute analyses have revealed, this argument oversimplifies the behaviour of banks. Banks as a sector remained significantly exposed to securitized mortgages through the holding of their own or other banks' mortgage-backed securities (MBS), as well as through credit guarantees to special purpose investment vehicles and conduits selling MBS (Acharya et al. 2009: 21; Calomiris 2008: 34). As this article argues, this implies that the interesting issue is not mortgage securitization per se but, more precisely, the preference of banks to hold mortgages as assets, which is a recent development since the 1980s. At least in the UK case, emphasizing the novelty of mortgage securitization skips a step, passing over the more fundamental question of when, why, and with what impact mortgages became important to the asset portfolio of banks.

Finally, in placing emphasis on "risk-inviting rules" in banking (Calomiris 2010) such as insurance for depositors and limited liability for investors, our article endeavours to show how legal structures writ large foment system-wide risk. From our perspective, the current crisis has thus been 'legal' as much as it has been 'economic'. Critical legal distinctions between branches and subsidiaries (Wade 2009), encumbered versus unencumbered assets (Deryugina 2009), and between default and bankruptcy, attained significance over the course of the crisis to an extent many equilibrium models in economics inadequately capture.[12] In particular, as this article illustrates with reference to Northern Rock, the crucial legal shift from mutual cooperatives to limited liability corporations as the key commercial enterprises responsible for writing residential mortgages may have been an important factor in structurally propagating systemic risk across the British banking system in recent years.

2 Building "Society"

Northern Rock's roots reach back to 1849 when the Newcastle upon Tyne and Northern Counties Freehold Land Society was established by a group of townspeople "with the object of purchasing land on which to build houses for the deserving and thrifty" (Aris 2000: 12). At inception, the Northern Counties Freehold Land Society was a building society in the literal sense of an organisation engaged in the collective purchase and building of houses for its 300 members (Bab 1938: 56). Although the chief advantage for members was their ability to purchase land at wholesale prices, the society was also formed with the ambition of helping members gain the right to vote, given various property qualifications then applicable in

[12] As Goodhart (2009) has pointed out, most dynamic stochastic general equilibrium models are premised on real business cycle theory, where shocks are exogenous and the transversality condition rules out defaults and minimize the role of money and banks. In other words, they make residual what distinguishes monetary from barter economies (Ingham 2004).

England (Boléat 1987: 3). With housing complete, the Northern Counties Freehold Land Society was wound down after a year.

Soon thereafter, another Newcastle-based building society modelled on the first society was started. But the new firm differed organisationally from its predecessor. As Stephen Aris (2000: 23) in his excellent official history of Northern Rock notes:

> The trades-people and shopkeepers were in a majority on the board, and it was they who set the tone this time, rather than the politically motivated lawyers and other professionals. Much less was to be heard about providing decent housing for the deserving poor, and much more about the excellent returns available on a pre-eminently safe investment. The accent was more on money and its accumulation than on land and its development.

This change in organisational culture was reflected in the changed legal architecture of the new enterprise. Whereas the mandate of the original society had been to house a particular set of people, the new society was founded to operate in perpetuity. Furthermore, the changed emphasis on “the building society as a home for savings rather than saving for a home” (Aris: 19) expressed itself in the fact that the new society began to offer interest on deposits—and in step started charging interest on loans. As Aris notes, “the introduction of preference and paid-up shares (the latter being a full value share available to non-subscribers) was a watershed” because it created “a lump sum investment pure and simple with no direct connection with house purchase or home ownership” (Aris: 46–47).

The local development of the Northern Counties Permanent Benefit Building and Investment Society over the next century mirrored the broader national trajectory of building societies in Britain. As late as 1950, the market for residential mortgage finance was small, primarily because only 25 percent of UK households at that point in time were owner-occupiers (Cook et al. 2001: 10). But between 1950 and 1980, the number of homeowners doubled, reflecting rises in real median incomes and changes in consumer preferences.[13] Northern Rock proper was born against this backdrop, the product of a 1965 merger between the Northern Counties

[13] Government policy played a role in shaping this preference because of government tax relief on mortgage interest and capital gains tax exemption on real estate transactions (Fforde 1983: 369). Government policy also played a role on the supply side, with rent controls constricting the supply of private lets, such that by the late 1970s, the choice for British households in terms of mode of dwelling was limited to owner-occupation or public housing. Furthermore, the implementation of the Housing Act 1980 giving tenants in council houses the option to buy properties at reduced properties transferred 630,000 dwellings to the private sector retail mortgage market in its first four years (Dicks 1988: 36).

Permanent Benefit and Investment Building Society and the Rock Building Society, another North East organisation founded in 1865. While the newly amalgamated society continued to focus on making mortgages within the North East, the broader national demand for residential mortgage finance offered a rationale for the firm's strategy of pursuing growth through acquisitions. From the launch of the new firm in 1965 until 1997, Northern Rock bought 53 other building societies, mostly in the North East (Walters 2008: 5).

It is noteworthy that while the post-war boom in owner occupation and housing construction benefitted building societies like Northern Rock, British banks generally issued less than 5 percent of residential mortgages during this period. This continued a historical pattern; traditionally, British banks concentrated their portfolios in short-term assets such as bills of exchange and rolling overdrafts. In fact, long-term lending or maturity transformation— particularly for housing with the exception of loans secured on large gentry owned estates—was generally considered imprudent within banking circles, in part because of the association of such advances with populist organisations such as building societies and land banks (Rogers 2007). Moreover, even if they wanted to compete in the residential mortgage market, British banks in the post-war period could not have easily availed themselves of the discretionary funds to do so. During the 1950s and 1960s, British banks often held two-thirds of their assets in the form of gilts and government securities because of lending controls put in place to fight inflation and maintain the convertibility of the pound under the Bretton Woods system (Congdon 2011: 64).[14]

In spite of holding most of their assets in highly marketable but relatively low yield securities, firms enjoyed healthy rates of profitability because the 'Big Five'

[14] During the nineteenth century, financial capital flowed freely out of Britain at rates relative to output that are still unprecedented today (Dintenfass 1992: 43). Capital controls in the twentieth century first emerged as weapons in the arsenal of the British government in a very literal sense (Artis and Taylor 1989). They were enacted at the start of the Great War to pay for soldiers and supplies. Although these controls ended in 1925, they returned for the same reasons in 1939 (Wood 1985). They continued to exist after the War because of prominent Keynesian arguments that capital controls "should be a permanent feature of the post-war system" (Keynes, as quoted in McKinnon 1993: 13). This followed from the perception that capital flows had prolonged the Great Depression (Bordo 1992: 12). During the Depression, as prices fell, expected profitability did as well, leading investors to sell the pound. Although officials tried to re-attract investors by raising interest rates, they did so at a time when, from a proto-Keynesian view, they ironically needed to be reduced (Mishkin 1999: 7-8). Article VI of the Bretton Woods agreement encouraged countries to use capital controls to achieve full employment and domestic growth, notably through regulation of overseas securities investment (Miller and Wood 1979: 44).

banks operated a de facto oligopoly. Consequently, the role of profits as a meaningful category for bankers was very different in the post-war period than it is today. In part, this stemmed from the fact that British banks did not publish their true profits until 1969, so banks and their investors could not easily compare financial performance across firms (Capie and Billings 2004: 71). Consequently, bank dividends remained constant for long intervals, and bank stock tended to be regarded as fixed interest securities by investors (Capie and Billings 2001: 387). More generally, the culture within British banks was fundamentally different than their current culture.[15] As Charles Goodhart (2011: 139–140) has described the situation with characteristic wit:

> There was no call for financial innovation; bank manager were trained to say 'no,' rather than 'yes;' and they, and their counterparts in mortgage banking, followed the 3:6:3 rule, i.e. borrow at 3 percent, lend at 6 percent and on the golf course by 3 p.m. Lunches were long and liquid.

Speaking about shareholder value and profit maximisation within this context would be anachronistic. Whatever the resulting inefficiencies and inequities within British banks during this period—and no doubt they were legion—the system produced stable profits for firms and thus financial stability. Suffice to recall that the safety of the system was such that until 1973 the Bank of England employed just one senior official to oversee supervision of the entire financial sector (Capie et al. 1994: 74).

However, changes in British banks' competitive environment began with the implementation of a more liberal regulatory regime in 1971 shorthanded Competition and Credit Control "after the document that had preceded the implementation of the changes" (Moran 1984: 2).[16] As well, starting in the 1970s, banks' profits were pinched from both sides of the balance sheet. Specifically, the emergence of mutual and pension funds caused disintermediation, reducing banks' retail funding. As a consequence of this shift in household savings, a mass market

[15] Historically, the boards of British banks consisted of local aristocrats and so-called "Johnny Seventeens" i.e. non-university educated, lower middle class persons who had worked themselves up to the boardroom from clerk level. But starting in the late 1970s, British banks followed the lead of foreign (mostly American) rivals to whom they were losing business, and began hiring MBA talent from across the globe to fill executive and managerial positions (Lascelles 2005).

[16] Most significantly, Competition and Credit Control meant banks no longer set their interest rates collectively.

for corporate securities emerged, so large UK firms started making recourse to capital markets instead of banks to satisfy their external financial needs (Toporowski 2005: 9). At the same time, the increasing presence of foreign banks operating in London also pushed down British banks' profits.

Against this background, in 1979, the Thatcher government permanently suspended capital controls. This undermined the remaining quantitative restrictions on the growth of bank balance sheets (the Supplementary Deposit Scheme or so-called 'corset'). With capital now able to flow freely across sovereign space, British banks could redirect clients to their overseas subsidiaries in order to issue loans they could not make directly from their home offices, while the non-bank public also started to avail themselves of funding in Euro-sterling markets (Howe 1994: 152). Given the ineffectiveness of bank credit controls in the context of capital liberalization, quantitative restrictions were abolished in 1980, followed by the abolition of the cash reserve ratio in 1981.[17]

Freed from balance sheet restrictions, and with profits from wholesale lending reduced, British banks entered the retail mortgage market on an amplified scale in 1980-81, in part to re-attract retail deposits.[18] This shift in business strategy had a profound impact. In the short-term, intensified price competition undercut building societies' profits. This contributed to the breakdown of the Building Societies Association (BSA) cartel in the 1980s which had been in place since 1939, once it became evident that, while the cartel protected building societies from one another, it did nothing to protect them from banks (Boléat 1987: 178).[19] In the medium term, the new competition building societies faced encouraged them to lobby the

[17] Geoffrey Howe, then Chancellor of the Exchequer, later recounted that the end of capital controls had been "an ambition that a number of us [Conservatives] had long cherished" but it had been "too sensitive to feature in our 1979 Manifesto" (Howe 1994: 130-131). A number of key contingences aided the Conservatives in the realization of their ambition, most notably the appreciation of sterling on foreign exchange markets following the discovery of North Sea oil and the crisis in the Middle East (Freud 1979). The abolition of exchange controls was also promoted by the City as a response to the lifting of capital controls in the US in 1974 (Helleiner 1994: 151).

[18] Given the inflationary context, houses were a good investment for banks since in case of foreclosure they could expect to possess title to an appreciating asset.

[19] The BSA cartel was originally formed to temper price competition between building societies during a period of low interest and profit margins (Boléat 1987). In later years, the cartel was justified as consistent with the philosophy of mutualism (Barnes 1984: 3) even though, as one critic later complained, if you were "single, or gay, or self-employed, and so on, then the building society was not interested" (Hird 1996: 42). With home mortgage loans constrained, mortgage queues were quite common in England during the 1960s and 1970s (Callen and Lomax 1990: 503).

government for regulatory reform, encapsulated in the 1986 Building Societies Act. The Act subsequently blurred the operational distinction between banks and building societies. As one building society senior manager at the time reflected:

> When the Building Societies Act came in 1986, as of 1987 the word profitability existed for the first time . . . as opposed to surplus of income over expenditure, stick it in the reserves. So people said 'ooh profitability', and that took them down the appropriate commercial road. 'Well if we're a business and now it is expected to make profits and maintain capital ratios we've got to have people from plc worlds that are used to doing that type of thing'...So then, 'ooh crumbs, we are competing with [banks and other building societies], we are not just cosy lunch clubs anymore.' That doesn't happen anymore, life is tough, we are one wolf pack against another wolf pack (quoted in Marshall et al. 2003: 741).

Although the 1986 Act contained a number of important provisions, its long-term legacy was to create the legal conditions of possibility for building societies to become banks at the close of the twentieth century; a demutualisation wave that would generate more new shareholders in the UK than all the other privatisations of British industry in the 1980s and 1990s *combined* (Martin and Turner 2000: 229). In 1997, Northern Rock, along with a number of other British building societies, became a corporate body independent of the natural persons constituting it.

3 Northern Wrecked

From a legal perspective Northern Rock's changed status from mutual building society to a proprietary corporation freed it from the restrictions imposed by the Building Societies Act 1986 (hereafter 'BS Act') [20] on permissible purpose or principal purpose (BS Act 1986, s 5(1) (a)), the range of powers it could exercise (BS Act 1986, ss 9(A) and 9(B)) and the characteristics of its balance sheet (ss 6 – 8 BS Act 1986). It also changed the nature of its membership so that members no longer had to be either borrowers or share account holding investors (savers) in the society (BS Act 1985, s 119, Sched 2 para 5). Instead the register of members was opened up to any legal person and the involvement of external, often institutional, shareholders led to a real shift in the expectations and entitlements of investors.

[20] As subsequently amended by the Building Societies Act 1997 and the Financial Services and Markets Act 2000 but nothing in that amending legislation affects the points we make herein.

Indeed the differences between the two forms of organisation changed the context in which Northern Rock operated to such an extent that it reoriented the way Northern Rock's directors perceived and discharged their duties and functions as a governing body in substantive ways that had profound effects a decade later.

This was so despite the fact that the literal legal duties of directors of companies, being so broadly expressed, may not seem very different to the behaviours that Courts have expected from the officers of a building society in the course of their conduct of the business of the society in accordance with the society's constitution as case law such as the 19th Century case of *Sheffield and South Yorkshire Permanent Building Society v Aizlewood and others* illustrates. This is no surprise since the Chancery Court borrowed from the long familiar duties of trustees when formulating the powers and duties of the officers of companies and building societies, which presented them with novel challenges in nineteenth century Britain. The duties owed at law by the members of building societies' governing bodies are simply stated and widely understood as being to conduct the business of the society subject to the statutory framework set out in the BS Act 1986.[21] To this end, the Building Societies legislation envisaged that the membership of the society upon its establishment would take the lead in delimitation of the powers and duties of the board of directors (BS Act 1986, schedule 2, Part I paras 2(3) and 3(4)) subject to various statutory restrictions on interested contracts and self-dealing by directors similar to those contained in Companies legislation (BS Act 1986, Part VII). The memorandum of association by which a building society is formed and the constitutional rules by virtue of which it is governed, are expressed to bind its officers, as well as its members (BS Act 1986, sched 2, part I para 3(2)). This marks an important difference between building societies and companies because the constitutional documents of companies incorporated under Companies legislation have contractual effect so as to bind the company and the members (Companies Act 1985, s14 replaced in 2009 by Companies Act 2006, s33) but *not* its officers who have historically been seen by the Courts as "outsiders" to the company for the purposes of giving the constitutional documents direct contractual effect as against the Directors, a principle that has flavoured company law since it was first

[21] As amended by BS Act 1997 and now of course, since building societies require FSA authorisation, within the broader regulatory framework of the Financial Services and Markets Act 2000 Part V of which has imposed more specific obligations under the members of a governing body of a building society through the Approved Persons regime just as it does to directors of banks.

established in the 1915 case of *Hickman v Kent & Romney Marsh Sheep Breeders Association Ltd.*

At first glance, this may seem little more than a technical legal point, but it resonates with our earlier research findings that, post-demutualisation, long standing (often employee) members of Northern Rock began to feel a far more tenuous link with the directors of the company, perceiving them as outsiders on a number of levels, to their original perceptions of the leadership of the organisation (Bholat et al. 2012). In 1997 when Northern Rock became a public company limited by shares incorporated under the (then applicable) Companies Act 1985, the duties owed by its Directors to the new company became those owed by all company directors, namely a bundle of fiduciary and common law duties represented by the accretion of over 100 years of case law precedent, overlaid by specific statutory rules designed to buttress the fiduciary duty. Land mark decisions among this vast body of precedent range from the middle of the nineteenth century *Aberdeen Railway Co v Blaikie Bros* (1854) to more recent decisions such as *Re D'Jan* (1993), and examine in specific detail the responsibilities of both executive and non-executive directors in every size and type of company, in almost every sector. The net effect of all this case law, in which the judiciary strove to develop appropriate behavioural codes and liability rules for company directors charged with stewardship of incorporated enterprise behind the veil of limited liability, was to require them to act in the best interests of the company in good faith, with absolute integrity, and with a reasonable degree of competence and professionalism.

Note that the duty is owed to the company and *not*, as a general rule, to the shareholders either collectively or individually (*Percival v Wright* (1902); *Peskin v Anderson* (2000), and nowhere in companies legislation or in case law have the functions of company directors been expressed as being to maximise the financial value of the shareholders stake in the company. Nonetheless Boards of Directors of public companies in Anglo-American jurisdictions have in practice seen "the interests of the company" as coterminous with "shareholder value" on the grounds that equity holders are not guaranteed a fixed return like other creditors and contractors, so maximizing the residual income available for distribution to stock investors optimises the performance of the firm as a whole (Martin et al. 2007: 81). While viewed by some scholars as a solution to the problem of separation of ownership and control identified by Berle and Means (1991) in their seminal work, the primacy of shareholder value has also been seen by critics as inconsiderate to the interests of other corporate stakeholders, such as suppliers, employees, managers, creditors, and the community more broadly (Lazonick and O'Sullivan 2000; Fligstein 2001). This general critique of shareholder value strategy has particular purchase in the banking sector given that very little bank funding comes from equity (Macy and O'Hara 2003: 94). This has led to a host of legislative and non-legislative initiatives designed to enable the corporate governance framework to promote some of these interests when "the interests of the company" are under consideration by the Board.[22]

But in practice this has been difficult to achieve. Why so considering that the literal nature of the legal duties owed by the directors of mutual and corporations are not so very different? What *is* so very different between the two organisational forms is the context in which those directors' duties are exercised as a result of the differences between the nature and expectations of the voting membership of a public company from that of the voting membership of a building society. The members of a mutually owned building society do not have the same kind of financial interests that shareholders in a company do. Their expectations as to financial participation in the assets of the society are to share in the distribution of any surplus in the reserves upon its winding up. Beyond that, the Courts have refused to see membership in a mutual society as conferring any kind of free standing financial value or rights to participate financially in the society's surpluses while it is a going concern (*Money Markets International Stockbrokers Ltd v London Stock Exchange Ltd* (2001); Needler *Financial Services Ltd v Taber* (2001)). This is in stark contrast to the bundles of rights that the Courts see a share in a company as conferring, for these *are* seen generally to confer a right to participate financially in the company's surpluses by way of dividends while it is a going concern:

> A share in a company could not properly be likened to a sum of money settled upon and subject to executory limitations to arise in the future; it was rather to be regarded as the interest of the shareholder in the company, measured, for the purposes of liability and dividend, by a sum of money, but consisting of a series of mutual covenants entered into by all the shareholders inter se (*Borland's Trustee v Steel Bros & Co Ltd* 1901).

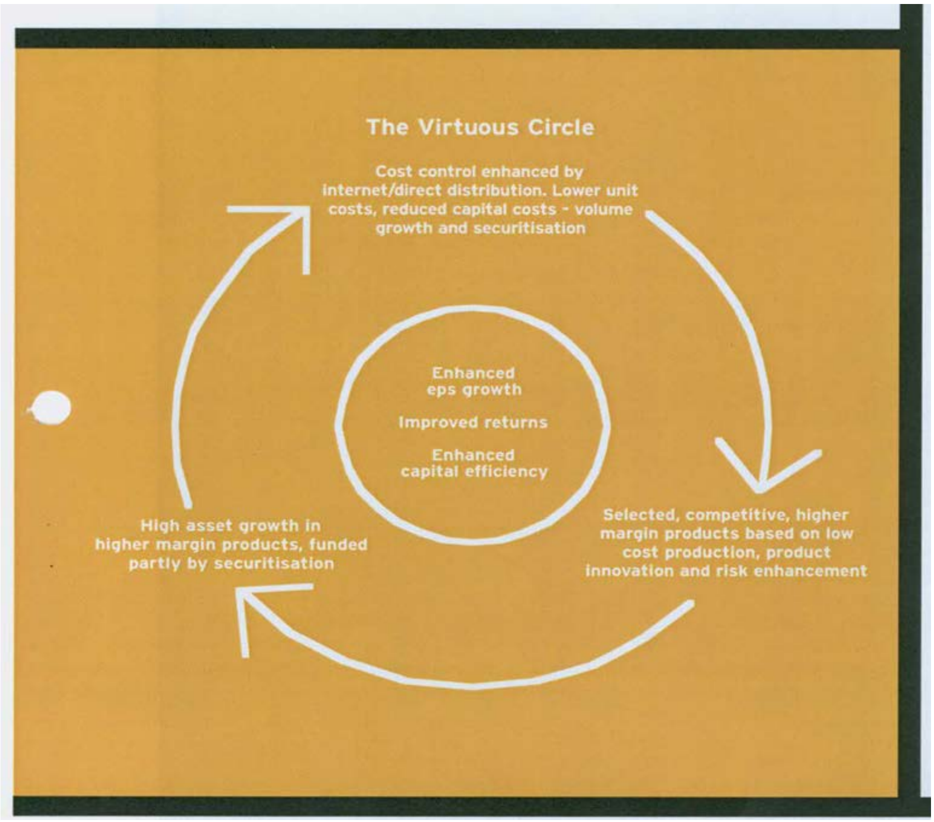
22 The most potentially significant legislative reform to date has been the adoption of the "enlightened shareholder value" test for Directors' decision making whereby they are directed to have regard to a range of other interests beyond those of the shareholders, enshrined in section 172 Companies Act 2006.

So too, when it comes to the voting rights of members. There are material differences in the governance framework between the two organisational forms, since building society members exercise their interests through voting in a manner that is unrelated to the size of their financial interest but instead relates simply to their membership in the society. Building society members are individual savers with and borrowers from the society whose franchise at general meeting is usually along a one-member, one-vote pattern, with the size of their share or loan with the society irrelevant to their influence. In theory, there thus exists a shorter chain of connectivity between the governing body of a building society and the constituent members of the society than is the case in the governance framework that exists between public company directors and the anonymous institutions that largely own them, for these institutional investors will often have their own long chains of accountability to diverse and anonymous ultimate investors and beneficiaries in which real identities and voice can get lost, leading to further weakening of governance incentives (Gray 2004). This has a very real effect on the incentives operating on the Directors of each type of organisation and the strategies they pursue, as highlighted by the BSA in its response to the review of corporate governance of UK banks and other financial industry entities (2009):

The relationship between the board and those to whom it is accountable is different in a mutual and a PLC. Building societies have individual members rather than the institutional shareholders that banks have. There are differing financial objectives in mutuals compared to PLCs—for example, in normal times many mutuals seek to narrow their margins in order to give their customers—who mostly are also their members, a better deal. PLCs tend to seek to widen margins in order to deliver dividends to shareholders.

Despite the fact that, ever since the decision in *Percival v Wright*, directors of companies have been told time and again by the Courts that their duties are owed in law to the company *as a whole* and not directly to the shareholders individually or collectively, just like many other companies across the Anglo-American world, Northern Rock's board after demutualisation conflated its duties to the firm to duties to shareholders. As the former Chairman of the Northern Rock Board Sir John Riddell once declared, "I have no time for the argument that concentration on shareholder value conflicts with the interests of other stakeholders. A single-minded drive to increase shareholder value carries with it, necessarily, the primacy of first-class service to the customer, and support for our workforce and for the North-East" (Northern Rock 2001: 4).

Figure 2: The 'Virtuous Circle'



Data Source: Northern Rock Annual Report 2003

Figure 2 encapsulates the strategic vision of the firm in a business model the company referred to as "the virtuous circle." The circular metaphor was apropos: while the firm's pursuit of profits generated frequent changes in products and pricing, its goal remained the same: "Northern Rock's strategy (plan) is to keep growing" (Northern Rock 2006a: 1). In general, Northern Rock delivered on its ambition. Between 1997 and 2007, Northern Rock's total assets grew from £18 billion to £113.5 billion, equivalent to an annual growth rate of 23.2 percent (Shin 2009: 103), while its pre-tax profits increased 250 percent (Marshall et al. 2011: 4). The primary means through which Northern Rock hit its profit targets was by keeping costs low, particularly by leveraging low-cost labour in the North East. As the company stated in a *Times 100* business case study titled *Pursuing a Growth*

Strategy, “A key advantage (of Northern Rock) over rivals is that its Head Office and key operational units are located in north east England where wages are, on average, lower than in the rest of the UK” (2006: 123). As a consequence, even as the company increased its staff by 3,000 people between 1997 and 2007, employment growth was primarily in low-skill, relatively low-wage work “comprising approximately one third call centre staff such as telesales and data processing, one third retail and commercial banking staff, and the remainder in administration, processing, and general management predominately supporting telebanking” (Marshall et al. 2011: 5).

Thus although Northern Rock was often viewed before the crisis as “a symbol of the North East’s renaissance” (Elliot and Atkinson 2008: 49), the reality was that the firm re-entrenched the region’s precarious position within the national and international division of labour “where it has relied on call centres, administrative and clerical support offices in the public and private sector to replace traditional industrial and manufacturing branch plant decline” (Dawley et al. 2011: 5). Moreover, the spatial agglomeration of the company’s staff in the North East also contained costs by reducing rental and property costs. In 2007, the company had only 72 branch offices (House of Commons Treasury Committee 2008: 67). In lieu of an elaborate branch network, Northern Rock instead generated sales through independent financial advisers (IFAs). By 2007, 90 percent of Northern Rock’s new mortgage business was coming through intermediaries (Sage and Patel 2007: 3) and 90 percent of all mortgage applications were submitted via the Internet through Northern Rock’s digital platform “Tracker Online” (Northern Rock 2007: 6). In this respect, Northern Rock exemplified a larger pattern within the British banking sector in recent years whereby the origination, funding, servicing, and monitoring of loans have become discrete and fragmented processes (Casu et al. 2006: 248).

Together, Northern Rock’s limited infrastructure and low-cost labour enabled the firm to have the lowest cost-to-income ratio among British banks in the years leading up to the crisis. In turn, the company passed these savings on to consumers in the form of lower rates on mortgages, especially during the 1990s and early 2000s when the firm’s often market-leading rates attracted a large volume of potential borrowers, from which the firm selected those with the lowest credit risk. Specifically, Northern Rock operated a policy that required seven out of every ten new customers to have a history of credit repayment (Northern Rock 2006b: 8). As a result of this policy, most of Northern Rock’s lending was to second-time home buyers and for remortgages (Northern Rock 2006b: 41), with net lending to first-time home buyers averaging just 25 percent. The logic behind the strategy was that by lending to borrowers with certified credit histories, the company would have lower default rates and overall lower costs compared to rivals. As one financial analyst report concluded in 2004, "Northern Rock has the lowest risk profile of any UK bank" (Hamilton and Bergoe 2004: 1).

Indeed the remarkable aspect of Northern Rock's growth story is that it largely occurred without any noticeable decline in conventional key risk indicators. In general, Northern Rock regularly reported mortgage arrears at or below half the bank industry average, and recorded similarly low repossession rates. These impressive results were the product of Northern Rock's generally solid underwriting standards. The company had limited exposure to loans in what are conventionally viewed as higher risk areas, such as business lending, credit cards, and insurance. In terms of residential lending, the company diversified nationally and had a limited number of buy-to-let and second charge mortgages on its books. The company also had limited exposure to large loans, with only about 5 percent of residential mortgages exceeding £500,000 in 2006. This remarkable, apparently riskless growth left many financial analysts with the impression that the firm had few faults. As equity analysts at ill-fated ABN AMRO wondered, "Northern Rock: How does it do it?" (Davies et al. 2003). The company was thus riddled with contradictions even the brightest analysts could not solve. Here was a firm both geographically expansive in its sources of funding and highly concentrated in terms of its labour force; the highest rated bank stock in Europe at the start of 2007, but also the most highly leveraged (Onado 2009: 104).

But with hindsight the virtuous circle was not without its vices. The embrace of the ethos embodied in the virtuous circle caused the company to adopt a range of strategic targets by which to measure its performance, most prominently, 20 percent growth in profits to shareholders, plus or minus 5 percent, and 20 to 25 percent return on equity (Northern Rock 2007: 34). At the same time, and particularly after 2003, the Rock lost its cost competitive edge, as other mortgage providers replicated the firm's products and pricing. Here the challenges Northern Rock faced should not be viewed in isolation but seen as symptomatic of the banking sector as a whole in the period after the millennium. These challenges are explicable by the interpretive framework outlined in the article's introduction. Specifically, the challenges banks faced occurred because exuberant profit targets, justified on the basis of shareholder value, generated price competition; competition reduced net interest margins and the rate of return of banking books; and lower profit rates induced the banking system as a whole to increase the volume of debt, thus making its cumulative repayment less and less likely. While these dynamics appeared as exogenous profit pressures from the perspective of each individual bank, they were, in fact, endogenously constituted by the system as a whole (Bisias et al. 2012: 48). From this perspective, banks played a constitutive role in their own crisis. [23]

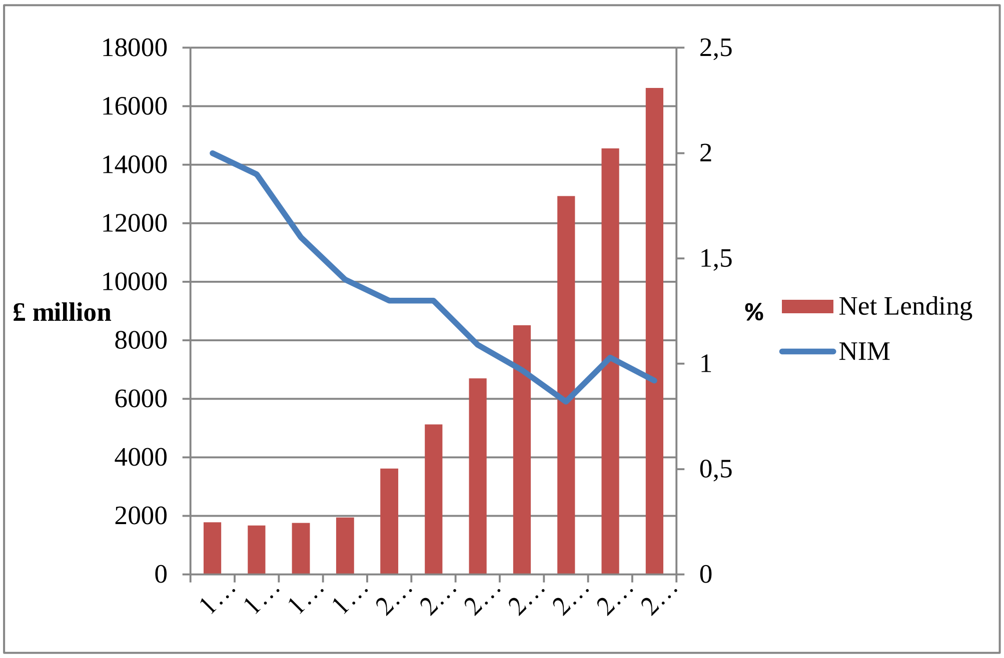
Northern Rock is illustrative. As its NIM narrowed, the firm massively increased the volume of loans to return profits (Figure 3). By the first half of 2007, Northern Rock's share of net mortgage lending had increased to 18.9 percent, making it the UK's biggest mortgage lender during that period (Chen 2007: 2). As part of these efforts, Northern Rock began marketing its now infamous "Together Loan" through which borrowers received loans for 125 percent of the market value of their home purchase, and up to six times their annual income (Brummer 2008: 10). Rather than hold these mortgages on balance sheet, Northern Rock increasingly marketed them to investors. Consequently, the percentage of customer loans securitized by Northern Rock increased from 0.6 percent in 1999 (the first year Northern Rock sold residential mortgage-backed securities) to 46 percent by 2006 (Milne and Wood 2008: 10). At the same time, the firm tried to increase its non-interest income by marketing insurance policies written by Legal & General Assurance Company, as well as by selling sub-prime mortgages on behalf of soon-to-be-doomed American investment banking firm Lehman Brothers.

The rest of the Northern Rock story is well-known. In order to fund its mortgage securitisation program, Northern Rock increasingly relied on wholesale funding rather than retail deposits, in a fashion similar to what occurred at Royal Bank of Scotland (Financial Services Authority 2011). As a result, on 9 August 2007, when inter-bank markets came to a standstill following months of bad news in financial markets, Northern Rock was acutely compromised. Although the retail queues outside the bank were still a month away, a run on the Rock by institutional investors had occurred invisibly because of their unwillingness to roll over the firm's short-term debt. As CEO Adam Applegarth later lamented, "The world changed on August 9" (as quoted in Jones 2007).

---

[23] The endogenous view of the banking crisis can be contrasted with exogenous views that explain it on the basis of high rates of savings in Asian economies, most notably China. According to this view, the resultant "global savings glut" (Bernanke 2005) lowered global interest rates, which in turn increased (financial) investment in recipient countries, most notably the US, whilst such low interest rates additionally inspired a "search for yield" among investors, encouraging their holding of comparatively riskier assets, such as US sub-prime mortgage backed securities (Financial Services Authority 2009: 14). For a critical view of the exogenous narrative see Borio and Disyatat (2011).

Figure 3: Net Lending and NIM



Data Source: Northern Rock Annual Reports and Accounts various years.

4 Conclusion

Much of the emergent literature on systemic risk focuses on the problems posed from network homogeneity rooted in positive asset correlations and common counterparty exposures. The basic argument is that high degrees of firm integration potentially render the financial system less durable and more vulnerable to collapse. This negative appraisal of the effects of bank interconnectedness on financial stability is historically remarkable. Suffice to recall that many economic historians credit Britain's highly concentrated branch network system for helping her weather the Great Depression, while one-third of firms failed in the unit bank-dominated US system (Billings and Capie 2011). Such considerations, however, by no means undermine the fundamental insight of the nascent systemic risk literature that diversification in assets and ideas matters mightily to the long-term viability of the financial system (Haldane 2009).

In that spirit, this article has identified organisational sources responsible for imposing uniformity in financial services beyond balance sheet linkages. In particular, an historical perspective on Northern Rock and the residential mortgage market in the UK offers a cautionary tale against legal reductionism i.e. the tendency to conflate financial firms with the limited liability corporate form, to the exclusion of other enterprise models, such as partnerships, producer cooperatives, the consumer mutual, and, of particular significance in the history of British commerce, the family firm (Herrigel 2006). As a recent report by the Oxford Centre for Mutual & Employee-owned Business (2009: 10–11) concluded, “A financial system populated by a diversity of ownership structures is likely to be...systemically less risky than one populated either by all plcs or all mutuals” because “the more diversified is a financial system in terms of size, ownership and structure of businesses, the better it is able to weather the strains produced by...an uncertain market environment” (cf. Haldane and Nelson 2012: 20).

In particular, this article has suggested that the spread of a corporate monoculture in banking valorising shareholder value has been an important, historically specific source of systemic risk. As the back offices of corporate banks have substituted for locally based building society branches as the main providers of mortgage finance in Britain, valuable grounded knowledge of the local economy may have been lost, displaced by numerical credit scores that, by themselves, may be poor indicators of credit risk (Rajan 2010: 129). Of course, building societies and the mutual form are hardly perfect, as the recent Dunfermline crisis makes plain. Our aim has thus not been to advocate any particular policy, but more humbly to emphasise that the predominance of the profit-maximizing, limited liability corporate organisation in British banking is contextually contingent. Before the twentieth century, most banks were private partnerships, and most deposit takers were cooperatives.[24] To the extent that corporate banks did exist, the unlimited liability of their investors balanced their risk-reward calculus.[25]

The issue of organisational diversity and legal plurality we have raised in this article acquires renewed purchase at present. In January 2012 new legislation was

---

[24] Monetary financial institutions encompass banks, building societies, and credit unions; in other words, institutions taking deposits and granting loans.

[25] Bank shareholders gained statutory permission for limited liability in 1862.

implemented to govern the UK credit union sector.[26] Among other provisions, the Legislative Reform (Industrial and Provident Societies and Credit Unions) Order 2011 relaxed criterion for credit union membership, allowing the admittance of corporations as members for the first time.[27] In addition, credit unions are now able to offer fixed interest-bearing deposits, and the dividend they pay on member shares is no longer capped at eight percent per year. In implementing these legislative reforms, the stated goal has been to remove “obstacles to profitability” (HM Treasury 2009: 18) which have purportedly hampered the growth of British credit unions. Thus credit unions are now able to charge their members for payment services above cost i.e. for-profit.

But in reflecting on these legislative changes, the history of British building societies should give pause for reflection. As the Northern Rock story shows, legal reforms that prospectively increase profit pressures on mutual cooperatives and render them more similar to contemporary corporate banks carries potential risks both for those firms and the financial system as a whole. In an uncertain world, history teaches that long-term economic innovation and social resilience is best promoted by cultivating a plurality of activities and values, rather than creating an institutional environment in which the maximization of short-term profitability enjoys singular prominence.

Acknowledgement: This article does not necessarily reflect those of any of our employers.

---

[26] Like banks and building societies, credit unions take deposits and grant loans, with the caveat that loans are generally granted only to those with deposits (“member shares”).

[27] As well, credit union members no longer need to demonstrate a single “common bond” but can be related through “common bonds” (plural), and the percentage of non-common bond membership permitted has been increased.

References

Aberdeen Railway Co v Blaikie Bros 1854 1 Macq. 461. http://en.wikipedia.org/wiki/Aberdeen_Railway_Co_v_Blaikie_Brothers

Acharya, V., Philippon, T., Richardson, M., and Roubini, N. (2009). The financial crisis of 2007–2009: Causes and remedies. In V. Acharya and M. Richardson (Eds.), *Restoring financial stability: How to repair a failed system*. New York, NY: New York University Press. http://onlinelibrary.wiley.com/doi/10.1111/j.1468-0416.2009.00147_2.x/full

Allen, F., and Carletti, E. (2008). Mark-to-market accounting and liquidity pricing. *Journal of Accounting and Economics* 45: 358–378. http://ideas.repec.org/a/eee/jaecon/v45y2008i2-3p358-378.html

Aris, S. (2000). *Building the Northern Rock*. London: James and James (Publishers) Ltd.

Artis, M., and Taylor, M. (1989). Abolishing exchange controls: The UK experience. Centre for Economic Policy Research Discussion Paper 294. http://www.cepr.org/pubs/dps/DP294.asp

Bab, H. (1938). The evolution of the British building society. *Economic History Review* 9(1): 56–63. http://www.jstor.org/stable/2589967

Bank of England. (2011). Instruments of macroprudential policy: A Discussion Paper. http://www.bankofengland.co.uk/publications/Documents/other/financialstability/discussionpaper111220.pdf

BBC News. (2011). Banking industry gives up on PPI mis-selling battle. http://www.bbc.co.uk/news/business-13330858

Beale, N., Rand, D., Battey, H., Croxson, K., May, R., and Nowak, M. (2011). Individual versus systemic risk and the Regulator's Dilemma. *Proceedings of the National Academy of Sciences of the United States of America*. doi:10.1073/pnas.1105882108. http://www.pnas.org/content/early/2011/07/13/1105882108.full.pdf+html

Berle, A., and Means, G. (1991). *The modern corporation and private property*. Brunswick, New Jersey: Transaction Publishers.

Bernanke, B. (2005). The global saving glut and the U.S. current account deficit. Remarks by Governor Ben S. Bernanke At the Sandridge Lecture, Virginia Association of Economists, Richmond, Virginia. http://www.federalreserve.gov/boarddocs/speeches/2005/200503102/default.htm

Bernanke, B., Gertler, M., and Gilchrist, S. (1998). The financial accelerator in a quantitative business cycle framework. NBER Working Paper Number 6455. http://www.nber.org/papers/w6455

Bernstein, P. (1998). *Against the gods: The remarkable story of risk*. New York, NY: Wiley.

Bezemer, D. (2011). Causes of financial instability: Don't forget finance. Levy Economics Institute Working Paper Number 665. http://www.levyinstitute.org/pubs/wp_665.pdf

Bholat, D., Dunn, A., and Gray, J. (2012). Share and share alike? Hedge funds, human rights, and owning enterprise in Britain. *Journal of Law and Society* 39(2): 185–212. http://onlinelibrary.wiley.com/doi/10.1111/j.1467-6478.2012.00578.x/full

Billings, M., and Capie, F. (2011). *Financial crisis, contagion, and the British banking system between the world wars*. Business History 53(2) April: 193–215. http://ideas.repec.org/a/taf/bushst/v53y2011i2p193-215.html

Bisias, D., Flood, M., Lo, A., and Valavanis, S. (2012). A survey of systemic risk analytics. Office of Financial Research Working Paper 1. http://www.treasury.gov/initiatives/wsr/ofr/Documents/OFRwp0001_BisiasFloodLoValavanis_ASurveyOfSystemicRiskAnalytics.pdf

Boléat, M. (1987). *The Building Society Industry*. London: Allen & Unwin.

Bordo, M. (1992). The Bretton Woods international monetary system: An historical overview. National Bureau of Economic Research Working Paper No. 4033. Cambridge, MA: National Bureau of Economic Research. http://www.nber.org/chapters/c6867.pdf

Borio, C., and Disyatat, P. (2011). Global imbalances and the financial crisis: Link or no link? Working Paper Number 346. Bank for International Settlements, Basel, Switzerland. http://www.bis.org/publ/work346.pdf

Borland's Trustee v Steel Bros & Co Ltd [1901] 1 Ch 279.

British Bankers' Association. (2012). *Abstract of Banking Statistics 28-2011*. London: British Bankers' Association.

Brummer, A. (2008). *The crunch: The scandal of Northern Rock and the escalating credit crisis*. London: Random House Business Books.

Building Societies Association. 2009. Submission to the Walker Review. http://www.bsa.org.uk/policy/response/walker_review_bsa_response.htm

Building Societies Act 1986.

Building Societies Act 1997.

Callen, T.S., and Lomax, J.W. (1990). The development of the building societies sector in the 1980s. Bank of England Quarterly Bulletin (November): 503–513.

Calomiris, C. (2008). The subprime turmoil: What's old, what's new, and what's next. VOX, 22 August 2008. http://www.voxeu.org/index.php?q=node/1561

Calomiris, C. (2010). Banking crises yesterday and today. *Financial History Review* 17(1): 3-12. http://journals.cambridge.org/download.php?file=%2FFHR%2FFHR17_01%2FS0968565010000028a.pdf&code=3b77c83f6adc9a7fa239898b8d35813a

Capie, F. (2011). British financial crises in the nineteenth and twentieth centuries. Paper presented at Durham University.

Capie, F., and Billings, M. (2001). Profitability in English banking in the twentieth century. *European Review of Economic History* 5(3): 367–401. http://ideas.repec.org/a/cup/ereveh/v5y2001i03p367-401_00.html

Capie, F., and Billings, M. (2004). Evidence on competition in English commercial banking, 1920–1970. Financial History Review 11(1): 69–103. http://ideas.repec.org/a/cup/fihrev/v11y2004i01p69-103_00.html

Capie, F., Goodhart, C., and Schnadt, N. (1994). The development of central banking. F. Capie, C. Goodhart, and N. Schnadt (Eds.), *The future of central banking*: The *tercentenary symposium of the Bank of England*. Cambridge: Cambridge University Press.

Casu, B., Girardone, C., and Molyneux, P. (2006). *Introduction to banking*. Harlow: Pearson.

Cerutti, E., Claessens, S., and McGuire, P. (2012). Systemic risk in global banking: What can available data tell us and what more data are needed? BIS Working Papers 376. Basel, Switzerland: Bank for International Settlements. http://www.bis.org/publ/work376.htm

Chen, S. (2007). *Northern Rock: The unravelling*. Panmure Gordon & Company.

Chick, V. (2008). Could the crisis at Northern Rock have been predicted? An evolutionary approach. *Contributions to Political Economy* 27(1): 115-124. http://cpe.oxfordjournals.org/content/27/1/115.full.pdf+html

Companies Act 1985.

Companies Act 2006.

Congdon, T. (2009). The Northern Rock affair: An analysis of the “teaser rate strategy.” In F. Bruni and D. Llewellyn (Eds.), *The failure of Northern Rock: A multidimensional case study*. Vienna, Austria: SUERF–The European Money and Finance Forum. http://ideas.repec.org/h/erf/erfssc/53-10.html

Congdon, T. (2011). *Money in a Free Society: Keynes, Friedman, and the New Crisis in Capitalism*. New York: Encounter Books.

Cook, J., Deakin, S., and Hughes, A. (2002). Mutuality and corporate governance: The evolution of UK building societies following deregulation. *Journal of Corporate Law Studies* 2: 110–138. http://heinonline.org/HOL/Page?handle=hein.journals/corplstd2&g_sent=1&collection=journals&id=112

Crouhy, M., Galai, D., and Mark, Robert. (2006). *The Essentials of risk management.* New York: McGraw-Hill.

Davies, D., Gough, N., and Erskine, R. (2003). *Northern Rock: How does it do it?* ABN AMRO.

Davies, R., Richardson, P., Katinaite, V., and Manning, M. (2010). Evolution of the UK banking system. *Bank of England Quarterly Bulletin* Q4: 321–332.

Dawley, S., Marshall, N., Pike, A., Pollard, J., and Tomaney, J. (2011). The Labour market impact of the run on Northern Rock: Continuity and evolution in an old industrial region. Papers in Evolutionary Economic Geography 1109. Utrecht, Netherlands: Utrecht University. http://econ.geo.uu.nl/peeg/peeg1109.pdf.

De Bandt, O., Hartmann, P., and Peydró, L. (2012). Systemic Risk in Banking: An Update. In A. Berger, P., Molyneux, P., and J. Wilson (Eds.), *The Oxford Handbook of Banking*. Oxford: Oxford University Press.

Deryugina, M. (2009). Standardization of securities regulation: Rehypothecation and securities commingling in the United States and the United Kingdom. *Review of Banking & Financial Law* 29: 253–288. http://heinonline.org/HOL/Page?handle=hein.journals/annrbfl29&g_sent=1&collection=journals&id=256

Desai, M. (1991). Endogenous and exogenous money. J. Eatwell, M. Milgate, and P. Newman (Eds.), *The New Palgrave: Money*. New York, New York: WW Norton. http://cas.umkc.edu/econ/economics/faculty/wray/papers/Desai.pdf

Dick, A., and Hannan, T. (2012). Competition and antitrust policy in banking. In A. Berger, P., Molyneux, P., and J. Wilson (Eds.), *The Oxford Handbook of Banking*. Oxford: Oxford University Press.

Dicks, M.J. (1988). The demographics of housing demand: household formations and the growth of owner-occupation. Bank of England Discussion Paper 32(July).

Dintenfass, M. (1992). *The decline of industrial Britain, 1870–1980*. London: Routledge.

Dow, J. (2000). What is systemic risk? Moral hazard, initial shocks, and propogation. *Monetary and Economic Studies* 18(2): 1–24. http://www.imes.boj.or.jp/research/papers/english/me18-2-1.pdf

Drake, L. (1997). The economics of mutuality; Building Societies Association, Paper Number 3. D. Llewellyn, (Ed.), *Economics of mutuality and the future of building societies*. London: Building Societies Association.

Elliot, L., and Atkinson, D. (2008). *The Gods that failed*. London: Random House.

Erturk, I., Froud, J., Leaver, A., Moran, M., and Williams, K. (2011). Haldane's gambit: Political arithmetic and/or a new metaphor. CRESC Working Paper 97. http://www.cresc.ac.uk/publications/haldane%E2%80%99s-gambit-political-arithmetic-andor-a-new-metaphor-0

Fforde, J.S. (1983). Competition, innovation and regulation in British banking. *Bank of England Quarterly Bulletin* 23(3) September: 363–376.

Financial Services Authority (2009). *The Turner review: A regulatory response to the global banking crisis*. London: Financial Services Authority. http://www.fsa.gov.uk/pubs/other/turner_review.pdf

Financial Services Authority (2011). *The failure of the Royal Bank of Scotland*. London: Financial Services Authority. http://www.fsa.gov.uk/library/other_publications/miscellaneous/2011/rbs.shtml

Financial Services and Markets Act 2000.

Fisher, I. (1933). The debt-deflation theory of great depressions. *Econometrica* 1(4): 337–357. http://www.jstor.org/stable/1907327

Fligstein, N. (2001). *The architecture of markets: An economic sociology of twenty-first century capitalist societies*. Princeton, New Jersey: Princeton University Press.

Freud, D. (1979). Exchange controls' quick end. *Financial Times*.

Galati, G., and Moessner, R. (2011). Macroprudential policy – A literature review. Bank for International Settlements Working Paper 337. Basel, Switzerland: Bank for International Settlements. http://www.bis.org/publ/work337.htm

Geanakoplos, J. (2010). Solving the present crisis and managing the leverage cycle. Federal Reserve Bank of New York. *Economic Policy Review*, August: 101–131. http://ideas.repec.org/a/fip/fednep/y2010iaugp101-131nv.16no.1.html

Goodhart, C. (2009). The continuing muddles of monetary theory: A steadfast refusal to Face facts. *Economica* 76(1): 821–830. http://ideas.repec.org/a/bla/econom/v76y2009is1p821-830.html

Goodhart, C. (2010). Money, credit, and bank behaviour: Need for a new approach. *National Institute Economic Review* 214(1): 73-82. http://www.reservebank.govt.nz/research/fellowship/4111226.pdf

Goodhart, C. (2011). The changing role of central banks. *Financial History Review* 18(2): 135–154. http://journals.cambridge.org/action/displayAbstract?fromPage=online&aid=8331074

Gorton, G. (2010). *Slapped by the invisible hand: The panic of 2007*. Oxford: Oxford University Press. http://ideas.repec.org/b/oxp/obooks/9780199734153.html

Gray, J., and Akseli, O. (2011). *Financial regulation in crisis? The role of law and the failure of Northern Rock.* Cheltenham: Edgar Elgar.

Gray, J. (2004). Personal finance and corporate governance: The missing link: Product regulation and policy conflicts. *Journal of Corporate Law Studies* 4(1): 187–220. http://heinonline.org/HOL/Page?handle=hein.journals/corplstd4&g_sent=1&collection=journals&id=189

Hacking, I. (1990). *The taming of chance*. Cambridge: Cambridge University Press.

Haldane, A. (2009). Rethinking the financial network. Speech delivered at the Financial Student Association, Amsterdam. http://www.bankofengland.co.uk/publications/Documents/speeches/2009/speech386.pdf

Haldane, A., and Nelson, B. (2012). Tails of the unexpected. Speech delivered at the University of Edinburgh Business School. http://www.bankofengland.co.uk/publications/Documents/speeches/2012/speech582.pdf

Hamalainen, P. (2009). Fallout from the credit squeeze and Northern rock crises: Incentives, transparency and implications for the role of market discipline. In F. Bruni and D. Llewellyn (Eds.), *The failure of Northern Rock: A multidimensional case study*. Vienna: SUERF–The European Money and Finance Forum. http://ideas.repec.org/h/erf/erfssc/53-3.html

Hamilton, J., and Bergoe, K. (2004). Northern Rock. West LB.

Hayek, F. (1973). *Law, legislation and liberty*. Volume 1. Chicago, Illinois: University of Chicago Press.

Helleiner, E. (1994). *States and the reemergence of global finance: From Breton Woods to the 1990s*. Ithaca, NY: Cornell University Press.

Herrigel, G. (2006). Corporate Governance: History without historians. Paper prepared for Geoffrey Jones and Jonathan Zeitlin (eds.), *Handbook for Business History*, Oxford: Oxford University Press. http://www2.e.u-tokyo.ac.jp/~sousei/Herrigel.pdf

Herring, R. (2011). *The Known, the unknown, and the unknowable in financial policy: An application to the subprime crisis*. http://www.law.yale.edu/documents/pdf/cbl/Herring_Known_Unknown.pdf.

Hickman v Kent & Romney Marsh Sheep Breeders Association Ltd [1915] 1 Ch 881

Hird, C. (1996). Building societies: Stakeholding in practice and under threat. *New Left Review*, 218: 40–52.

HM Treasury (2009). Legislative reform order (industrial and provident societies and credit unions). http://www.legislation.gov.uk/uksi/2011/2687/contents/made

Howe, G. (1994). *Conflict of loyalty*. London: Macmillan.

Independent Commission on Banking (2011). Final report: Recommendations. http://bankingcommission.s3.amazonaws.com/wp-content/uploads/2010/07/ICB-Final-Report.pdf

Ingham, G. (2004). *The nature of money*. Cambridge: Polity Press.

International Monetary Fund (2011). Global financial stability report. http://www.imf.org/external/pubs/ft/gfsr/2011/02/index.htm

Jones, S. (2007). Northern Rock: "The world changed on August 9." *Financial Times*. http://ftalphaville.ft.com/blog/2007/09/14/7309/northern-rock-the-world-changed-on-august-9/

Kettering, K. (1999). Repledge deconstructed. *University of Pittsburgh Law Review* 61: 45–239. http://heinonline.org/HOL/Page?handle=hein.journals/upitt61&g_sent=1&collection=journals&id=55

King, M. (2004). What fates impose: Facing up to uncertainty. The Eighth British Academy Annual Lecture 2004. http://www.bankofengland.co.uk/publications/Documents/speeches/2004/speech234.pdf

Knight, F. (2010). *Risk, uncertainty, and profit*. Charleston, South Carolina: Nabu Press.

Knight, F. (1997). *Ethics of competition*. Piscataway, New Jersey: Transaction Publishers.

Laeven, L., and Valencia, F. (2008). Systemic banking crises: A new database. IMF Working Paper 224. Washington, DC: International Monetary Fund. http://www.imf.org/external/pubs/ft/wp/2008/wp08224.pdf

Lascelles, D. (2005). Other people's money. London: Institute of Financial Services.

Lavoie, M. (1984). The endogenous flow of credit and the post Keynesian theory of money. *Journal of Economic Issues* XVIII(3) September: 771–797. http://cas.umkc.edu/econ/economics/faculty/wray/601wray/the%20endogenous%20flow%20of%20credit.pdf

Lazonick, W. (2012). The financialization of the US corporation: What has been lost, and how it can be regained. Conference paper presented at University College, London. http://ideas.repec.org/p/pra/mprapa/42307.html

Lazonick, W., and O'Sullivan, M. (2000). Maximizing shareholder value: A new ideology for corporate governance. *Economy and Society* 29(1): 13–35. http://dx.doi.org/10.1080/030851400360541

LiPuma, E. and Lee, B. (2004). *Financial derivatives and the globalization of risk*. Durham, NC: Duke University Press.

Lo Duca, M. and Peltonen, T. (2011). Macro-financial vulnerabilities and future financial stress: Assessing systemic risks and predicting systemic events. ECB Working Paper Series Number 1311. Frankfurt: European Central Bank. http://www.ecb.int/pub/pdf/scpwps/ecbwp1311.pdf

Macey, J., and O'Hara, M. (2003). The corporate governance of banks. *Federal Reserve Bank of New York Economic Policy Review* 9(1): 91–107. http://www.newyorkfed.org/research/epr/03v09n1/0304mace.html

Marshall, N., Willis, R., and Richardson, R. (2003). Demutualisation, strategic choice, and social responsibility. *Environment and Planning C: Government and Policy* 21(5): 735–760. http://ideas.repec.org/a/pio/envirc/v21y2003i5p735-760.html

Marshall, N., Pike, A., Pollard, J., Tomaney, J., Dawley, S., and Gray, J. (2011). Placing the run on Northern Rock. *Journal of Economic Geography* 12(1): 1–25. http://ideas.repec.org/a/oup/jecgeo/v12y2012i1p157-181.html

Martin, R., and Turner, D. (2000). Demutualisation and the remapping of financial landscapes. *Transactions of the Institute of British Geographers* 25(2): 221–241.

Martin, R., Casson, P., and Nisar, T. (2007). *Investor engagement: Investors and management practice under shareholder value*. Oxford: Oxford University Press. http://ideas.repec.org/b/oxp/obooks/9780199202607.html

McKinnon, R. (1993). The rules of the game: International money in historical perspective. *Journal of Economic Literature* XXXI(March): 1–44. http://www.jstor.org/stable/2728149

Miller, R., and Wood, J. (1979). *Exchange controls for ever*? London: Institute of Economic Affairs.

Milne, A., and Wood, G. (2008). Shattered on the Rock? British financial stability from 1866 to 2007. Research Discussion Papers 30. Helsinki, Finland: Bank of Finland. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1318222

Minsky, H. (1991). Financial crises: Systemic or idiosyncratic? Jerome Levy Economic Institute Working Paper Number 51. http://estes.levy.org/pubs/wp51.pdf

Mishkin, F. (1999). Global financial instability: Framework, events, issues. *Journal of Economic Perspectives* 13(4): 3–20. http://www.jstor.org/stable/2647010

Money Markets International Stockbrokers Ltd (An Irish broking firm – Action brought by liquidators) V London Stock Exchange Ltd [2001] EWHC 1052.

Moore, B. (1979). The endogenous money stock. *Journal of Post Keynesian Economics* 2(Fall): 49–70. http://www.jstor.org/stable/4537511

Moran, M. (1984). *The politics of banking*. London: Palgrave MacMillan.

Morris, C. (2008). *The two trillion dollar meltdown: Easy money, high rollers and the great credit crash*. New York: Public Affairs. http://www.kantakji.com/fiqh/Files/Economics/w113.pdf

Needler Financial Services Ltd v Taber [2001] EWHC Ch 5

Northern Rock (2001). *Annual report and accounts 2000*. Newcastle: Northern Rock.

Northern Rock (2004). *Annual report and accounts 2003*. Newcastle: Northern Rock. http://www.northernrock.co.uk/downloads/report_acc03.pdf

Northern Rock (2006a). *Annual report and accounts 2005*. Newcastle: Northern Rock. http://www.northernrock.co.uk/downloads/report_acc05.pdf

Northern Rock (2006b). Pursuing a growth strategy. Times 100 Case Studies. http://companyinfo.northernrock.co.uk/downloads/results/NorthernRockFinalV2.pdf

Northern Rock (2007). *Annual report and accounts 2006*. Newcastle: Northern Rock. http://www.northernrock.co.uk/downloads/report_acc06.pdf

Obrinksy, M. (1983). *Profit theory and capitalism*. Philadelphia, Pennsylvania: University of Pennsylvania Press.

Onado, M. (2009). Northern Rock: Just the tip of the iceberg. In F. Bruni and D. Llewellyn (Eds.), *The failure of Northern Rock: A multi-dimensional case study*. Vienna: SUERF–The European Money and Finance Forum. http://ideas.repec.org/h/erf/erfssc/53-5.html

Oxford Centre for Mutual & Employee-owned Business. (2009). *Converting failed financial institutions into mutual organisations*. London: Building Societies Association. http://www.bsa.org.uk/docs/presspdfs/remutualisation.pdf

Percival v Wright [1902] 2 Ch 421

Peskin v Anderson [2000] EWCA Civ 326

Postone, M. (2012). Thinking the global crisis. *The South Atlantic Quarterly* 111(2): 227–249.

Pozsar, Z., A., Ashcraft, A., and Boesky, H. (2010). Shadow banking. Federal Reserve Bank of New York Staff Report 458. http://ideas.repec.org/p/fip/fednsr/458.html

Rafferty, M. (2008). Northern Rock plc: A case study in banking policy during times of duress. Proceedings of the 2008 Annual System Dynamics Conference. http://www.systemdynamics.org/conferences/2008/proceed/proceed.pdf

Re D'Jan [BCC] 646.

Rajan, R. (2010). Fault lines: *How hidden fractures still threaten the world economy*. Princeton, New Jersey: Princeton University Press.

Reinhart, C., and Rogoff, K. (2009). *This time is different: Eight centuries of financial folly*. Princeton, New Jersey: Princeton University Press.

Robb, R. (2009). Nietzsche and the economics of becoming. *Capitalism and Society* 4(1). http://ideas.repec.org/a/bpj/capsoc/v4y2009i1n3.html

Rogers, D. (1999). *The big four British banks: Organisation, strategy, and the future*. New York, New York: Palgrave Macmillan.

Rogers, E. (2007). Hitting Northern Rock bottom: Lessons from nineteenth-century British banking. Policy papers. http://www.historyandpolicy.org/hp/papers/policy-paper-64.html.

Sage, R., and Patel, V. 17 September 2007. *Northern Rock.* Bears Stearns.

Samuelson, P. (2010). *Economics*. New York: McGraw-Hill.

Schularick, M., and Taylor, A. (2011). Credit booms gone bust: Monetary policy, leverage cycles, and financial crises, 1870–2008. Centre for Economic Policy Research Discussion Paper Series 7570. http://ideas.repec.org/a/aea/aecrev/v102y2012i2p1029-61.html

Sheffield and South Yorkshire Permanent Building Society v Aizlewood and others (1889) 44 Ch D 412

Shin, H. (2009). Reflections on Northern Rock: The bank run that heralded the global financial crisis. *Journal of Economic Perspectives* 23(1): 101–119. http://www.jstor.org/stable/27648296

Sollis, R. (2009). Value at risk: A critical overview. *Journal of Financial Regulation and Compliance* 17(4): 398–414. http://ideas.repec.org/a/eme/jfrcpp/v17y2009i4p398-414.html

Stephens, M. (2001). Building society demutualisation in the UK. *Housing Studies* 16(3): 335–352. http://dx.doi.org/10.1080/02673030120049706

Taylor, J. (2006). *Creating capitalism: Joint-stock enterprise in British politics and culture, 1800–1870*. Suffolk: The Boydell Press.

Toporowski, J. (2005). *Theories of financial disturbances: An examination of critical theories of finance from Adam Smith to the present day*. Cheltenham: Edward Elgar Press.

Wade, R. (2009). Iceland as Icarus. *Challenge* 52(3): 5–33.

Walters, B. (2008). *The fall of Northern Rock*. Petersfield: Harriman House Publishing.

Walker, D. (2009). *A review of corporate governance in UK banks and other financial industry entities – Final recommendations*. London. http://webarchive.nationalarchives.gov.uk/+/http://www.hm-treasury.gov.uk/d/walker_review_261109.pdf

Warner, A. (1997). Faith of the converted. *The Banker* 147: 856.

Watson, K. (2004). The financial services sector since 1945. In R. Floud and P. Johnson (Eds.), *The Cambridge economic history of modern Britain, Volume III: Structural change and growth, 1939–2000*. Cambridge: Cambridge University Press.

Weale, M. (2007). Northern Rock: Solutions and problems. *National Institute Economic Review* 202: 4–8. http://ideas.repec.org/a/sae/niesru/v202y2007i1p4-8.html

Wolf, M. (2008). *Fixing global finance*. Batimore, MD: John Hopkins University Press.

Wood, G. (1985). Exchange controls in the United Kingdom. *Skandinaviska Enskilda Banken Quarterly Review* 3: 66–71.

Wray, R. (1990). *Money and credit in capitalist economies: The endogenous money approach*. Aldershot: Edgar Elgar.

Economics
The Open-Access, Open-Assessment E-Journal

Please note:

You are most sincerely encouraged to participate in the open assessment of this article. You can do so by either recommending the article or by posting your comments.

Please go to:

http://dx.doi.org/10.5018/economics-ejournal.ja.2013-27

The Editor