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Banks and the False Dichotomy
in the Comparative Political Economy of Finance

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Abstract

The wide-ranging Varieties of Capitalism literature rests on a particular conception of banks and banking, which, we argue, no longer reflects the reality of modern financial systems. We take advantage of the greater information regarding bank activities revealed by the financial crisis to consider the reality, across eight of the world's largest developed economies, of the 'financial power' of banks to act as bulwarks against market forces. This article offers a 'market-based banking' framework that transcends the bank-based/capital market-based dichotomy that dominates Comparative Political Economy's (CPE's) consideration of financial systems, and argues for a future CPE research focus on the activities of banks. By demonstrating how market-based banking increases market influences on the supply of credit, we highlight an under-appreciated source of financial market pressure on non-financial companies (NFCs) that has potential impact across the range of issues that the Varieties of Capitalism (VoC) literature has seen as differentiating national systems, with implications in areas such as labor, welfare, innovation and flexibility.

Introduction

In this article we challenge the core assumption on which Comparative Political Economy's (CPE's) bank-based/capital market-based 'dichotomous framing' rests.¹ This core assumption is that, in certain countries, banks possess the 'financial power'² that enables them to mitigate the impact of financial market pressures on non-financial companies (NFCs) with which they have a long-term relationship. By focusing on the activities of commercial banks in eight countries over the period from 2000 until the international financial crisis erupted in 2007, we show how, to varying degrees, 'market-based banking' better describes the provision of credit to NFCs and encapsulates how movements in financial markets affect the pricing and availability of that credit. Market-based banking more accurately characterizes the place of banks within financial markets and points to a research agenda that allows a clearer understanding of the extent of convergence between national financial systems.

This article is structured as follows. Section one offers a rationale for closely studying banks as a key subject of research in CPE. We highlight the importance of patient capital in the Varieties of Capitalism (VoC) literature, and of bank 'financial power' to that patience. Section two discusses the dominant bank-credit / capital market dichotomy in CPE and the centrality of 'financial power'. Section three presents 'market-based banking' as both a more accurate way to consider banks within political economy and as undermining banks' financial power. Section four analyses the details of some banking practices revealed by the 2007-08 financial crisis, to both begin to expand on the concept of market-based banking and compare its extent across the eight countries considered in detail here. The conclusion reviews

¹ Culpepper 2005, Clift 2007.

² Zysman 1983.

implications for CPE scholarship; in particular for the conception of bank-based financial systems. We argue that important changes in bank lending are encapsulated in a market-based banking model that provides a better understanding of national financial systems and hence theories of comparative capitalism.

The Importance of banks and banking for Comparative Political Economy

‘[A] firm-centered political economy that regards [non-financial] companies as the crucial actors in a capitalist economy’³ has dominated the recent CPE literature. Finance has attracted more limited attention and a core bank-based / market-based dichotomy has persisted. CPE studies on banks and banking systems are particularly lacking.⁴ By contrast, the financial economics sub-field has clearly noticed developments in banks and their impact upon national financial systems, albeit a narrower range of developments than highlighted here.⁵

Thirty years ago, Zysman published what rapidly became the work of reference on the political economy of national financial systems.⁶ Zysman gives equal prominence to potential pressures on NFCs from holders of their debt – banks and bond investors – and of their equity. The maturity of bank lending, short or long term, was an important part of his distinction between financial systems. Questions regarding the nature of bank lending, however, have not established themselves in the VoC literature.⁷ Non-financial company (NFC) finance in this literature is mainly

³ Hall and Soskice 2001, 6.

⁴ There are a small number of important exceptions, notably Deeg 1999.

⁵ Hackethal 2001; Levine 2002; Rajan and Zingales 2003.

⁶ Zysman 1983.

⁷ Exceptions include, on long-term lending in Germany, Vitols 1998.

important due to the extent to which the use of equity financing and changes in the equity investor base raise corporate governance issues for NFCs. The key causal mechanism in the VoC literature therefore stems from the concentration or dispersion of share ownership (on which there is significant cross-national variation⁸), or the extent of equity financing, relative to bank borrowing, by NFCs.⁹ The continued viability of institutional diversity hinges on the ability of what the VoC literature labels Coordinated Market Economies (CMEs), such as those in Germany and Japan, to shield company managers from the short-term imperatives of equity investors that are characteristic of, and frequently perceived as coming from, Liberal Market Economies (LMEs).¹⁰

The close association of bank credit-based systems, ‘patient capital’ and the other core elements of CMEs has been explored in both the CPE and economics literatures:¹¹ including cross-shareholding and interlocking directorates, long-term corporate investment decisions, worker involvement in company decision-making, effective training schemes (apprenticeship programs) and stable long-term employment relations including worker retraining and cooperative wage bargaining. ‘Relational’ banking and long-term finance enable investment strategies with delayed returns and long-term employment, rather than short-term profit maximization. The focus on the long-term enables NFCs to provide for longer-term employment, which results in improved training and retraining programs. Worker representation on NFC boards is more common in CMEs, In Germany it extends to co-determination. Further, the limited public availability of data on the financial performance of NFCs

⁸ Gourevitch and Shinn 2005.

⁹ Beyer and Höpner 2003.

¹⁰ Culpepper 2005.

¹¹ See, e.g., Allen and Gale 2000; Rajan and Zingales 2003; Deeg 2010.

that do not issue equity or have highly concentrated equity ownership increases the need for bank and other NFC-investor involvement in corporate governance, in order to access information.¹² The cross-shareholding and network corporate governance that decreases the autonomy of senior managers who are compelled to consult supervisory boards results in a more consensual decision-making style that further increases emphasis on the long-term.

Hall and Soskice note that '[f]inancial deregulation could be the string that unravels coordinated market economies'.¹³ However, the extent to which these other elements of the CME rely upon the continuation of 'patient' capital is subject to ongoing disagreement in the literature. Many scholars examine the potential erosion of other CME elements due to a variety of factors including: an increased reliance by large CME NFCs on equity capital and financialization more generally,¹⁴ increased transparency and investor protection, decreased concentration of existing equity holdings, some decline in cross-shareholding, decline in blockholding and the departure of bank and insurance company directors from company boards.¹⁵ However, most scholars also downplay change, emphasizing rather continuity or evolutionary change determined largely by the CME institutional framework.¹⁶ Many note that evidence of change is inconclusive.¹⁷

The consideration of the nature of NFC financing in this debate focuses on two broad issues: first, the balance of NFC financing between bank loans and equity; and

¹² Bathelt and Gertler 2005.

¹³ Hall and Soskice 2001, 64.

¹⁴ Beyer and Höpner 2003.

¹⁵ On Germany see Fiss and Zajac 2004; Culpepper 2005; Deeg and O'Sullivan 2009.

¹⁶ Bathelt and Gertler 2005.

¹⁷ Culpepper 2005; Deeg 2010.

second, the changing nature of the investors in equity. Are shareholdings concentrated in long-term, patient banks and insurance companies, or dispersed across short-term, shareholder value-focused international equity fund managers?¹⁸ Implicit in the consideration of equity financing is a recognition that the nature of equity investors can vary and a view that this variation has a material impact on NFCs' business model. The same close attention has not, however, been paid to the nature of bank lending, a key component of the existing typology.

The result is a static conception of bank lending and an assumption that it should be contrasted with market-based sources of finance. As we show below, this assumption leads to the conclusion that, by the standard comparison of bank-based and market-based sources of NFC finance, the economies we consider have since 2000 mostly become more bank-based. We argue that closer attention to the nature of banking shows that these economies have nearly all become more market-based. Further, this clearer picture of bank activities has implications for consideration of diversity and convergence amongst capitalist systems.¹⁹ Banking is a potential source of differentiation in new ways related to the market basis of bank lending and complex change occurs not only in continental Europe but also the UK and the US. This does not yield a picture of convergence to a static "Anglo-Saxon" type but points to a dynamic and multi-dimensional framework for understanding variation. We argue that in contemporary economies there is no simple correspondence between typologies of financial systems and modes of capitalism.²⁰

¹⁸ Culpepper 2005; Gourevitch and Shinn 2005.

¹⁹ See, e.g., Berger and Dore 1996; Crouch and Streeck 1997; Kitschelt, Lange, Marks and Stephens 1999; Whitley 1999; Schmidt 2002.

²⁰ Cf. Deeg 2010.

CMEs depend in part on a very specific role for banks as bulwarks against the influence of financial markets on NFCs. The banks' bulwark role comes from being suppliers of patient capital to clients with which they have a relational, not arms-length, interaction. Increased equity funding relative to bank loans increases market pressures on NFCs, because of the demands of (often assumed to be international) equity investors relative to patient capital. Banks can supply two kinds of patient capital: long-term holdings of equity or long term bank loans. When Hall and Soskice published, CME banks already held fewer shareholdings than at the time of Zysman's writing²¹ and were expanding their investment banking activities.²² Yet most CPE scholars writing on NFC finance in CMEs have insisted on the persistence of patient capital. They point first to the role of NFCs and/or insurance companies in the patient holding of NFC equity. Second they emphasize the continued importance of relational banking in CMEs, allowing 'access to capital independent of current profitability',²³ most notably in the archetypal bank-based financial system, Germany.²⁴ Such systems exhibit high aggregate bank lending as a percentage of NFC finance.²⁵ The first claim, that NFC shareholding of other NFC equity is a source of patience, is irrefutable, as this is long-term investment that is unlikely to be reversed in the face of short-term difficulties at either the investor or investee firm. We argue that the second claim is more problematic. It implies that the changing activities of banks do not have an impact upon their role as patient lender to NFCs. The argument depends on banks being able to lend long-term and to continue to support their NFC clients regardless of market pressures on the banks themselves. We argue that this

²¹ Hall and Soskice 2001, 23. See also Jackson and Moerke 2005.

²² Hall and Soskice 2001, 62.

²³ Hall and Soskice 2001, 16.

²⁴ Hall and Soskice 2001, 62; Vitols 2004; Deeg 2010. The continued importance of the Hausbank to German NFCs is also challenged; see Beyer and Höpner 2003.

²⁵ Vitols 2004; Deeg 2010.

view of banks as bulwarks against market pressures has become problematic, and relies – in contrast to extensive analysis of the changing nature of equity financing – on a static conception of banks and loans and an unwillingness to consider in detail this area of financial markets.

Our focus on banks and lending, and on the rise of market-based banking, highlights a crucial source of change which undermines ‘patient capital’. Market-based banking undercuts the central position of ‘relational’ banking by increasing the position of market considerations relative to long-term bank business decisions, where a bank sacrifices short-term profitability in the expectation of subsequent recompense.²⁶ Of further importance is that the rise of market-based banking potentially affects corporate governance in small and medium-sized entities (SMEs) which depend more heavily on bank financing than in larger firms which tend to have more diversified funding, including equity. This would include the German *Mittelstand* whose unchanged financing sources are emphasized in the debate on CME change.²⁷

To be patient with NFC borrowers, banks must be able to resist financial market pressures they themselves face.²⁸ Relationship banking involves ‘intertemporal transfers in loan pricing’²⁹ and/or recompense for current loss, or opportunity cost, on

²⁶ Aoki 1995; Aoki and Dinç 2000; Rajan and Zingales 2003.

²⁷ Deeg 2010. German banks do not generally either own equity in, or sit on boards of, SMEs (Vitols 1998).

²⁸ Aoki 1995; Rajan and Zingales 2003. Market-based banking should not be seen as the only source of change in the relationship banking which underpins the CME model. NFCs must also be willing and able to ignore short-term market signals. The relationship can be undermined by direct market pressures on NFCs, or by increased competition reducing bank’s power over NFCs.

²⁹ Boot 2000, 13.

lending from future bank-NFC business activities other than loans.³⁰ For this to be possible, banks must not only have the power over NFCs necessary to prevent subsequent defection, but also the power to resist market pressures on their current lending decisions.³¹ Similarly, in order to make the long-term loans, which form part of their provision of ‘patient capital’ to NFCs,³² banks must themselves have either stable sources of short-term financing to underpin their maturity transformation function, or sources of long-term financing.³³ The monitoring by relationship banks of NFC borrowers also helps to overcome information asymmetry problems, particularly in systems involving a main bank or *Hausbank*.³⁴ Market-based banking has the potential both to undermine the relationship-banking model and reduce the ability to benefit from monitoring, because the profitability of lending is increasingly determined by market prices. Market-based banking should therefore be seen as a potentially significant source of change to ‘patient capital’ and the complementary features of the CME model, as well as a further source of change within LMEs.

The market-based banking model introduced here, and discussed in more detail below, focuses on a particular set of business activities banks chose increasingly in most advanced industrial economies beginning in the late 1990s. These involve both the continuation but significant expansion of activities from earlier periods and new activities, either for all or the majority of banking systems. Even for continued

³⁰ Aoki, Patrick and Sheard 1995; Deeg 1998.

³¹ Rajan and Zingales 2003, 12.

³² Zysman 1983; Vitols 1998.

³³ On the importance of long-term financing to the ability of German banks to make long-term loans to NFCs, see Vitols 1998.

³⁴ Aoki 1995; Aoki, Patrick and Sheard 1995; Aoki and Dinç 2000; Deeg 1998; Vitols 1998.

banking activities, significant data limitations preclude direct comparison with earlier periods. Increased post-crisis data, particularly from regulatory authorities, has increased transparency and highlighted previous inadequacies,³⁵ but has not provided significant historical data on specific types of bank activities. Still, the developments discussed here can be placed in longer-term context: from 1980-2000, deposits represented a declining share of bank liabilities in G7 countries except Japan (unchanged) and France;³⁶ loans declined as a share of bank assets in G7 countries except Canada and Italy; and a customer funding gap (loans exceeding deposits) emerged on aggregate across the G7.³⁷ In the analysis below, we show how these trends continued and accelerated from 2000.

Banks' business strategies reflect both bankers' choices as well as the set of national and supranational institutions in which banks operate. Clearly, institutional factors shape bankers' business choices: banking regulation and banking supervision,³⁸ corporate governance rules,³⁹ fiscal (tax) policy, the structure of other financial institutions in place (notably equity and bond markets) and protectionism in the banking sector. However, banks must still be seen as agents in this context: making business decisions, engaging in financial innovation and responding to their own experience in the market (including their experience with global liquidity and previous banking crises) and not just as institutionally-embedded actors.⁴⁰

³⁵ See, e.g., Financial Stability Board 2011.

³⁶ Byrne and Davis 2003, 159. Increasing inter-bank deposits mean customer deposits declined even more (*ibid.*, 155).

³⁷ *Ibid.*, 156.

³⁸ Pagano and Volpin 2001; Busch 2009.

³⁹ Laeven and Levine 2009.

⁴⁰ Crouch 2005; Hall and Thelen 2009.

Questioning the Financial System Dichotomy

Zysman's main contribution was to show how three different types of national financial structures, depicted as relatively static and dominated by different financial activities and institutions, shaped the scope for government action and industrial development: capital market-based; credit-based in which governments set prices and intervened in the market; and credit-based, in which banks also played an important, autonomous, role in the economy intermediating between household savers and entrepreneurs and could influence prices. Zysman does not use the term 'bank-based', but the central role of banks is clear in his distinction between 'the impersonal arm's length dealings of capital markets' and 'the personal institutional ties of banks or lending institutions'.⁴¹

There has been very little effort by CPE scholars either to unpack Zysman's understanding of national financial systems or to move beyond it. Zysman recognizes differences in bank activities across countries, in his contrast between overwhelmingly short-term bank lending in capital market-based systems and similarly predominant long-term bank lending in credit-based economies.⁴² Zysman also recognizes the static nature of his analysis and the clear possibilities of change in financial systems.⁴³ Zysman encouraged future researchers to consider the impact of 'ever more elaborate financial markets' on national systems of capitalism.⁴⁴ Yet we continue to see the assumptions regarding banks that underpin Zysman's original typology and its use in the VoC literature, remaining more or less unchallenged in

⁴¹ Zysman 1983, 63.

⁴² *Ibid.*, 192.

⁴³ Zysman 1983., 287.

⁴⁴ *Ibid.*, 281.

CPE's limited consideration of credit provision in western economies.

The dichotomy we highlight pre-dates the seminal work by Zysman. For political economists, his contribution was mainly to set out the linkages between financial systems and the ability of governments to intervene in the economy. Our main justification for going back to a 30 year-old text to help understand modern financial systems, however, is Zysman's close focus on financial systems, and his largely overlooked articulation of the basis for the standard dichotomy. It rests for Zysman, on two key assumptions, both of which we challenge. First, he assumes banks are the institutions overwhelmingly responsible for making loans to NFCs. Loans are not financial instruments that can be sold, so banks themselves make decisions regarding lending, and the profitability of this lending is determined by banks' assessment of creditworthiness. This approach results in financial instrument – loans – and financial institution – banks – being largely interchangeable in any empirical analysis, as they largely were at the time Zysman was writing. He acknowledges the existence of non-bank lenders,⁴⁵ but rightly (given their insignificance for NFC financing then) does not consider them in any detail. Zysman asserts that '[w]hat makes the financial systems different is the relative importance of two types of financial markets; capital markets and loan markets'⁴⁶ and implies a distinction between bank-based and market-based provision of credit to NFCs in an economy. This widespread distinction underpins the categorization of financial systems by considering the provision of credit to NFCs (loan, bond or equity)⁴⁷ or by the relative size of bank assets, equity

⁴⁵ Zysman 1983, 61.

⁴⁶ *Ibid.*, 60.

⁴⁷ This ignores both the maturity of bank lending and financing from companies' own retained earnings. See Murinde, Agung and Mullineux 2004.

stock market capitalization and outstanding private bond market issuance.⁴⁸

The second key assumption is that, in making their lending decisions, banks do not face constraints from their own ability to borrow the funds they must lend. Banks, even the investment banking operations of European universal banks, ‘draw their funds from deposits’,⁴⁹ and depositors are loyal. This is central to Zysman’s typology and the more standard dichotomy. In contrasting ‘a system based on capital markets with resources allocated by prices established in competitive markets’ with ‘a credit-based system dominated by financial institutions’,⁵⁰ Zysman is assuming, as many others implicitly have,⁵¹ that the capacity of financial institutions in credit-based systems to borrow would not change their dominant role. Zysman also does not consider the need for banks to have capital to support lending.⁵² The distinction Zysman makes is between financial agents and financial intermediaries.⁵³ Banks are agents in terms of their lending decisions (the agency we highlight above, in contrast, is in regard to their overall business model), whose financial power allows them to influence the pricing of credit in an economy. Financial institutions that act as intermediaries in the provision of bond and equity financing merely reflect the relevant market’s pricing of that financing.

Central to the bank-based system, and therefore to the existing dichotomy, is banks’ ‘financial power’, derived from the fact that ‘a limited number of financial institutions

⁴⁸ E.g., Allen and Gale 2000.

⁴⁹ Zysman 1983, 61.

⁵⁰ *Ibid.*, 55.

⁵¹ E.g., Rajan and Zingales 2003.

⁵² Changes in banks’ own shareholdings may also be a source of change, as noted by an anonymous reviewer.

⁵³ Zysman 1983, 57.

dominate the system’.⁵⁴ An oligopoly industry structure with limited competition is the primary factor shaping banks’ pricing of their loans. Limited competition in both the market for attracting deposits and making loans give the banks pricing power. A number of authors have therefore focused on the impact of competition on banks’ ‘financial power’, but have concentrated on the ability to prevent NFC defection.⁵⁵ This power could be circumscribed in two ways. First, increased competition between banks for deposits and to make loans could decrease banks’ ‘concentration of market power’ to the extent that both bank deposit funding costs and lending margins are determined in more competitive markets.⁵⁶ Alternatively, banking markets could remain oligopolistic, but banks could change their business models, shifting away from deposits as the financing backing loan activity. We acknowledge the possibility of the first development, but we focus here on the erosion of banks’ financial power to provide patient capital to NFCs because they are sourcing funds for lending from other financial institutions rather than their own customers.

We argue that reliance on market-based funding is now generally the case in bank lending, although to a different extent across the countries we analyse. In reality, banks acting as agents in terms of their business models have undermined their ‘financial power’ in lending to NFCs. Banks have increasingly turned themselves into market intermediaries in these lending activities. Figure 1 shows figures for the tightening of bank lending to NFCs from mid-2007 (the intensification of the financial crisis) to the end of 2011 due to the ‘cost and availability of funding’, that is the

⁵⁴ *Ibid.*, 72.

⁵⁵ See Byrne and Davis 2003; Rajan and Zingales 2003; Lall 2006. As an anonymous reviewer pointed out, the concentrated nature of UK bank lending to SMEs, for example, suggests there is no automatic link between a lack of competition and relationship banking.

⁵⁶ We are grateful to an anonymous reviewer for highlighting this point.

ability of banks to borrow to fund lending.⁵⁷ In Zysman's conception of banks as funded by stable deposits, such a reason for tightened lending conditions cannot be envisaged (absent a deposit run). The question asked in the equivalent US survey,⁵⁸ regarding 'liquidity in the secondary market for these loans' (i.e., the ability to sell loans to other financial market actors), is even further from a traditional conception of banks and loans. However, both these factors made a significant contribution to the tightening of bank lending conditions – a credit crunch – in all the countries examined. In the UK the 'cost and availability of funding' was almost as significant as the more nebulous 'expectations about economic activities'.⁵⁹ The difficulty for banks in financing themselves is clearly not uniform across the countries. As we show below, the degree to which banking was 'market-based' is a potentially useful variable explaining this difference. We also recognize, however, that the impact of market-based banking on NFC financing is not only an issue for periods of market weakness. We also should expect it to be strongly procyclical in its impact on the cost, availability, and potentially maturity, of NFC financing.

We would not necessarily expect relative shortening of the maturity of NFC lending in the period prior to 2007 due to market-based banking because market-based

⁵⁷ The balance of percentage of bank loan officers reporting a tightening (a positive number) or an easing (a negative number), relative to the previous three months, because of changes in the bank's own ability to borrow. Data are not available for the Netherlands. Japanese banks reported no tightening of bank lending conditions for reasons linked to funding.

⁵⁸ US Federal Reserve, 'Senior Loan Officer Opinion Survey on Bank Lending Practices', available at <http://www.federalreserve.gov/boarddocs/snloansurvey/>.

⁵⁹ UK credit conditions survey data show cumulative tightening due to the 'cost and availability of funding' over the six quarters from mid-2007 to end 2008 of 233.4; cumulative tightening due to 'expectations about economic activities' reached 235.8 (Bank of England, 'Credit Conditions Survey, Survey Results, 2008 Q4', January 2009).

sources of lending (most obviously securitization) do provide longer-maturity lending and assist the maturity transformation inherent in banking activities. However, our argument does lead us to expect long-term lending to decrease disproportionately when market conditions for the funds that financial institutions provide one another tighten or become unpredictable. As figure 2 for the Euro area shows, this is indeed the case. At periods of financial market weakness, the availability of both long- and short-term loans is reduced, but long-term lending conditions tighten further.

Bank of England (Credit Conditions Survey) and US Federal Reserve data on the maturity of loans similarly finds a significant balance of lenders reducing maturities at times of financial market weakness.⁶⁰ In addition, the Bank of England has asked, from October 2007 until April 2012, about the impact on NFC lending of the need to support Asset Backed Commercial Paper (ABCP) or similar programs, the reduced ability to transfer risk off banks' balance sheets and conditions for raising capital, all aspects of market-based banking discussed below. The cumulative negative figures over the period suggest additional and direct links between difficulties in market-based banking, as described here, and NFC lending.⁶¹

⁶⁰

www.bankofengland.co.uk/publications/Pages/other/monetary/creditconditions.aspx, accessed 11 July 2012; <http://www.federalreserve.gov/boarddocs/snloansurvey/>, accessed 12 July 2012.

⁶¹

www.bankofengland.co.uk/publications/Pages/other/monetary/creditconditions.aspx, accessed 11 July 2012.

Market-Based Banking

The term ‘market-based banking’ is not new, but our use of it expands on previous usage to allow a clearer understanding of banks and the provision of credit to NFCs, and a comparative approach to higher income country financial systems. Previously, market-based banking has been applied to the ‘shadow banking system’: those parts of the financial system that provide credit, but are not commercial banks, such as investment banks and money market funds.⁶² In this usage, shadow banking focuses on the ‘originate and distribute’ business model. In this model, banks ‘disintermediate themselves’ by not keeping loans on the balance sheet but selling them to other financial market actors – or are disintermediated by those other financial market actors providing credit directly. This familiar story of the disintermediation of banks involves loans being market-based. It is incomplete, however, in failing to consider the huge increases in the size of banks in recent years. If banks are being disintermediated in favor of market-based sources of financing, then their assets should be decreasing relative to the size of the economy. While this is the case in bank-based Italy and (recession-bound) Japan, it is not the case in countries as supposedly varied as France, Germany, the Netherlands, Spain, the United Kingdom and the United States.⁶³ Moreover, if this disintermediation was the dominant trend of the period leading to the 2007 financial crisis, national financial systems would have become more market-based on the traditional measures, as bank assets decreased relative to equity capitalization and the size of private bond markets, and bank lending became relatively less important to NFC borrowing. As Figure 3 shows, bank assets increased relative to the size of equity and bond markets in 2000-07 in all the

⁶² See Adrian and Shin 2010.

⁶³ See Beck and Demirgüç-Kunt 2009.

countries considered except Japan and Spain. In other words, by this measure, *all but two national systems became more bank-based*. In the previous decade, this was the case only in Japan.⁶⁴

Similarly, as Figure 4 shows, bank loans became a more significant part of NFC financing in five of the eight countries considered.⁶⁵ This includes an archetypal market-based system, the UK, where the Bank of England highlights ‘the potential benefits of lowering the economy’s reliance on bank finance’.⁶⁶ This reverses a trend in the G7 countries in the previous decade.⁶⁷

Our market-based banking framework, therefore, adds an analysis of developments on the balance sheets of the commercial banks; specifically, their valuation of assets at market prices (which has an impact on bank capital) and their various forms of financing from other banks and financial market actors (to the extent that banks are not financed, as Zysman assumes, by deposits). Adrian and Shin recognize that ‘at the margin all financial intermediators, including commercial banks, have to borrow in capital markets as deposits are insufficient to meet funding needs’, but, with echoes of Zysman’s ‘financial power’, conclude that ‘[t]he large balance sheets of commercial

⁶⁴ World Bank figures for equity and private bond market capitalization go back only to 1989. For discussion of market value issues (especially in equity markets), see Byrne and Davis 2003.

⁶⁵ The Bank of England does not provide data on NFCs’ outstanding equity. However, data on equity flows demonstrates a significant decline of equity issued in real terms between 2000 and 2007 and in relation to bank lending.

⁶⁶ Bank of England 2009, 11.

⁶⁷ Byrne and Davis 2003, 78.

banks ... mask the effects operating at the margin'.⁶⁸ We demonstrate below that this conclusion does not conform to the reality of commercial banking.⁶⁹ Without considering the market influences on banks, we cannot understand the nature of NFC financing, especially outside the US.

One of the few CPE scholars writing on banks, Deeg, highlights the rise in 'deal-based banking'.⁷⁰ There is clear overlap with our analysis, but, similarly to Adrian and Shin, Deeg focuses only on the 'originate and distribute' business model (one of four elements of our market-based banking model). Outside CPE, the approach has been similar. Lall discusses traditional and 'new' financial intermediation by non-banks.⁷¹ Erturk and Solari show change in the sources of bank profits.⁷² Similarly partial are those analyses that consider the increase in bank holding of securities. Aglietta and Breton note that banks add a 'new market portfolio' to their 'traditional credit portfolio'.⁷³ Gorton and Metrick, in their focus on 'securitized banking', consider the funding of these securitized assets on the balance sheet, especially by the investment banks.⁷⁴ In so doing, they come closest to our concept of market-based banking.⁷⁵

We add to these discussions of banking a consideration of the market-based nature of the valuation, hedging and funding of loans that stay on bank balance sheets: in other words, the extent to which even the 'traditional credit portfolio' is no longer

⁶⁸ Adrian and Shin 2010, 6.

⁶⁹ On the vulnerabilities of certain German banks' market funding, see Hackethal 2004; IMF 2009b, 18.

⁷⁰ Deeg 2010.

⁷¹ Lall 2006; see also Allen and Gale 2000.

⁷² Erturk and Solari 2007.

⁷³ Aglietta and Breton 2001, 441.

⁷⁴ Gorton and Metrick 2010.

⁷⁵ Also Gorton 2010.

traditional. Instead of the unlikely event of a bank run caused by depositors, the risk is a run by other, much more skittish, financial institutions.⁷⁶ Banks, as a result, do not have the ‘financial power’ to resist market pressures, undermining their ability to be patient, and cannot play the coordinating role that is central to the bank-based system.

Table 1 summarizes this contrast between the traditional model of banking and market-based banking. In the traditional banking model, commercial banks make loans, keep them on their balance sheets and finance their lending with stable customer deposits: banks act as agents. Traditional banking underpins the bank-based/market-based dichotomy. Absent the unlikely event of a customer run on deposits, banks face no funding constraints. The lending decision is driven by a bank’s own view of creditworthiness and its relationship with the borrower. The profitability of lending is determined solely by borrowers’ payment of the interest on, and repayment of, the loan. Banks have the ability to play their coordination role within a CME.

In market-based banking, there are a number of key differences from the ‘traditional’ model. The financial institution making a loan may not be a commercial bank, but could be a ‘parallel’ bank, without customer deposits and therefore ordinarily lacking lender of last resort support from the central bank.⁷⁷ These are a close equivalent of

⁷⁶ See, e.g., Basel Committee of Banking Supervision 2008, 2. Byrne and Davis (2003, 156) show the increasing importance of inter-bank lending from 1970-2000.

⁷⁷ See Adrian and Shin 2010 for the distinction between shadow and parallel banks. A number of authors discuss non-banks engaged in ‘relationship intermediation’ (Boot 2000, 11), especially private equity firms (Aoki and Dinç 2000). This is another reason not to see banks as unique.

the ‘specialized lending institutions’ Zysman acknowledges.⁷⁸ While in 1983, such institutions could be safely ignored, they are now central to credit provision in the US. The total assets of investment banks, one group of parallel banks most affected in 2007-08, reached 30 per cent of US commercial bank assets before the crisis.⁷⁹ If commercial banks or the now-important parallel banks keep loans, they are hedged using Credit Default Swaps (‘CDS’)⁸⁰ and/or financed through the wholesale markets. However, loans may not be kept, but sold to the market, either directly or through securitization: ‘originate and distribute’. As a result, the distinction, central to Zysman’s typology, between loans that remain on bank balance sheets and market-based bonds and equities, has broken down. Loans can also be sold to ‘shadow’ banks, entities that are wholly or partly off the balance sheets of the banks, but only as long as market financing is available. As a result of all these activities, the pricing and availability of lending are determined not by banks as agents, as in a bank-based system, but banks as market intermediaries.

As indicated above in the discussion of central bank lending surveys, the impact of market-based banking upon NFCs is significant. While equity issuance may expose NFCs to greater short-term pressure than traditional relationship-based bank borrowing, the new market-based credit financing potentially exposes NFCs to greater market-driven volatility than equity financing, as ‘patient’ bank credit is undermined.⁸¹ Kroszner, Laeven and Klingebiel show how credit-dependent sectors

⁷⁸ Zysman 1983, 61.

⁷⁹ Merton and Metrick 2010, 11.

⁸⁰ Data limitations preclude a comparison of CDS across countries, but at the end of 2006, banks had ‘bought’ net credit protection of over US\$3 trillion (Bank of England 2008a, 35). Nor is this confined to larger banks: Norddeutsche Landesbank offered ‘the individual trading of borrower risks’ to smaller savings banks (2007, 75).

⁸¹ See Byrne and Davis 2003 on ‘direct control by debt’.

grow faster in normal times and are hit harder in tough times,⁸² while Ivashina and Scharfstein show that banks with higher customer deposits (and therefore less market-based) reduced lending less during the recent financial crisis.⁸³ Therefore, where banks are themselves dependent on the market for their financing, they are unable to perform the role of bulwarks against market pressures that the concept of a bank-based system assigns to them. Instead of patiently acting as a bulwark, banks transmit those pressures to their NFC customers just as a financial market intermediary would in bond or equity markets. Furthermore, lending-related pressures are transmitted more widely across an economy, including to SMEs that are less likely to finance through equity and bonds and are therefore more likely to depend on loan markets. As these loan markets become market-based, this alternative source of market pressures potentially challenges a view that change has only occurred at the level of large firms, through increased issuance of equity and bonds, but not at SMEs.⁸⁴

Market-Based Banking and the 2007-08 Financial Crisis

To understand market-based banking, it is necessary to look in detail at some of the specific activities, involving both the assets and liabilities of banks. The financial crisis of 2007-08 revealed much more about the reality of bank activities, and in particular their market-based nature. In this section, we therefore combine consideration of developments in the years from 2000 to 2007 with an examination of the crisis itself. Where these developments are also important before 2000, and sufficient data exist, we also consider an earlier time period. We consider four core

⁸² Kroszner, Laeven and Klingebiel 2007.

⁸³ Ivashina and Scharfstein 2009; see also Basel Committee on Banking Supervision 2008, 11.

⁸⁴ On Germany, see Vitols 2004.

elements of market-based banking, on both the asset and liability sides of bank balance sheets, all central to banks' ability to lend. These are the extent to which: 1. assets are valued at market prices ('marked to market'); 2. bank lending is securitized or traded; 3. bank assets are sold to 'shadow banks'; and 4. assets retained on balance sheets are financed from market sources.

1. Increased 'Marked to Market'. Bank assets that are not priced on the balance sheet according to market prices will remain at their original value, absent a clear reason for change (such as credit impairment on a loan). In contrast, the value of bank assets that are 'marked to market' is determined by prevailing market prices.⁸⁵ This is the 'new market portfolio' discussed by Aglietta and Breton.⁸⁶ Market prices increase/decrease profitability, increasing/decreasing the ability to retain earnings to increase capital,⁸⁷ and, through the impact of profitability on bank share prices, increasing/decreasing the ability to raise new capital. Through the 'Value at Risk' method of valuing marked to market assets, increased volatility also increases the amount of capital banks require.⁸⁸ Estimates of the losses on US sub-prime mortgage securities, based on prevailing market prices in 2008, were nearly 60 per cent greater than losses implied by the Bank of England's assumption regarding actual default-related losses (a proxy for fundamental value).⁸⁹ For UK prime mortgage securities, losses were 85 per cent greater.⁹⁰ It therefore matters whether or not the value of bank assets are determined by market prices. The issue, however, is not one solely of losses, but of procyclicality, as higher market prices can also increase profitability and lending

⁸⁵ See Ryan 2008.

⁸⁶ Aglietta and Breton 2001, 441

⁸⁷ Deutsche Bundesbank 2009, 60.

⁸⁸ Ibid., 50; Commission Bancaire 2009, 23.

⁸⁹ Bank of England 2008b, 16.

⁹⁰ Ibid., 16; see also Hellwig 2009.

capacity.⁹¹

The value of a loan remaining on a bank's balance sheet at its original value ('historic cost') is determined by the bank's correct assessment of the borrower's creditworthiness. If a loan is marked to market, the profitability is determined by a successful assessment of the asset's market value. As a result, the nature of the lending decision changes in a way that undermines the distinction between a loan and bonds or equity. Even if a loan is not sold, its market value determines its terms. Banks' marking to market varies across countries, although the data are incomplete.

The data in Table 2 make clear that the impact of market prices directly on bank assets is low in Italy, Japan and Spain; but this impact is high in France, the UK and, allowing for the investment banks, the United States. The Netherlands lies between, and the data on Germany is insufficient.⁹² For those countries where a high proportion of bank assets are marked to market, excessively weak market prices cause difficulties for banks, sufficient in the financial crisis to be one explanation for the sub-prime crisis becoming systemic.⁹³ The controversial regulatory response was selectively to suspend mark-to-market accounting rules.⁹⁴

⁹¹ Hellwig 2009, 180; IMF 2008.

⁹² Deutsche Bank is certainly an outlier in the German system, which clearly includes many smaller banks that remain much closer to the traditional characterization above. Furthermore, Deutsche Bank is highly international in its activities. National banking systems cannot be considered without internationally-active banks, but further research should examine the impact of internationalization on national systems. We thank an anonymous reviewer for this point.

⁹³ Hellwig 2009, 133-4.

⁹⁴ Deutsche Bundesbank 2009, 22. This accounting change was applied also to holding of securities, but see BNP Paribas 2009, 169 for a bank taking advantage of this change for loans.

2. Increased securitizing and trading of loans. The marking-to-market of assets discussed above involves loans that are retained by banks. However, many are also sold. Increasingly in the period analyzed here, commercial banks moved to an ‘originate and distribute’ business model. Banks made loans, not to keep them on their own balance sheets, but to sell them to other financial market actors. This further undermines Zysman’s distinction between loans and market-based bonds and equities, as loans become simply another financial market asset.⁹⁵ ‘This is not the way that banks operated for hundreds of years’.⁹⁶ The lending decision is directly linked to the market via the ability to sell and the pricing of any sale. There are two broad ways in which such distribution can take place. The first is through direct sales of the loans themselves, a largely post-2000 activity; the second is as a result of various forms of securitization, which had started in the US in the 1980s but expanded markedly in the years before the crisis. The securitized assets are then in turn sold directly to the market or to shadow banks. Whether sold directly or securitized before sale, the loan is made only because the bank expects it can be sold, and the terms of the loan are determined by that prospective sale. Loans are not a unique instrument held only by banks, as in the bank-based/market-based dichotomy, but are traded like any other financial instrument.

Much of the direct sales of loans represent genuine distribution of risk outside the banking system: by 2007 institutional (non-bank) investors bought 62 per cent of

⁹⁵ The desire to sell loans also undermines the ‘flexibility and discretion in [loan] contracts’ seen as part of the value in relationship banking (Boot 2000, 12).

⁹⁶ Gorton 2010, 42.

leveraged loans in the US;⁹⁷ in Europe one estimate for 2006 exceeds 40 per cent.⁹⁸ Trading loans is a relatively new activity, but has grown very rapidly in recent years. The trading volume of loans in the United States reached US\$520 billion in 2007,⁹⁹ a fivefold increase from 2000. Gorton sees the ratio of secondary market loan sales to outstanding commercial and industrial loans peaking in 2007 at over 25 per cent.¹⁰⁰ Yet in Japan there is no secondary loan market.¹⁰¹ Although ‘relatively nascent’,¹⁰² European markets had trading volumes in 2007 at US\$225 billion.¹⁰³ A further indication of the loan market’s size, and of its sensitivity to overall market pressures, is that early in the financial crisis, banks were caught with US\$300 billion of loans they had planned to sell.¹⁰⁴

Loans are not only sold directly to the market, but are also sold by way of securitization: the repackaging of pools of loans into tradable bonds. The large securitization market in the US is well known, but securitization of European assets has also been significant, although there is considerable country variation (see Table 3). Even in the US, despite being long-established, securitization has increased very rapidly: 2007 issuance was more than double 2000 levels.¹⁰⁵ In Europe, growth was even more dramatic: from just €78.2 billion in 2000 to €453.7 billion in 2007.¹⁰⁶ European securitization has therefore grown from largely insignificant levels in 2000

⁹⁷ Ivashina and Sun 2011. Leveraged loans are those made to less creditworthy corporate borrowers.

⁹⁸ Morgan Stanley 2006, 12.

⁹⁹ Authors’ e-mail communication with Alicia Sansone, Loan Syndications and Trading Association, 16 September 2010.

¹⁰⁰ Gorton 2010, 42.

¹⁰¹ Author’s e-mail communication Sansone, 16 September 2010.

¹⁰² Standard & Poor’s 2010, 17.

¹⁰³ Axa Investment Managers, undated.

¹⁰⁴ Bank of England 2007, 36.

¹⁰⁵ European Securitisation Forum 2008.

¹⁰⁶ *Ibid.*; see also ECB 2009, 10.

to amounts that represent a significant proportion of GDP in a number of European countries (see Table 3 below). Securitization, and the ‘originate and distribute’ model of banking generally, underpins increased bank lending in benign market conditions, but increases the severity of a credit crunch when markets fall. Deutsche Bank makes the connection explicit in its (pre-crisis) 2006 annual report: ‘A sudden drop in investor demand for asset-backed securities could cause us to restrict our lending thereafter for the types of loans we securitize’.¹⁰⁷ Securitization rose to about half of UK banks’ market funding by 2008.¹⁰⁸ The decisions by US, European and UK central banks to support the securitization markets are further proof of their importance,¹⁰⁹ as is the IMF’s conclusion that ‘repairing securitization is critical to supporting the supply of credit’.¹¹⁰

Seabrooke sees securitization as increasing bank power through the increased profitability it affords.¹¹¹ However, securitization is central to a decline in banks’ ‘financial power’ to limit the impact of the market on their clients.¹¹² In securitization, not only is the pricing and availability of financing determined by the market, but the ability of banks to coordinate the rescue of companies in difficulty¹¹³ is further undermined. As with the selling of loans, the banks are no longer the lenders whose interests are central to any corporate restructuring. An additional difficulty with the structure of securitizations is that the interests of investors can conflict, making

¹⁰⁷ Deutsche Bank 2007, 110.

¹⁰⁸ Bank of England 2009, 16; on the link between securitization and credit growth, see Jiangli and Pisker 2008; Sabry and Okongwu 2009.

¹⁰⁹ See Cheun, von Köppen-Mertes and Weller 2009.

¹¹⁰ IMF 2009a, 32.

¹¹¹ Seabrooke 2006.

¹¹² See Rajan and Zingales 2003: 8.

¹¹³ Zysman 1983, 64.

resolution all the more difficult.¹¹⁴

Clearly the US stands far ahead of all other countries in the significance of securitization to lending. However, securitization was also an important influence on lending capacity in a number of continental countries, including two, Italy and Spain, where bank lending relies significantly on wholesale funding sources (see Figure 4). Overall, in the first quarter of 2009, securitization accounted for 28 per cent of outstanding credit in the US, 14 per cent in the UK and 6 per cent in the Euro area.¹¹⁵ In some countries where securitization activity was relatively low, however, growth was rapid. German securitization issuance, for example, was in 2006 over five times the level in 2004.¹¹⁶ Such securitization was not confined to mortgages. Outstanding European securitized collateral other than residential mortgages totaled just under €600 billion at Q1 2008, with the US at a further €1.5 trillion equivalent.¹¹⁷

Although in theory securitization involves the outright sale of assets, much of the risk transfer of securitization proved illusory, with banks retaining very significant proportions of securitizations,¹¹⁸ and valuing them at market prices. It was therefore also a part of the increased marking to market of assets discussed above. Furthermore, securitization involved selling many assets to entities that retained a close connection to the commercial banks. We turn next to these entities: the

¹¹⁴ For example, investors in securitization tranches that take credit losses first may oppose a write-down of debt that investors in more senior tranches, which will not take losses, support.

¹¹⁵ IMF 2009a, 32.

¹¹⁶ IMF 2009b, 13.

¹¹⁷ European Securitisation Forum 2008.

¹¹⁸ Acharya, Schnabl and Suarez 2010

‘shadow’ banking system.

3. Increased ‘Shadow Banking’. ‘Shadow banking’ has been used to describe banking activity outside the commercial banking system.¹¹⁹ Pozsar *et al.* differentiate ‘internal’ and ‘external’ shadow banking and parallel banking.¹²⁰ For greater clarity, we distinguish lending activity by the commercial banks that until the financial crisis was wholly or partially off the banks’ balance sheets (shadow banking) from banking activity that takes place separate from, in ‘parallel’ with, the activities of the commercial banks. Shadow banking is therefore a particular instance of the wholesale funding of bank balance sheets (see below). Shadow banking was important in a number of developed economies, while parallel banking has only been significant in the US.¹²¹

Loans, often as securitizations, are sold to ‘special purpose vehicles’ established by banks with the single purpose of buying these assets and financing them by issuing securities. The most important of these vehicles, on which we focus, are ABCP programs, which borrow short term, usually from money market funds.¹²² Banks sponsor the establishment of ABCP programs, and provide them with guarantees. Profit comes from the difference between their interest income and cost of borrowing, assisted by the reduced requirement for capital to support the lending.¹²³ ABCP programs therefore, in good market conditions, increase the availability of credit in an

¹¹⁹ E.g., Pozsar, Adrian, Ashcraft and Boesky 2010; Tucker 2010.

¹²⁰ Pozsar, Adrian, Ashcraft and Boesky 2010, 66.

¹²¹ Both shadow and parallel banking existed well before 2000, but were much smaller and less complex. Limitations in data also make analysis of the pre-2000 period difficult, see also Pozsar, Adrian, Ashcraft and Boesky 2010, 8.

¹²² For an overview, see Fitch Ratings 2007.

¹²³ Acharya, Schnabl and Suarez 2010, 61.

economy, and also increase bank profitability. However, the banks' guarantees leave them committed to lending, secured on ABCP assets, if financing is unavailable. Banks then own the underlying assets of the ABCP program in an 'involuntary reintermediation', pressuring banks' capital and liquidity – a further example of market-based and procyclical lending. Outstanding ABCP reached US\$1.3 trillion in July 2007, a larger amount than outstanding US government Treasury bills, and a doubling since January 2004.¹²⁴ However, from August to December 2007 (a year before Lehman's collapse) outstanding ABCP fell to US\$833 billion. As noted above, the Bank of England's surveys revealed the direct negative implications for UK bank lending of this contraction in the ABCP market.

ABCP is important for two reasons. First, losses on the market-based ABCP assets, as a result of the guarantees given, reduced the bank capital needed to support lending. In extreme examples, such as Landesbank Sachsen and IKB Deutsche Industriebank in Germany, or Royal Bank of Scotland in the UK, reduced bank capital due to losses on ABCP assets was a major factor in bank collapse. Support for ABCP was high, measured as a percentage of GDP, in the Netherlands,¹²⁵ Germany and the UK. Support was moderate in France and the US, and low in Japan, Italy and Spain.¹²⁶ The second importance of ABCP was as a source of lending in the various countries considered. Table 3 above shows the assets of ABCP programs by country and therefore the direct impact of this lending on credit in each country.¹²⁷ As a percentage of GDP, Germany is at the same level as the US, and all are behind the

¹²⁴ Acharya, Schnabl and Suarez 2010, 1.

¹²⁵ ABN Amro, bought by Royal Bank of Scotland shortly before the crisis, was particularly active.

¹²⁶ Authors' calculation from Acharya and Schnabl 2010. High is 6.5 per cent of GDP or greater. Low is less than 2 per cent.

¹²⁷ Note that there is potentially some double counting in Table 3.

UK and the Netherlands.

4. Increased Market-Based Liabilities. We move now to consider the market-based liabilities of banks. The liability side of the balance sheet has moved far from the traditional conception of bank lending funded by customer deposits. First, as discussed by Gorton and Metrick in the case of ‘securitized banking’, financing increases on a very short-term secured basis in the repurchase, or ‘repo’ market.¹²⁸ The problems in this market have been well-documented elsewhere in the case of the US, but were also significant in Europe.¹²⁹ Although these securities include many unrelated to NFC lending (especially government securities), bonds issued by NFCs are also included. Second, and of greater significance in Europe than the US, a ‘funding gap’ has developed in many countries as the loans that banks make have exceeded their deposits.¹³⁰ Market borrowing is required to fill the vast majority of this gap. Figure 5 shows the development of this funding gap for the countries considered here:

Slightly different data reported in different countries make comparisons difficult, but a number of clear conclusions can be drawn. Banks in all countries, except Japan, need to borrow from the market to finance their lending, and in all countries, except Germany, this requirement increased. Despite the falling funding gap in Germany and Japan’s increasing surplus of deposits over loans, the aggregate funding gap across

¹²⁸ Gorton and Metrick 2010. Also Gorton 2010.

¹²⁹ It explains in part why European banks were more affected by the global financial crisis – the European banks were, more than US counterparts, funded by short-term credit.

¹³⁰ Bank of England 2009, 37. See also ECB 2009, 9; Raddatz 2010.

the eight systems increased by approximately US\$2 trillion in this period. The increased variation between countries is also significant.

When the funding gap on loans and the financing of securities is combined, the IMF estimates UK banks total market financing at over \$4 trillion (146 per cent of GDP) by end 2007, nearly twice the amount of their US counterparts (only 15 per cent of GDP). Even Japanese banks had market funding of US\$1.4 trillion (24 per cent of GDP), although this is likely to be mainly related to Japanese government bonds. Separate country figures for the Euro area are not given, but the Euro area total is US\$12.4 billion (94 per cent of Euro area GDP).¹³¹

Although the market funding of the US commercial banks appears small relative to the size of the economy, market-based liabilities are primarily in the parallel (most importantly, investment) banks. Investment banks, whose assets reached approximately 30 per cent of those of US commercial banks, had virtually no deposits, and their requirement for market funding (including the market financing of securities) reached US\$3.7 trillion by 2007, overwhelmingly (86 per cent) short term.¹³² While even allowing for the investment banks, market funding in the US was relatively low compared to GDP, investment banks had ‘to roll over a large part of their funding on a daily basis’.¹³³ Short-term (up to 1 year) bank market funding, the most immediate source of market pressure on bank lending, represented 32 per cent of US GDP, 65 per cent of UK, 24 per cent of Japanese and 54 per cent of the Euro

¹³¹ IMF 2010, 67.

¹³² IMF 2010, 68.

¹³³ Brunnermeier 2009, 80.

area.¹³⁴

These figures point to the wide range of wholesale funding sources. The full analysis of the market pressures on banks as a result of these different sources of wholesale funding is beyond the scope of this paper, but the markets can be distinguished in two ways. First, by the maturity of borrowing; shorter maturity liabilities, including borrowing from other banks, transmitted market problems to banks' financing more quickly. At the pre-crisis peak, over 80 per cent of all commercial paper investment was 1-4 *days* in maturity, for example.¹³⁵ The majority of unsecured interbank borrowing was for less than a week.¹³⁶ Banks reliant on longer-term sources of funding, such as various forms of bonds, face less immediate refinancing pressures. Second, wholesale markets must be distinguished by their fragility: the financial crisis has demonstrated that some wholesale markets are more fragile than others, making the impact on lending of market difficulties more immediate for those systems more dependent on those markets. Table 4 sets out the timing and severity of the impact of the crisis on the most important bank funding markets.

There is no single way to measure the variation in the exposure to the market, but market funding can be divided broadly into financing from other banks (with borrowing from international banks and especially in foreign currencies particularly vulnerable to withdrawal in the event of market weakness), and financing through the bond and non-bank money markets (with the maturity of financing, and the fragility

¹³⁴ IMF 2010, 67.

¹³⁵ Bank of England 2008b, 23.

¹³⁶ Bank of England 2007, 34.

of certain bond markets both concerns). We recognise, however, that the stability of the same type of financing varied across countries. A particular type of bond, covered bonds,¹³⁷ is longer established in Germany (*Pfandbriefe*) than elsewhere, and more stable. Similarly, many German and Italian banks sell unsecured bonds to their own clients or related savings banks, a more stable source of demand than ‘the market’ more generally.¹³⁸ Nevertheless, increased exposure to wholesale funding generally goes hand-in-hand with financing from less stable sources.

We have discussed four facets of market-based banking: marked-to-market asset pricing; securitization and trading of loans; shadow banking and market-based liabilities. A full analysis of each of the national financial markets discussed here or quantification and aggregation of each facet into an overall index of “marketization” is beyond our scope in this article. We do present a stylized array of countries along a continuum for heuristic purposes (see figure 5). A continuum is preferable to a typology because the four facets may relate to and shape the rest of the political economy differently and they suggest a multi-dimensional characterization that places most countries in our sample in a middle ground between traditional banking and high levels of market-based banking. Introducing a third *type* would mask potentially important conceptual specification and empirical nuance.

Table 5 summarizes the banking systems of the eight case study banking systems in terms of the extent to which the areas of market-based banking discussed above are important to bank lending activity. This provides detailed support for the assessment on the banking systems in table 6, in terms of the relative market-based nature of bank

¹³⁷ For further detail, see IMF 2009a: 90.

¹³⁸ See Westdeutsche Landesbank 2009, 97; Bayerische Landesbank 2009, 33.

assets and liabilities, and the importance of parallel banking.

This analysis allows us to reach a conclusion as to the extent of market-based banking in each country, best displayed along a continuum (see Figure 5). The countries can effectively be distinguished by the degree to which banking in each country has moved away from the view of banks in the VoC account towards lending that depends on the market. In all cases, commercial banks have a reliance on the market to fund their lending that compromises, to varying degrees across countries, their ‘financial power’. In the so-called CMEs, this represents an undermining of the ability to fulfill a coordinating role. More fundamentally, it undermines the very bank-based / market-based dichotomy. These insights provide a challenge to the existing VoC literature.

Conclusion

This article challenges the way Comparative Political Economy conceptualizes bank-based financial systems. It starts by examining Zysman’s seminal work. For Zysman, the distinguishing feature of loans is that they are not traded financial instruments, and therefore, their price is not set directly by markets. The distinguishing feature of banks in bank-based systems is that they have the ‘financial power’ to influence market prices. Neither feature, we argue, accurately represents lending or banks in the developed financial systems outside Japan in the first decade of the twenty-first century. Loans are now bought and sold in the market and therefore their terms are set directly by market forces. Banks’ ability to lend, where they do retain loans, is

constrained by their own ability to borrow from financial markets and by their own requirements to raise the capital to support their lending. Many banks are no longer funded predominantly by deposits, as is explicit in Zysman's analysis and implicit in CPE's subsequent consideration of financial systems. Bank lending is therefore increasingly market determined.

This analysis of the changed role of banks in CPE has implications that go beyond debates about the accuracy of the dominant typology. Zysman and the VoC literature have assigned to banks the role of bulwarks against the encroachment of financial markets. The 'patience' of banks in their holding of corporate equity and their making of loans is underpinned by this ability to resist market pressures. Borrowing from Hall and Soskice, if changes in banks 'could be the string that unravels coordinated market economies',¹³⁹ the analysis here has implications for the broad range of issues upon which the CPE literature has focused. The findings of this article about bank financing can underpin further research into the shifting patterns of relational banking in Germany and other continental European countries, especially at the level of SMEs, and the impact upon related features of corporate governance, including the long-term nature of corporate investment decisions and the stability of employment relations.

Much CPE literature focuses on questions of convergence of, or the continued divergence between, national capitalisms, including financial systems. This literature has been overwhelmingly focused on the degree to which continental European countries (and notably Germany) have converged with the Anglo-Saxon model, typified by the UK and US. Our study has a number of implications for this literature.

¹³⁹ Hall and Soskice 2001: 64.

First, as we show, the two archetypal LMEs have very different financial system characteristics, especially if analyzed with the standard empirical data whose utility we have questioned. Second, implicit in much of this work is a static conception of the Anglo-Saxon model, with which other systems are, or are not, converging. This is simply wrong. Indeed, on many of the measures we have highlighted above, change is fastest in the LMEs. Third, banking activities are a potential source of either convergence or divergence. As so many world leaders survey the wreckage of their banking systems following the financial crisis, the economic crisis and in some cases the Euro area sovereign debt crisis, it might be tempting to think of this only as a question of convergence. However, we have highlighted continuing, and in some cases increasing, divergence.

We have examined a very specific period of time, during which the relative decline of banks as a source of NFC financing has been reversed.¹⁴⁰ The global financial crisis, the economic crisis that followed, and most recently the Euro area sovereign debt crisis have in turn led to ongoing change in banking regulation and practice. An obvious issue common to CPE, therefore, is the extent to which the change we address is largely cyclical rather than secular. We recognize that some of the wilder excesses of pre-crisis market-based banking are unlikely to reappear, and that the direction of travel in banking regulation – particularly increased capital and liquidity requirements – will at least limit the further expansion of market-based activities.

However, we would highlight a number of reasons to argue that market-based banking represents significant and long-lasting institutional change. First, as longer-

¹⁴⁰ For the longer perspective, see Rajan and Zingales 2003; Deeg 2010.

term trends indicate, a return to bank deposits funding all bank lending (i.e., to traditional banking on the liabilities side of bank balance sheets) within all but a very few national systems appears implausible. Second, while the reasons behind the changes have not been a primary focus of this article, they potentially include changes in the shareholdings of banks,¹⁴¹ competition from other sources of NFC financing or between banks (although the evidence remains inconclusive in the latter case),¹⁴² and technological change.¹⁴³ There is no reason to expect any significant reversal of these developments.

Government policy, and regulation specifically, are clearly important to explaining the causes of market-based banking and to considering its likely future direction. Those concerned with economic and regulatory policies are influenced by two conflicting concerns: bolstering growth and increasing control of financial systems. Banks are now central to both sides of this conflict. Increased bank capital requirements and limitations on liquidity risk point in one direction; attempts to restart securitization and guarantee bank bond issues point in the other. Banks are looking to increase the proportion of customer deposits in their funding,¹⁴⁴ but the shadow banking system is now as large as it was pre-crisis.¹⁴⁵ Market-based banking will remain central to the provision of credit, at least in developed world economies, and must therefore be a part of how we understand national financial systems and interpret their implications for the wider political economy. A complete understanding of the

¹⁴¹ Hardie and Howarth 2009. Market-based banking by ‘not strictly profit-maximizing’ German Landesbanken (Hackenthal, 2004, 74) suggests this is not the only explanation.

¹⁴² See Deeg 1998; Boot 2000; Memmel, Schmieder and Stein 2007.

¹⁴³ Byrne and Davis 2003, 152.

¹⁴⁴ ECB 2009, 5.

¹⁴⁵ Financial Stability Board 2011.

implications of market-based banking requires a more complete research program than can be accommodated in a single article, but we have provided here both an argument in favor of such a program and an indication of some of its main areas of focus.

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Tables

Table 1 Traditional versus Market-Based Banking

	<i>Institutions</i>	<i>Loans</i>	<i>Funding/ Liabilities Of Loans Retained</i>	<i>Credit Risk of Loans Retained</i>	<i>Accounti ng Of Loans Retained</i>	<i>Official Support Pre-Crisis</i>

Traditional Banking	Commercial Banks/ Savings Banks ¹⁴⁶	Retained on Balance Sheet	Customer Deposits	Not hedged	At Cost	Central Bank Lender of Last Resort
Market-Based Banking	Commercial Banks and Parallel Banks (including investment banks)	Sold, in loan market, via securitization or to shadow banks (ABCP etc.). 'Originate to Distribute'	Wholesale Market (inter-bank, bonds etc.; repos for parallel banks)	Hedged via CDS	Mark to Market	Central Bank Lender of Last Resort (but not for parallel banks)

Table 2 Mark-to-Market Accounting by country, 2007

	% of Assets
France	46.5
-BNP Paribas	65
-Crédit Agricole	44
-Société Générale	46
Germany	
-Deutsche	75
Italy	19
Japan	27
Netherlands	28.4
Spain	17.2
United Kingdom	
-Barclays	52
-HSBC	40
-Royal Bank of Scotland	45

¹⁴⁶ These institutions have different names in different countries, i.e., savings and loans, building societies, savings banks, mutual banks.

US (Commercial banks only)	26.9
-Bank of America	27
-Citigroup	39
-Goldman Sachs	86
-JP Morgan Chase	41
-Lehman	42
-Merrill Lynch	44
-Morgan Stanley	44

Sources: Committee on the Global Financial System (2010), Fitch Ratings (2008) See also IMF (2008: 119).

Table 3 Securitization Collateral by Country (end 2007)

	Medium Term Securitization Collateral (% of GDP)	ABCP Collateral (% of GDP)	Total
Germany	1.6	1.2	2.8
France	2.9	0.8	3.7
Italy	7.8	0.8	8.6
Netherlands	24.1	6.8	30.9
Spain	16.9	0.4	17.3
UK	24.8	4.0	28.8
US	70.1	1.2	71.3
Japan	1.3	0	1.3

Source: Authors' Calculations from European Securitisation Forum, Japan Securities Dealers Association.

Percentage of outstanding ABCP as of 28.2.08 versus total ABCP outstanding and GDP as of end 2007. Figures based on ABCP outstanding of €392 billion versus peak of €528.9 billion (Q2 2007). Figures also understated because do not include assets categorised as 'global' or 'Europe' (19 per cent of total).

Table 4 Funding Sources During the Crisis

	Pre-crisis	Aug 2007 – Sept 2008	Lehman Failure	After Govt. Rescue Plans
Short-Term Financing				
Interbank	○	●	●	●

Repurchase	○	●	●	■
ABCP	○	●	●	●
CP	○	○	●	●
Deposits	○	○	○/■	○
Long-Term Financing				
Bonds	○	■	●	●/■
Covered Bonds	○	○	●	●
Securitization	○	●	●	●

Key: ○ Financing Available

■ Signs of Difficulties in Financing

● Impaired

Adapted from ECB 2009: 11

Table 5: A Summary of Market-Based Banking in Eight Case Study Countries

France: Mark-to-market assets were relatively high, but exposure to ABCP moderate. The relatively high funding gap was offset by low exposure to US\$ interbank market, and borrowing via securitization and ABCP low.
Germany: A cautious conclusion is necessary given the heterogeneous nature of the German banking system, and the limited data on ‘marking to market’ of assets. However, guarantees to ABCP were high and a source of very significant difficulties in the German banking system. The German funding gap declined over the period, and market-based borrowing included relatively robust and long-term covered bonds and unsecured bonds sold to retail clients.
Italy: Mark-to-market assets and ABCP guarantees were low. The funding gap was relatively high, but with borrowing from relatively robust and long term sources, particularly unsecured bonds sold to retail clients. US\$ interbank borrowing was low and use of securitization was moderate.
Japan: Mark-to-market assets and ABCP guarantees were low. Deposits were greater than loans.
Netherlands: Marked-to-market assets were low but guarantees to ABCP were exceptionally high. The funding gap was low. The use of securitization was high, but its market-based nature was limited by government guarantees.
Spain: Mark-to-market assets and ABCP guarantees were very low. The funding gap was moderate but Spain was the only country to borrow in the US\$ inter-bank market to finance domestic lending. ¹⁴⁷ Securitization as a source of financing for domestic lending was relatively high.
United Kingdom: Marked-to-market assets and support for ABCP were high. There were a high funding gap and market-based borrowing overall, with the sources of this financing both fragile and short-term, ¹⁴⁸ including inter-bank, commercial paper and ABCP.

¹⁴⁷ McGuire and von Peter 2009, 10.

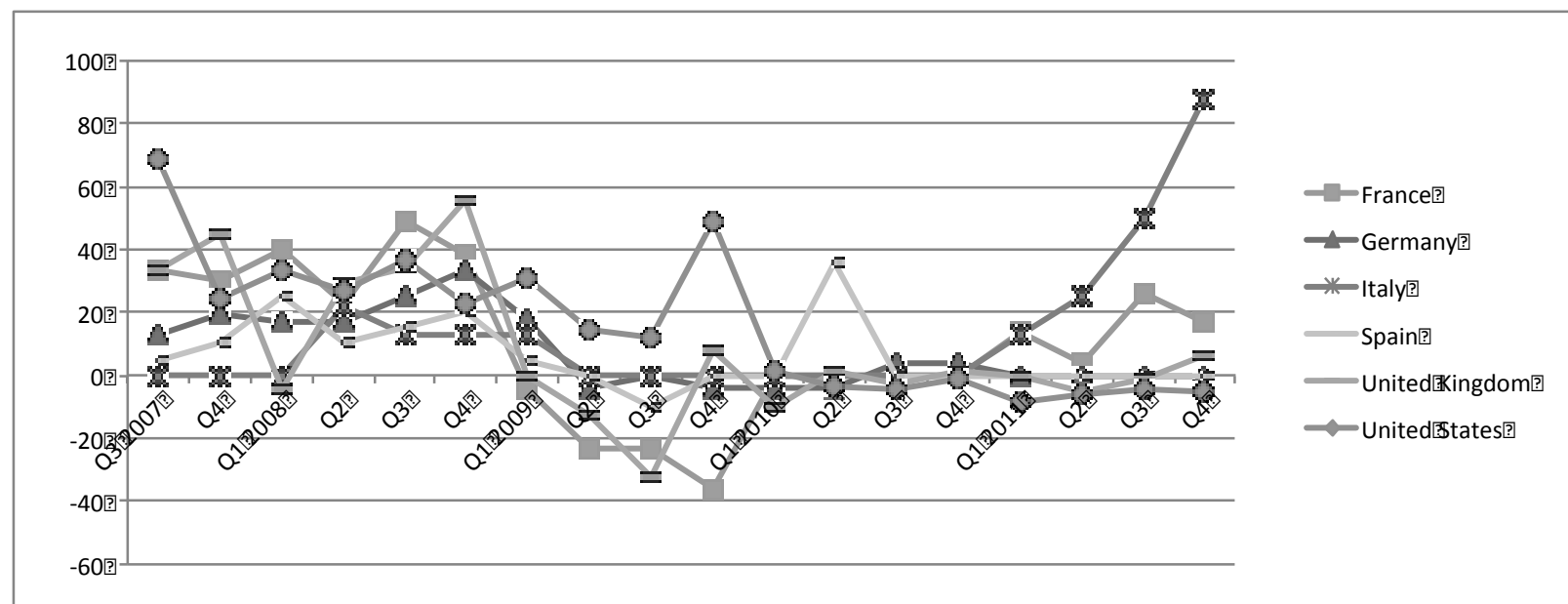
¹⁴⁸ At the end of 2006, a median of 44 per cent of major UK banks’ wholesale funding matured within three months (Bank of England 2007: 34).

United States: The use of marked-to-market by commercial banks was low as was the funding gap (especially relative to GDP), with guarantees to ABCP moderate. However, more activities by large US banks were off balance sheet compared to European banks. The US is the only country considered with significant parallel banks, the market-based assets and liabilities of which were very high.

Table 6 Market-based banking in eight countries

	Market-Based Assets	Market-Based Liabilities	Parallel Banking
France	Moderate	Moderate	Low
Germany	High	Moderate	Low
Italy	Low	Moderate to Low	Low
Japan	Low	Low	Low
Netherlands	High	Low	Low
Spain	Low	Moderate	Low
United Kingdom	High	High	Low
United States	Moderate	Moderate	High

Figure 1 Tightening of banking lending due to ‘cost and availability of funding’.*

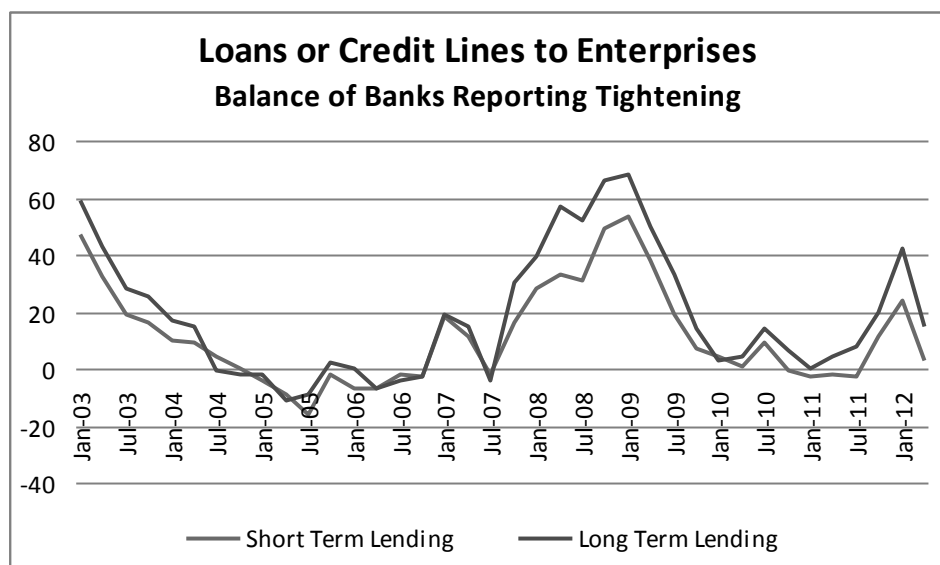


Sources: Bank lending surveys. The US Federal Reserve refers to ‘cost and availability of funding’ as ‘Decreased liquidity in the secondary market for these loans’. Figures are not made available by the Dutch Central Bank for domestic banks because of competition concerns. Figures are not provided for Japanese banks, which rely little on wholesale funding markets.

*A positive result equals a net tightening of lending according to bank loan officers because of the ‘cost and availability of funding’ for the banks’ themselves.¹⁴⁹

¹⁴⁹ The limited further tightening of bank lending conditions due to ‘cost and availability of funding’ in Spain from 2010 appears to contradict our findings as to the previous importance of wholesale funding to Spanish bank lending and evident restrictions on this funding in the context of

Figure 2



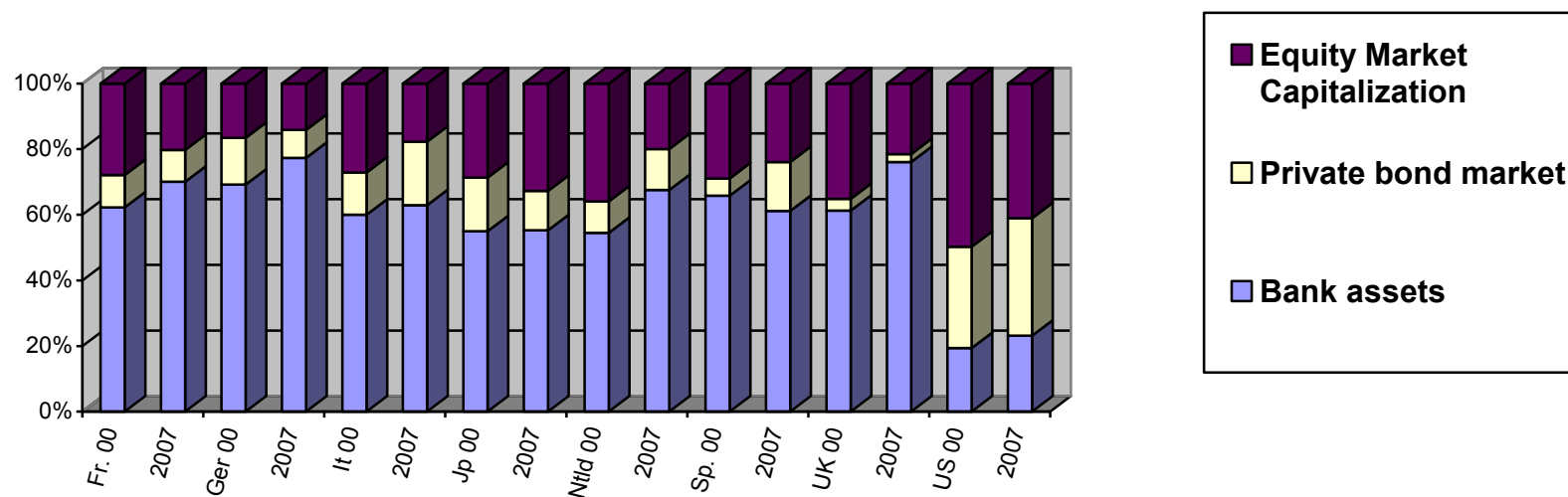
Source: ECB Euro Area Bank Lending Surveys April 2003 – April 2012¹⁵⁰

Spain's sovereign debt crisis. The Spanish bank lending survey indicates that general economic conditions have contributed considerably to tightening, and the collapse of the Spanish property market and construction industry, even if triggered by bank funding, may subsequently be over-riding banks' difficulties with wholesale market funding.

¹⁵⁰ <https://www.ecb.int/stats/money/surveys/lend/html/index.en.html>, accessed 11 July 2012. The crisis in the Euro area has resulted in flows of deposits from periphery to core, distorting any country-level comparison.

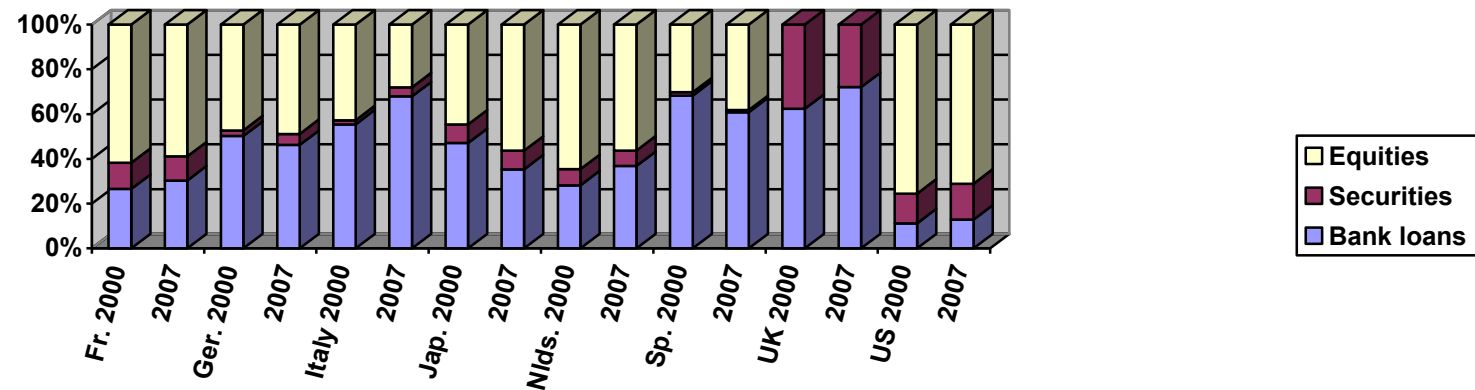
Figure 3 National financial systems (2000 and 2007)

Bank assets, Private debt market, Equity market capitalisation as a percentage of total financial system assets.



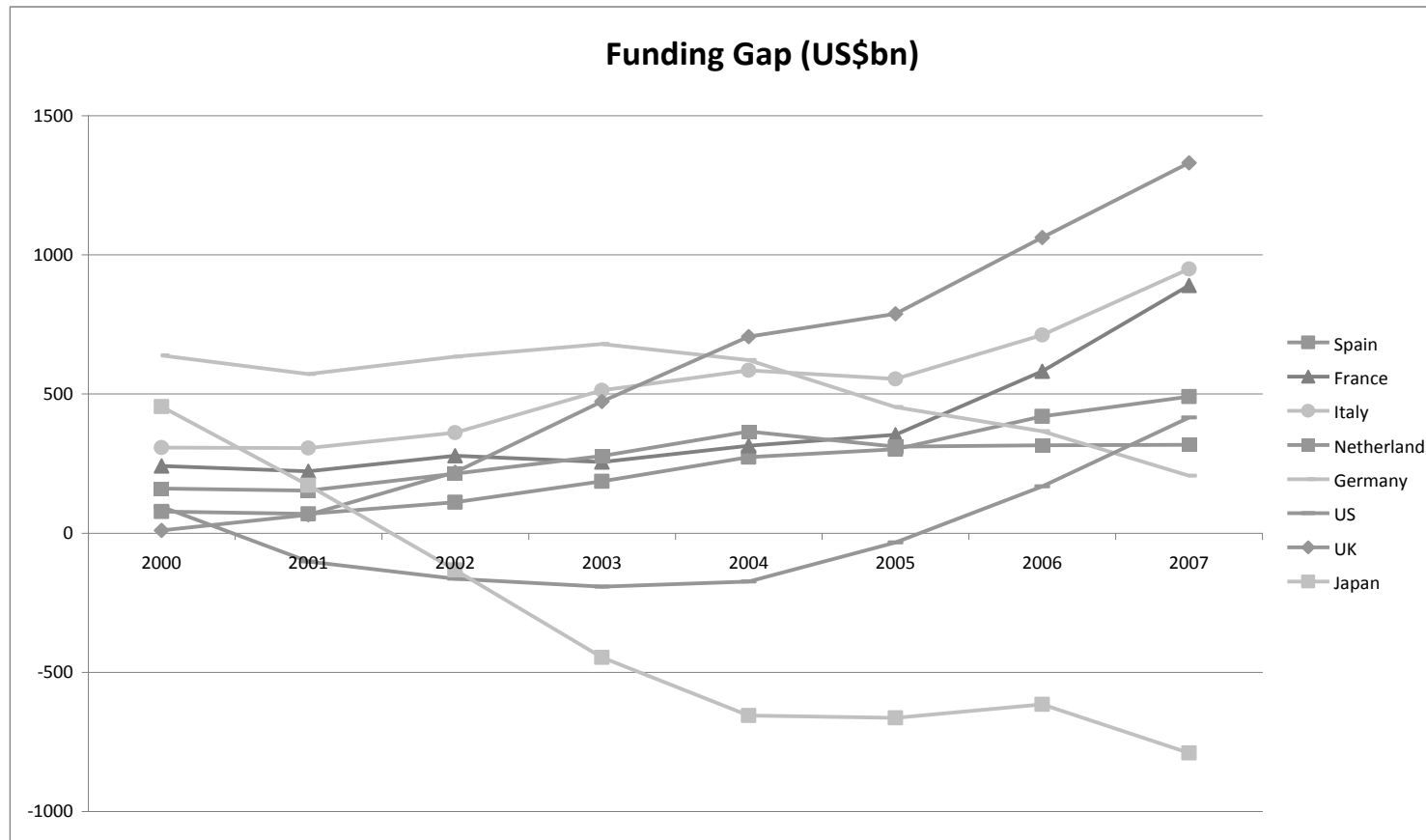
Source: World Bank. See Beck and Demirgüç-Kunt 2009.

Figure 4 Nonfinancial company finance (bank loans, securities, equities) as a % of total (2000 and 2007)



Sources: EU member state figures are drawn from the ECB statistics data warehouse and national central bank figures; Federal Reserve Flow of Funds, December 2010 and December 2004 releases; Ministry of Internal Affairs and Communications, Statistical Research and Training Institute ed. (2001, 2008), *Japan Statistical Yearbook*, Ministry of Internal Affairs and Communications, Statistics Bureau; Bank of Japan. Banque de France figures. The Bank of England / Treasury does not collect data on outstanding equity issued (only new equity issues and growth). The figures for the UK thus only demonstrate the growth of bank lending in relation to securities.

Figure 5: Commercial Bank Funding Gap



Sources: European Central Bank (Loans to Euro-residents excluding Monetary Financial Institutions (MFIs) less Deposits from Euro-deposits excluding MFIs), Bank of England 2008, Table 1.7; Federal Reserve H8 Reports (Loans and leases in bank credit, domestically chartered commercial banks, less Deposits, domestically chartered commercial banks, both not seasonally adjusted), Bank of Japan Statistics (Deposits, Total, domestically chartered banks less loans, Total, major, regional and shinkin banks) See also Bank of England 2009: 32.

Figure 6: A continuum of market-based banking

Low						High
Japan	Italy Spain	France	Netherlands	Germany	UK	US