The co-evolution of financial risk and megabanking in London, New York, Paris, and Frankfurt

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22 May 2015

ABSTRACT

This paper examines the co-evolution of financial risks and of megabanking in four nations: the United Kingdom, the United States, Germany, and France. It is now recognized, even by IMF economists, that the recent growth of finance has grown too big. But the problem is not just the size of the too-big-to-fail or "systematically important financial institutions;" if it were, then provisions to increase their capital would suffice to de-risk the too-big-to-fail institutions at the heart of the modern system of finance. We argue here that the unique historical, economic, and regulatory circumstances of these nation states, and their competitive and geo-political interrelationships, underlie the development of global finance as we have it today. The apparent technological necessity of a super-leveraged, risk-shifting global financial complex is a mirage; this complex, anchored in the cities of London and New York and mirrored in Frankfurt and Paris, has emerged in the context of UK and then US sponsorship of gold-based global currency systems, and more recently the 30-years'-long current-account deficit/capital-account surplus that has made the US a global liquidity sink. This structure of global finance is both the source of its strength in the current historical conjuncture, and the reason it is so spectacularly crisis-prone.

Keywords: Globalized finance, City of London, Wall Street, Paris, Frankfurt, mega-banks, shadow banking, financial deregulation, subprime crisis, development banking, financial functionality and dysfunctionality

JEL Codes: E44, G01, G18, N20

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1. Introduction

Successful national development requires an economically functional system of finance – that is, one that provides credit for employment-creating activity, while offering sustainable risk-return alternatives for savers. Two very different views of successful financial development have been proposed, sometimes by the same authors: one approach emphasizes that financial development emerges from the particular historical and institutional circumstances of every nation; the other, that it involves modernization by the multiplicative growth of new categories of markets and financial intermediaries.[1] Mainstream analysts have, until very recently, assumed that the growth of finance, however measured, necessarily enhanced growth. However, the 2008 financial crisis has led to the idea that there might be too much finance (Beck *et al*., 2014), leading some researchers (for example, Arcand *et al.*, 2012) to search for a tipping-point in the finance/national-income ratio. The IMF has issued an extensive study (IMF 2015) calling for a multi-measure approach to finance-growth ratios. This revision, in the end, is modest: it maintains the core view that a larger and more diverse ecosystem of financial intermediaries permits a more nuanced conduct of the financing, liquidity-provision, and risk-pooling activities on which economic activity depends.

What this view does *not* do is to examine the extent to which any financial system, no matter its size, provides core services – as noted above, credit creation and savings outlets – for the non-financial sector without imposing excessive costs on the economy as a whole. The obvious fact, in the experience of the past two decades, is that national financial systems across the globe – in Japan, the US, the UK, and in continental Europe – have failed by this measure. Finance has become dysfunctional in a double sense: its excessive leverage and risk-taking has led to institutional failures whose costs have been imposed on the tax-paying public; and in the aftermath of crises, its leading institutions have had to focus on rebuilding their equity levels instead of on providing the productive credit that non-financial businesses and households need to reboot their activities. In the 2007 crisis and in the years that followed, the economies of the US and Europe have suffered the consequences of financial practices that treated the securitization of high-risk mortgage and other credit instruments, as well as unregulated and unrestrained zero-sum derivative bets on these instruments' market valuations, as virtually riskless – until the possibility of revaluation without crisis was already foreclosed.

So what went wrong? How did leading global economies' financial sectors become economically dysfunctional and a source of crisis?[2] We argue here that the problem is not one of size alone. The growing size and increasing dysfunctionality of finance stems from a conjuncture of three elements. The first of these is the global spread of a neoliberal accumulation regime, involving *inter alia* the deregulation and globalization of financial practices in an era of declining national

[1] Among the most insightful works on the relationship between financial development and economic growth are Cameron (1960, 1967), Cassis (1994, 2006), Demirgüç-Kunt and Levine (2004), Gerschenkron (1962), and Goodhart (1988). These works have the added virtue of recounting national banking histories in far more depth than is possible here.

[2] We define a financial system as *functional* when it carries out the textbook functions of finance efficiently, and provides development finance. This latter term denotes the provision of credit to build infrastructure or support employment-creating enterprise. A system is *dysfunctional* when it systematically creates systemic risk and when its operational failure or collapse generates costs that must be borne, directly or indirectly (through the intermediation of government bailouts) by citizens.

governmental power. The second is competition between financial hubs fueled by profits increasingly based on global financial activity itself. The third element is the asymmetric access of the financial hubs involved in this competition to central banks willing and able to play a lender-of-last-resort role, and which issues an international reserve currency.

This brings us to the first of the four nations on which we focus. The US and the UK both have played a hegemonic role in the international economy in the capitalist era. The British pound and US dollar have each anchored a global fixed-exchange rate system linked to gold. These periods of global currency hegemony required the creation of a financial center or *hub* – respectively, the City of London and Wall Street – whose leading firms could manage financial relationships on an integrated global basis. These two centers' principal players, networks, and practices have adapted so successfully to post-gold-standard circumstances that they have retained their global financial dominance (Wójcik 2013). Further, because of these two centers' centrality in financial-system evolution, their embrace of deregulation and marketization have forced transitions in financial practices elsewhere. This has transformed other nations' financial hubs and, in turn, other nations' overall financial systems.

This brings us to France and Germany, and hence to Paris and Frankfurt, which constitute the two principal financial hubs of the member nations of the European Monetary Union (the Eurozone). We show below how innovations in the two hegemonic-currency financial hubs forced innovations in financial structure and regulation in France and Germany, and in turn helped to shape the character of the EMU itself. One key feature of EMU architecture is that the European Central Bank (ECB) established on the creation of the EMU did not entail a role of lender of last resort. The ECB's focus was on disciplining EMU member nations, not on backstopping their financial systems; financial system health was the responsibility of national financial authorities. And these member nations themselves lacked lender-of-last-resort capacity.

This global financial architecture – two competing financial hubs rooted in hegemonic national currencies, interacting with other financial hubs based in nations without the lender-of-last resort capacity necessary to protect financial hegemony, created the preconditions for the extended "global financial crisis" that arose in 2007 and whose effects have persisted until now. That is, the timing and character of the interlinked subprime and Eurozone crises mirrors the global structure of financial hegemony and competition.

We proceed as follows. Section 2 describes the transition to globalized finance in the United Kingdom and the United States through 2008. Section 3 then describes this evolution in France and Germany. Section 4 briefly recounts the subprime crisis of 2007-08. Section 5 then considers whether and how financial behavior and structures have changed in the post-2008 period, and describes some financial aspects of the Eurozone crisis. Section 6 briefly concludes.

2. Evolving financial hubs in currency-hegemonic nations: City of London and Wall Street

In recent financial history, only the UK and the US have had currencies that anchored gold-linked global currency systems – the British gold standard (1816-1914) and the US Bretton Woods system (1946-1971) – and then became global reserve currencies. Both nations have long traditions of intertwined military and industrial development. And each has hosted one of the two dominant global financial hubs in the past 150 years.

The United Kingdom. British economic development, based on the twin pillars of overseas trading/resource-extraction ventures (especially via joint-stock companies, often with Royal charters) and domestic industrialization based on coal and rail, featured the pursuit of public purposes through privately-held enterprises. The Bank of England itself was privately-owned until 1946. Soft-touch regulation among privileged "gentleman" stakeholders prevailed as the preferred behavioral norm in British banking. English high-street banking has been dominated by a small number of institutions – five in 1918, four today – for the past 100 years. For example, whereas US banking was transformed by a series of banking laws in the 1930s, British banking survived those years via a series of publicly-guided mergers and acquisitions of distressed banks, without significant changes in banking laws. Only in 2012 did Parliament pass the Financial Services Act, which established the Financial Conduct Authority and the Prudential Regulation Agency as "twin peaks" agencies to look after the safety, soundness, and competitiveness of UK financial institutions.

The international experience and relationships of many of the core institutions in the City of London have a long history, rooted in the management of the far-flung British empire (Sutherland 2013). These commercial and financial linkages were deepened during Britain's century administering its gold standard. Britain's key geopolitical position after World War II permitted it to bolster its position as a dominant global financial hub despite the fading importance of British industry and the struggles of the pound sterling. As Lambie puts it, "the USA became the world's 'hegemon' after the Second World War, but London retained its power in finance; well placed to challenge the post-war Keynesian regulatory consensus in favor of globalizing interests, theoretically and politically served by the rise of neo-liberal ideology." (2013, p. 239)

There have been three crucial steps in the contemporary emergence of the City of London. The first was the creation of an active Eurodollar (offshore money) market in the early 1960s. London became the preferred global hub for what Machlup (1970) famously termed "stateless money." By the late 1960s the City of London had become a supra-national enclave managing the Eurocurrency (offshore) financial system, largely independently of domestic industry (Coakley and Harris 1983). The Eurocurrency business, most denominated in dollars, created risk for the banking entities involved and undercut the global competitiveness of British industry.[4]

The second definitive step for the City was the 'big bang' deregulation of the London Stock Exchange – including the ending of fixed commission charges and of traditional trading practices – in October 1986. The combination of the tradition of "soft touch" regulation, experience in managing the exchange-rate and other risks of off-shore financial relationships, and the deregulation of activities and roles, proved a boon in the 1970s and 1980s, during which Great Britain found it difficult to maintain exchange-rate parity with the chronically strong German economy. As Warsh (2011) recounts, Europeans' continually frustrated efforts to maintain their integrity as an economic bloc without exchange-rate slippage eventually led to two grand ideas: a single market, which would solidify Europe's status as a megamarket; and a single currency,

[4] Denominating financial transactions in dollars, given the current-account deficits of this pound-sterling national economy, put the interests of British industry and international finance into direct conflict. The City had to maintain a high pound-sterling to maintain its margins; industry benefited from a low pound.

which would require macroeconomic harmonization.

In the end, Britain joined the single market – the European Union (EU) – but not the single currency – the European Monetary Union. This was the third element in solidifying the capital of post-hegemonic Britain as a global financial capital. Arnold and Fleming (2014) have reported that more than 250 foreign banks locate their main European subsidiaries there as a base for wholesale (investment and corporate banking) European operations in the EU single market – investment and corporate banking. Indeed, the combination of EU membership and Eurocurrency experience, in the era of deregulation, meant that London could function as an ideal base for offshore and onshore financial activities for large multinational firms and the banks that service them. As Palan (2002) and Palan *et al.* (2009) document, many small nations commercialized their sovereignty and teamed with City firms to create tax havens that permitted the creation of financial activities that could escape from regulation and taxation even while being conducted within the same physical space.

The special competence of City bankers in using over-the-counter instruments to hedge exchange-rate and other risks came to the fore as subprime securitization instruments spread across borders. City of London firms thrived as the markets for global financial instruments expanded. London grew ever more prosperous on the back of its global financial industry, even while the remainder of the British economy stagnated (Chakrabortty 2013).The special place of Great Britain's banking industry is readily seen when contrasted with global competitors. Figure 1 shows that whereas the size of the largest banking firm relative to gross domestic product (GDP), in the six nations shown, grew steadily in every case between 1989 and 2012, a UK bank was consistently at or near the top of this list.[5] Figure 2 shows that the UK's export earnings from its financial/insurance industry are far greater as a share of its exports than for other nations.

Britain's economic soft spot lay in areas (the Midlands and North) that had formed the basis of its industrial strength in an earlier day. Britain had no development bank to steer a renaissance for these areas.[6] What passed for an industrial policy involved Northern relocations of City back-office operations and government bureaucracies, and a housing boom fuelled by the Building Societies Act of 1986, which de-mutualized Britain's building societies and opened the way to deregulated mortgage lending. The subprime lending and securitization methods perfected in the United States were adapted and spread throughout the United Kingdom by building societies, in competition with high-street British banks.

The United States. During the 19th Century, the US was a developing nation (Chang 2002). Investments from abroad provided much of the financing for its railroads and its canals; and it

[5] The banking statistics shown in Figure 1 are drawn from various issues of *Business Week* and *Forbes* magazine, featuring lists of the 1,000 or 2,000 largest business enterprises across the globe; the data for GDP in Figure 1, as well as the data shown in Figures 2 and 3 are taken from the OECD.

[6] Britain's sole development bank, the Colonial Development Corporation, was established in 1948 to "develop self-sustaining agriculture, industry and trade in the British empire" (*The Economist* 2001). The Blair administration transformed it into a public-private partnership that would raise capital from the private sector for developing-nation projects that could earn market returns. Its paltry budget of £2 billion (in 2002) made it at best an afterthought in financial markets and development planning alike.

capitalized on infant-industry protections to build the industries that made it rich, and permitted its growth into a continental giant. No federal development bank was established prior to the 1930s. Financing was provided through state-chartered banks that were frequently unstable and unreliable. These provided the finance needed to continue the nation's westward push.

The Great Depression brought a raft of new laws aimed at stabilizing the financial system: deposit insurance was provided, investment and commercial banking were split, and commercial banks' geographic and product-line competition limited.[7] Housing was supported through federally-subsidized and underwritten financial entities. World War II then led to the Bretton Woods system - the dollar-based gold standard. As Mazzucato (2013) and Weiss (2014) have shown, development financing support for industrial innovation came indirectly through defense-related research and development, operated by the US's defense, energy, and national securities agencies.

In the latter 1960s, current-account deficits undercut the US-led Bretton Woods system. In 1971, it collapsed. As the 1970s unfolded, high inflation, recession, and rising interest rates put the fragmented, regulated US banking system under severe stress. Deregulation and permissive regulatory oversight fed a bank merger wave that reduced the bank population by half, to 6900 banks, between 1980 and 2009. Of the 24 largest US bank holding companies in 1997, only 10 remained by September 2011. Those that did survive increased their share of banking assets via mergers and geographic expansion. The growth of the very largest banks was also fueled by three additional factors (Dymski 2009): first, the collapse of the US's thrift-based housing-finance system in the 1980s, and its replacement by a securitization-based system; second, the expansion of securitization to encompass high-rate, high-risk, and predatory lending (including subprime mortgages); third, the US's steady capital-account inflow, a byproduct of its persistent current-account deficits throughout the neoliberal period.

The 1980s marked out a post-hegemonic interregnum. The US experienced systematic current-account deficits; its contribution to global economic order was no longer to insure worldwide prosperity, but instead to provide residual aggregate demand for the increasing number of nations trying to export their way to renewed growth, especially after crisis episodes. In effect, the US current-account deficit became an entrenched part of global economic functioning; it preserved the dollar's role in currency reserves and cross-border transactions, even while embedding US aggregate demand as a motor-force for the global economy.

Large bank holding companies' expansion in the context of broad-based deregulation put them into direct competition with large non-bank Wall Street firms. Given the huge capital-account surplus bringing money systematically into US financial markets, this competition focused on the bundling, holding, and sale of subprime paper and of CDOs – and, in turn, on the ancillary derivative and underwriting products created in tandem with securitized credit. The rapid growth of largely unregulated investment funds, including hedge and private equity funds, provided outlets for the securities emitted. The megabanks and shadow banks dominating Wall Street took the lead in numerous "global financial services," and established themselves as a source of

[7] See Dymski (1999) for a concise history of 20th-Century US banking.

competitive advantage for the United States (Franko 2004).[9] Figure 2 shows that US exports, like those of the UK, were proportionately very reliant on financial/insurance exports in the 2000s.

So while the City of London's global-hub role was rooted in its cross-border relationships, Wall Street's role was securitization-based. Both global hubs competed to create financial products that complemented or competed with the other. Regarding the Eurodollar market, for example, Cassis has observed, "While American banking legislation thus strengthened London's international role to the detriment of New York's, American banks took full advantage of the situation, dominating the Euromarkets and integrating them into their global strategy" (Cassis 2006, p. 227). Wójcik argues that "the degree of commonality, complementarity and connectivity" between the two financial hubs is so profound as to justify the term, "the New York–London axis" (2013, p. 2736).

3. Evolving financial hubs in continental Europe: Paris and Frankfurt

France. During the Fordist era (the "trentes glorieuses"), the French economy was largely state-controlled, through three connected mechanisms: a large direct ownership stake in the economy, a policy of indicative planning, and a system of credit allocation. This included the Mitterand government's experiment with "Keynesianism in one country"; after the last round of nationalizations in 1981, 13 of the largest 20 companies in the economy were state-owned. Over 10 percent of economic activity and employment in public sector. As Zysman (1983, p. 130) put it, "the French financial system [was] a credit based system with administered pricing."

This system was disassembled from the mid-1980s onward. The Chirac government privatized 13 large groups in 1986; by 2002, public-sector employment was only 5% (Abdelal 2006). In the 1980s, the *Commission des Opérations de Bourse* (COB) widened the role of market forces in finance, creating the French futures market, and freeing up the securities and foreign exchange markets (Cerny 1989). This was followed by the merging of regulatory authorities into the *Autorité des Marché Financiers* (AMF) in 2003.

French companies turned increasingly to equity markets to raise money in the 1990s (Levy 1999). Consequently, large firms in France have become the "central node of political-economic decision-making, a position previously held by the state" (Bob Hancké, 2002: 30). So despite what Schmidt (2002, 271-87) calls the "discursive illegitimacy" of the free market, the market has emerged as the central mechanism for coordinating action in the French economy. These changes have pulled the French financial sector into taking positions in markets across the globe, while permitting more foreign ownership within France. Foreign ownership of shares in the French bourse rose from 10% to 35% between 1985 and 1997, and to 40% by 2000 (Clift 2007). As Morin (2000, p. 36) put it,

> "France has undergone rapid change from a 'financial network economy' to a 'financial market economy'. This new pattern of shareholding has not only broken

[9] Early in the 1990s, Jane D'Arista described the emergence of a "parallel banking system," which engaged in speculative loan-making, and which "divided intermediation between two separate entities, each of which dealt directly with the public through only one side of the balance sheet" (D'Arista 1994, p. 418) – thus escaping regulation as banks.

> the traditional system of cross-shareholding, but it has also facilitated the arrival of foreign institutional investors who bring with them new techniques and demands on corporate management."

New combinations were encouraged, such as the merger of AXA and UAP in 1996, creating an insurance/investment-banking group with global reach. The driving idea in French finance was no longer to control non-financial firms' activities, but to read the market. Turning to a related paper by Loulmet and Morin (1999, p. 14): "The entry of foreign capital into the heart of the French financial network thus involved a transformation in strategic orientation of the most profound type: a surrender to short-term goals, to accountability for meeting targets, and 'submitting to the imperative of profitability'."

Meanwhile, within the domestic market, cooperative banks grew to be huge entities. In France in 2003, for example, over half of all deposits and loans (though just 24% of all banking assets) were held by cooperative banks, with slightly less than half these deposits and loans held by Crédit Agricole (Table 1, Ory and Lemzeri, 2012, p. 222). Further, these banks began to take on riskier assets and to experiment with investment-banking and asset-management activities.

Despite this openness to foreign entry, national particularities remained. Legal definitions were quite different under French than under Anglo-American law. For example, bankruptcy was not defined as precisely, so loan default could not be as precisely specified – a legal difference that mitigated against widespread securitization of French loans. French legal definitions remained at variance with emerging European Community law: as Chambraud and Morin (1994) observed, French law contains no definition of "consumer," thus impeding measures to define what predatory practices would be legal (and illegal) in France. There was also substantially less transparency than was the norm in Anglo-American systems (Maclean 2002, O'Sullivan 2003), making regulatory intervention more problematic than in the UK or US. At the same time, the "*intérêt social* (social interest) of the firm" plays a major role, not just the interests of shareholders.

A double rationale underlay this transition: one impetus was to position French finance for global competition against unconstrained competitors; a second was that France was preparing to enter the European "single market" mechanism, which was agreed in Maastricht in 1992. When the Euro replaced the French franc, however, the Bank of France lost the capacity to print francs to protect its banks if and when lender-of-last-resort protection was needed. Thus, when large French banks found a global niche – some specialty areas in over-the-counter markets, and in securities funded with short-term borrowings – they were not backed by a nationally-controlled central bank.

Germany. The German financial system was characterized by Gerschenkron (1962) as a textbook case of how large universal credit banks could nurture national industrial development; the role of large-scale universal banks intersecting with large corporate concerns was celebrated, as well, in Hilferding's concept of "finance capital." This view of German banking emphasizes the parallel between French and German top-down coordination, but oversimplifies the situation. Zysman (1983) and Hardie and Howarth (2009), among others, describe German banking as a three-pillar system, consisting of large private banks, public-sector savings banks, and cooperatives. These institutions, on the one hand, are functionally distinct. The three large private banks that exist today (Deutsche, Dresdner, and Commerzbank) emerged in the 1870s, survived the 1930s crisis, and focus today on global and large corporate business. The public-sector savings banks – the Landesbanken – rooted in Germany's historically independent city-regions, account for the majority of deposits. The cooperatives – the Sparkassen – connect local businesses with small savers.

But this tri-partite structure should not be overemphasized as the defining characteristic of the German system. As Guinnane has emphasized, understanding this system requires paying attention to "the multiplicity of banking institutions… how they interact with each other, and how history has shaped their present form" (Guinnane 2002, p. 120). For one thing, the cooperative banks are best understood as a strategic network (Greve 2002); Guinnane (2002) observes that this network operates at multiple levels. One key element in the post-War period has been Germany's public development bank, KfW. It plays a key role in the German economy, collecting, bundling, and securitizing credits from small and medium-sized enterprises across the country, and thus maintaining access to credit at all levels of the economy. Another key element of the German model of interconnection is cross-share holding. German banks own an extensive share of firm equity directly (Siebert 2004).

The German financial system, like France's, was changing dynamically in the 1990s and 2000s. The degree of interconnection between firms and banks was lessening. The large private banks became more involved in cross-border transactions; they also took on esoteric financial instruments, and competed with Wall Street and City of London firms for global preeminence. And as in France, the bulk of traditional domestic banking was carried out by other entities, not the three megabanks. The system remained localized, with few banks classified as systemically important (Hopt and Steffek 2009, p. 518).

4. From the 2007-2008 subprime crisis to the Eurozone crisis

Credit growth in the countries analysed here – and banks' involvement therein – varied widely in the years leading up to the subprime crisis. Figure 3 shows that domestic credit issued by the domestic banking sector, was flat in Germany. It increased at a brisk pace in the UK, cresting in 2007 and 2008. France showed more modest but accelerating growth from 2002 to a peak in 2007. In the US, bank credit growth peaked in 2002. This result is due to the fact that most credit growth in the US has been done by non-bank lenders in these years. Figure 4 presents data on overall domestic credit provided to the private sector as a share of GDP. It shows that the US and UK credit-to-GDP ratios rose steadily in the 2000s; the US ratio peaked in 2007, while that in the UK peaked in 2009. By contrast, these ratios remained virtually constant in both France and Germany.

The data shown in Figures 2 and 3, considered in light of the rapid growth in large banks' asset size in Figure 1, demonstrate that the growth of the megabanking sector in these nations was not driven by the expansion of credit to domestic borrowers. Instead, this asset growth reflected the increasing degree of interpenetration among large firms in financial centres. Indeed, the rise of subprime-linked securitization in the decade before the crisis set in cemented the integration of megabanks, mortgage-brokers, underwriters, funds, and broker-dealers into a financial complex optimized to extract maximum fees from originating, selling, insuring, and taking highly-leveraged bets on an ever-expanding stream of securitized credit. The excessive leverage was especially distinctive; it was accomplished through the inter-mixing of contingent and spot commitments, facilitated by exchanges and multiple uses of the same 'safe' assets as collateral. This 'rehypothecation' formed just one method by which shadow banking emerged as a fundamental structural element in global financial centers.[10]

And while these new instruments and intermediary relationships were largely forged in the two principal global financial centres, their creation permitted new global linkages for financial firms located elsewhere. In the case of France and Germany, these changes permitted these nations' megabanks to rely heavily on wholesale funds to support their asset positions, and to seek out niches in the over-the-counter and securities markets. And the securities emitted in these centres, with subprime loan contracts at their core, were taken on by financial institutions elsewhere. In the case of Germany, some of the Landesbanken and the Hypo Real Estate bank holding company purchased large amounts of subprime paper; in France, it was an investment banking firm, Natixis, spun off from two cooperative banking groups in 2006, that took risky positions in derivatives instruments and held large amounts of risky securities, in part through its holdings of the subprime-paper-laden French insurer CIFG.

The details of the subprime crisis as it unfolded, and of the subsequent public interventions this crisis necessitated, are not recounted here. Suffice it to say that the crisis itself was incredibly costly. Initial bailout costs for the four countries analyzed here, according to an IMF report (2009), were 18.9% of GDP for the United Kingdom, 7.5% for the United States, 3.7% for Germany, and 1.6% for France. Here we simply make some summary points about the crisis experience in the four countries under consideration here.

The UK. The subprime crisis gathered force in 2007: early that year, significant numbers of small loan-brokers and funds selling the undercollateralized, unpayable mortgages of the subprime era began failing; then the subprime crisis proper began with the run on the Newcastle-based building society, Northern Rock, in September 2007. Northern Rock and a number of other UK building societies failed or were merged. Two of the UK's "big five" banks – the Royal Bank of Scotland and Lloyds – needed huge infusions of public money to avoid insolvency. The Labor government of PM Gordon Brown, which was in power when the Shearson Lehman meltdown occurred, briefly considered nationalizing the problem banks; but instead opted to inject public funds without nationalization.[11] The incoming Cameron government established a business bank, but only at a very modest scale of £300 million. Justin Welby, the Archbishop of Canterbury, has more recently called for establishing a set of regional development banks (Goodley 2013); but the recent election result makes this unlikely.

The US. Once the subprime crisis hit home, the price of the dizzying financial competition of the 2000s was revealed: in 2008, three of the five largest Wall Street non-commercial-bank firms either failed or disappeared through merger (Lehman Brothers, Merrill Lynch, Bear Stearns); the

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[10] Pozsar *et al*. (2013) define shadow banks as "financial intermediaries that conduct maturity, credit, and liquidity transformation without explicit access to central bank liquidity or public sector credit guarantees."

[11] The "big five" are HSBC, the Lloyds Banking Group (which includes the Bank of Scotland and TSB Bank), the Royal Bank of Scotland Group (which includes National Westminster Bank and Ulster Bank), Barclays, and Standard Chartered. Lloyds is 25% owned by the UK government, and the RBS Group is 84% owned by the UK government; both however remain active as private-sector entities.

other two were converted into bank holding companies. Federal Reserve and Treasury policy decisions in these weeks of crisis revealed that the Wall Street complex was fragile, and at the same time had to be maintained via any means necessary: its core institutions were too big to save, too intertwined with shadow banks and other global behemoths to untangle, and thus constituted the new reality of modern money and credit markets.

As of December 2009, six megabanks – Bank of America, JP Morgan Chase, Citibank, Wells Fargo, Goldman Sachs, and Morgan Stanley – stood alone as the commanding heights of US banking. The 2008 TARP program that preserved these megabanks' existence was fully consistent with the broader design of US banking policy. The US government provided subsidies for large banks to buy failed savings & loan associations after the 1980s "thrift" crisis, and then encouraged their transformation to megabanks through a series of financial deregulation acts. In effect, the emergence of the six largest US megabanks through the eventual intersection of Wall Street and super-sized commercial banks should be understood not as an accidental by-product of the 2007-08 subprime crisis, but as the endpoint of a lengthy period of intentional policy choices regarding the activities and market scope of a reshaped, more efficient US banking industry. What was unintended was that these megabanks' final emergence should have required such huge public interventions to survive crises of their own making.

So after a 30-year bank merger wave, US banking largely consisted of two distinct sectors: a megabanking sector at the hub of the Wall Street financial complex, and a community banking sector in which more than 9 of every 10 US banks have under $1 billion in assets. The former sector securitizes at least a third of what it lends, while the latter does virtually no securitization. And the six dominant megabanks represent an uneven mix of two former investment banks, two former retail banks, and two US versions of universal banks.

France. The collapse of Natixis and other losses in markets led the two French cooperative banking groups, Caisse d'Epargne and Banque Populaire, to request public financial support. Some refinancing and recapitalization support was also provided to other institutions, through a fund to which both the government and the French megabanks contributed. As Xiao (2009) indicates, there were few other significant changes in the French financial system. It remains highly concentrated. The large French banks increased their leverage ratios after the crisis, and remain dependent on wholesale funding for 60% of their balance sheets, and of that more than 35% is short-term. A large share of profits at French banks come from foreign positions, as was the case prior to the crisis. Hardie and Howarth (2009) argue that the crisis was seen to vindicate the broad-based French "universal banking" approach, leading BNP Paribas and Crédit Mutual to expand their overseas positions.

Germany. Lewis (2009) recounts how Deutschebank was sold a large amount of bad subprime paper by New York investment banks just before the 2008 meltdown. As noted, however, Deutchebank was far from alone. So in Germany, as in the other nations covered here, public support was necessary, especially for Commerzbank. These interventions did not lead to insolvencies, however. The Financial Market Stabilisation Act of 2008 and the Supplementary Financial Market Stabilisation Act of 2009 allow the German state to gain unlimited control over banks of systemic importance. These acts, Hopt and Steffek (2009) point out, were necessary because German insolvency and capital-market law had no provision for restructuring troubled banks. The mechanisms deployed under this new legislation, such as capital increases and squeeze-outs, might not be compatible with European Commission or even German constitutional law. Nonetheless, this legal inconsistency should be swallowed, in these authors' view, because the German Insolvency Act provides "no reasonable alternative for systemically important banks." Indeed:

> "The opening of such proceedings would destroy enormous and (ex ante) incalculable value in Germany, Europe and the world as the developments following Lehman Brothers Holdings Inc.'s ('Lehman Brothers') filing of 15 September 2008 seeking relief under Chapter 11 of the US Bankruptcy Code have shown. The result of this filing was the collapse of the national and international interbank trade, triggering a liquidity crisis that burdens the European and world-wide financial markets until today." (Hopt and Steffek, 2009, p. 519)

A recent review of competition and stability in the German banking system in the wake of the subprime crisis (Moch (2013), finds that contrary to the (Neoclassical) expectation that the German three-pillars approach will cause overbanking, uncompetitive local markets, and instability, he finds no evidence of problems of this kind. The author attributes this finding to the fact that the German banking system works differently than the US system – so country-level assessments will reach mistaken conclusions.

5. After the Financial Crisis: Caught in a Flytrap?

Analysts disagree profoundly about the causes of the 2007-08 crisis.[18] Some point the finger at excessively aggressive behaviors within the New York-London "axis": hubris, excessive leveraging and complexity, the fragmentation between risk-creation and risk-bearing, the capacity to take zero-sum bets on real and synthetic securities, the asymmetric knowledge bases of broker-dealers and investors. Others blame government over-regulation or inadequate regulation. Still others blame greedy home-buyers whose reach exceeded their grasp. Others (including this author) have emphasized predatory lenders' targeting of minorities and lower-income neighborhoods that had previously been denied access to mortgage credit.

The question for our purposes here is whether the crisis will trigger change in global megabanking. Wojcik (2013, p. 2736) argues that it will not:

> "the global financial crisis 2007–09 originated to a large extent in the [New York-London] axis rather than in an abstract space of financial markets. The dominance of the axis in global finance can be easily underestimated and evidence suggests that, contrary to expectations the axis is not in decline."

Robert Shiller (2008, 2013) has consistently maintained that the subprime crisis has to be understood as a regrettable cost of transiting from an antiquated hold-to-maturity loan-based system to a modern originate-and-distribute securitization-based system more fully able to exploit the advances in information and communication offered by the technology revolution.[19]

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[18] Dymski (2013) summarizes the contrasting views about the causes of the subprime crisis.
[19] Nobel laureate Robert Shiller expressed at the very commencement of the subprime crisis (Shiller 2008) and has maintained it in subsequent writings (Shiller 2013).

The crisis thus demonstrated the dysfunctionality of the megabank-shadow-banking-led financial complex. But is this then a transitional problem, best managed discretely by national government subsidies, some legislative adjustments, and the threat of more? The core of the matter is whether this globalized financial system is providing productive credit effectively.

Despite the bailouts they have received, virtually none of the large banks in the countries examined here have been increasing their loan volume in the years after the subprime crisis. They have instead focused on recapitalization. Given the large degree of the lending market that the megabanks control – over half in the US, and 90% of business loans in the UK (Fleming 2014) – business recovery will be severely infringed in these nations.

Further, initiatives for structural change at the Parliamentary or Congressional levels is ruled out the political power of lobbyists for the established banks. In particular, efforts at financial reform have been stalled, watered down, and largely frustrated. The Big Four UK banks have fought aggressively against efforts by the European Union to strengthen financial regulation. As Arnold (2014) noted in the *Financial Times*, "The UK has already launched four legal challenges to EU financial services regulation including the power to ban short selling; the requirement that clearing houses handling euro transactions be based in the eurozone; the financial transaction tax; and the bonus cap." US megabanks and shadow-banks, in turn, resisted the passage of the Dodd-Frank Act, even after their legal departments shaped many of its sections; they have taken measures to slow its implementation; and they have worked long and hard to limit its scope via the rule-making process (Bair 2012, Eavis 2014).[20] In both national capitals, and indeed in Brussels, passing effective reform legislation is rendered nearly impossible by the often definitive influence of lobbyists and experts working for financial interests.

The problem of the New York-London axis' uncontrollability, in short, remains, due to its interconnectedness combined with multiple regulatory jurisdictions – a formula for insuring that whatever reforms are passed will be subject to Goodhart's law.[21] As Pozsar et al. (2013, p. 14) demonstrate, shadow banking itself is not external to the megabanks; rather:

> The "internal" shadow banking subsystem refers to the credit intermediation process of a global network of banks, finance companies, broker-dealers, and asset managers and their on- and off-balance-sheet activities—all under the umbrella of financial holding companies. … the "external" shadow banking subsystem refers to the credit intermediation process of diversified broker-dealers and a global network of independent, nonbank financial specialists that includes captive and stand-alone finance companies, limited-purpose finance companies, and asset managers.

[20] Legal challenges to provisions of Dodd-Frank, including the consumer finance protection agency it establishes and its orderly liquidation procedure, have also delayed its implementation.

[21] Goodhart's formulated it as follows: "Any observed statistical regularity will tend to collapse once pressure is placed upon it for control purposes" (Goodhart 1984, p. 96). Alloway and Mackenzie (2014) inadvertently invoke Goodhart's law in that same article when they observe, "in fighting the vanguard of the last financial crisis, regulators have missed new areas of danger in the system."

Consider the evidence of interconnection provided by Wójcik (2012) in his description of the pre-crisis period: AIG originated credit-default swaps that were viewed by their purchasers as providing insurance against the non-performance of securitized credit bundled into CDOs (collateralized debt obligations) created, in part, from mortgages created by Northern Rock in Britain and (say) Countrywide Financial in the US, which in turn were invested in vehicles registered in offshore tax havens by hedge funds. We can extend Wójcik's string of interconnections further: short and long options were created on the basis of these CDOs in New York, leading to options swaps in London, and now to new emergent indices and zero-sum hedging instruments not yet defined in law.

Many of these instruments are being forced into trading on exchanges in the wake of post-crisis regulatory reforms. However, the game cannot be considered frozen into place just yet. With so many financial hubs and offshore centers and vehicles involved, Goodhart's Law remains very much in effect – efforts to regulate one financial instrument invite innovations that escape whatever regulatory umbrella was established. For example, the rapid growth two innovative instruments, total return swaps and "swaptions" was recently reported: "$60bn of CDS index options currently exchange hands each week – up from just $2bn traded *per month* back in 2005" (Alloway and Mackenzie 2014),

A further problem in reining in and regulating the "axis" is the transformation of international law in the Neoliberal years.[22] What Machlup might have called "stateless interests" have increasingly been asserting, establishing, and protecting their legal rights over the disposition of contracts that extend beyond domestic borders.[23] The problem in the case of securitized credit transactions resides in the fact that two contracts are made on the basis of the same cash-flow. Offshore purchasors are increasingly asserting their prior rights over financial promises to pay based on securities they purchased, regardless of the status of payment by the original borrower on the original credit contract.[24] Wojcik notes that these securities take the form of IVs and SPEs that are protected by a phalanx of "financial, legal and accountancy firms" (2012, p. 333) He writes: "the advanced business services hold considerable power, which they exercise by operating legal and financial vehicles designed to escape the control of governmental or intergovernmental organizations through the use of offshore jurisdictions." (2012, p. 330).

The fact that the sovereigns engaged directly (in the case of the US) or indirectly (in the case of the nation-state members of the European Union) are now often treated as unworthy borrowers,

[22] Glinavos (2008) argues that this effort has been systematic; he points to the "current promotion of law reform by international institutions like the World Bank as the product of neoliberal economic theory;" in his view, "the use of law reform to impose what neoliberalism considers 'rational' solutions undermines the legitimacy of democratic institutions in developing and transitional countries" (p. 1087). Also see Chiong, Dymski, and Hernandez (2014).

[23] Supranational authority over otherwise domestic economic activity, of course, is increasingly being asserted via international treaties. The North American Free Trade Agreement (NAFTA) and the EMU provide the outstanding examples of such action to date. Such treaties, while not the topic of this study, are relevant insofar as they serve to reduce the authority of domestic law over economic transactions.

[24] The use of legal action by hedge funds NML and Aurelius Capital Management, in their holdout against accepting a debt write-down on outstanding Argentinian debt, and the New York court's upholding of these funds' claim, provides dramatic evidence of the importance of this new terrain of globalized legal rights.

to be disciplined by markets, adds to the difficulties of reform efforts. Can an entity that can be disciplined by market forces also shape markets and their forces? Consider, for example, that the not-yet-fully-implemented Dodd-Frank Act was passed in July 2010, four years from the time of this writing. The asymmetric pace of regulation and innovation leads some to despair. For example, Alloway and Mackenzie (2014) quote Janet Tavakoli, president of a eponymous Tavakoli Structured Finance, as follows: "We've reformed nothing … We have more leverage and more derivatives risk than we've ever had." Others hold out hope of using market discipline to rein in excess. For example, Ingo Walters (2012, p. 114) argues:

> Improving the financial architecture in a disciplined, consistent, internationally coordinated and sustained manner with a firm eye to the public interest should ultimately be centered on market discipline. By being forced to pay a significant price for the negative externalities SIFIs generate – in the form of systemic risk – managers and boards will have to draw their own conclusions regarding optimum institutional strategy and structure in the context of the microeconomics and industrial organization of global financial intermediation. If this fails, constraints on their size, complexity and interconnectedness will be a major part of the policy reaction to the next financial crisis.

The challenge for such an approach is for regulators to keep pace with market participants' creation of innovations that create systemic risk, not to mention anticipating the scope of this risk before its implications have been fully understood. Pozsar *et al.* (2012, p. 1) argue that, in any case, "increased capital and liquidity standards for depository institutions and insurance companies will likely heighten the returns to shadow banking activity." Therefore, they conclude, "Shadow banking, in some form or another, is therefore expected to be an important part of the financial system for the foreseeable future." These reflections amplify the point made by Wójcik: "if global finance is to change, the New York–London axis has to change" (2013, p. 2736)

And until this axis does change, the participation of the megabanks of France and Germany in global financial competition represents the Achilles heel of the financial system. For whereas US megabanks can rely on the global liquidity supplier of last resort in a crisis, and UK megabanks on the Bank of England, those of France and Germany depend on the European Central Bank, whose caution and hesitation in intervening in the Eurozone crisis have poisoned financial-market opinion the world over against it.

6. Conclusion

This paper has provided an account of how the really definitive aspect of global finance as we have it today is not this sector's size, but rather the unique historical and economic circumstances that have shaped it. As Thomas Piketty (2014) has emphasized in his opus on income inequality, empirical patterns that appear to be characteristic of long-term trends in capitalist development have political roots. The apparent technological necessity of a super-leveraged, risk-shifting global financial complex is a mirage; this complex has emerged, anchored in the cities of London and New York, due to a series of events, circumstances, and decisions. Opportunities and crises have both played their part. The formation and then dismemberment of gold-based global currency systems played a role, as have the 30-years'-long current-account deficit/capital-account surplus that has made the US a global liquidity sink.

Having highlighted the importance of historical events and institutional developments, it must immediately be acknowledged that the dynamics of global finance include far more than has been captured in this analysis of two financial hubs. Hubs in France, Germany, Switzerland, Japan, China, and São Paulo, among other global cities, do follow the tail-return possibilities left by the cauldrons of innovation in New York and London; one example is large German banks' purchases of subprime securities from Wall Street houses in the waning days of the US housing boom (Lewis 2010). But beyond this follower behavior, these financial hubs have independently created – and continue to create – new instruments and practices, triggering further behavioral responses in the New York-London axis.

This last insight makes it all the more clear that acknowledging the historical contingency that brought about the current fix – the world of the 1% of the 1%, as Piketty (2014) and his numerous co-authors have emphasized - does not mean that this path-dependent path is easily undone. To the contrary; because things are done as they are in this sector – because the politicians now understand they must bail out or make special arrangements for "systematically important institutions," because the megabanks circulate and recirculate short-term securities to support their speculative position-taking, because credit can easily flow only when there are "investors" willing to absorb securitized loans sold by "banks" – then behaviors in virtually every other sector in the economy and society have had to make adjustments. The core question at hand – "what precisely are the economic functions that the banking system performs for the other agents in the economy?" – is out of bounds for any polite policy discussion. Yet if this question is not asked, then policy discourse will be the equivalent of intermission chatter until the audience gathers for the coming of the next systemic, global-economy-threatening crisis. We conclude then by paraphrasing Wójcik: if global finance is to change, the New York–London axis and the governments and non-financial firms and households that have adjusted to the reality of coercive and unproductive global finance has to change.

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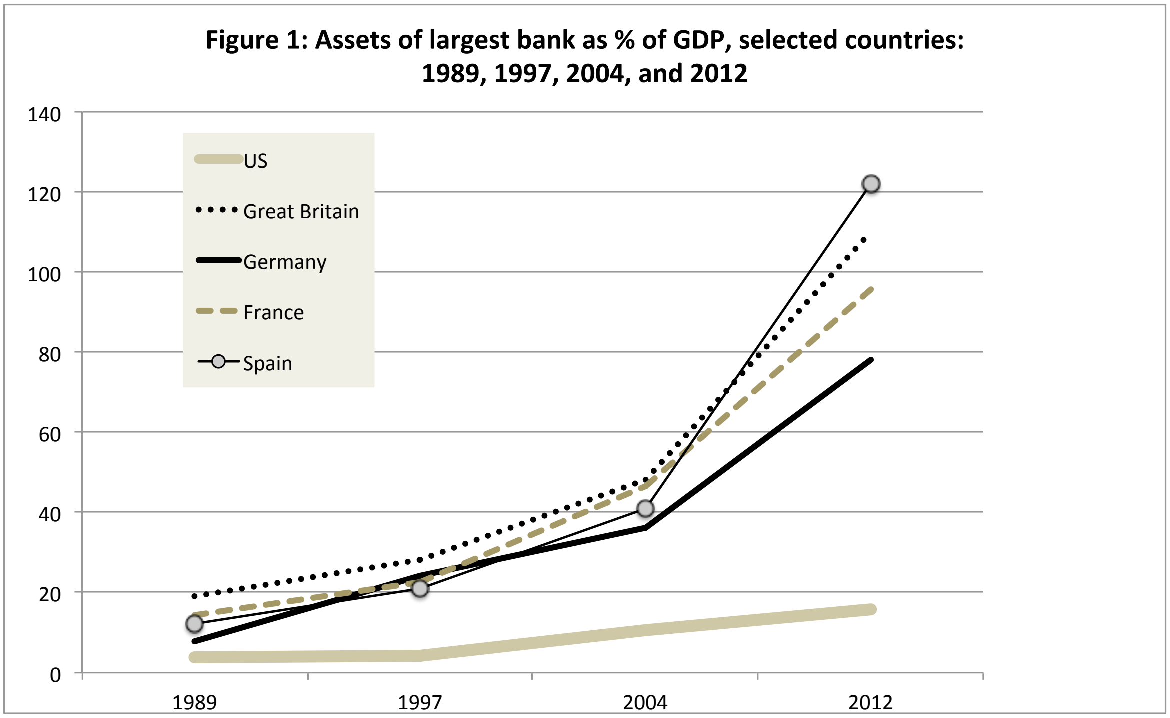
Figure 1: Assets of largest bank as % of GDP, selected countries:
1989, 1997, 2004, and 2012
US
Great Britain
Germany
France
Spain
140
120
100
80
60
40
20
0
1989
1997
2004
2012

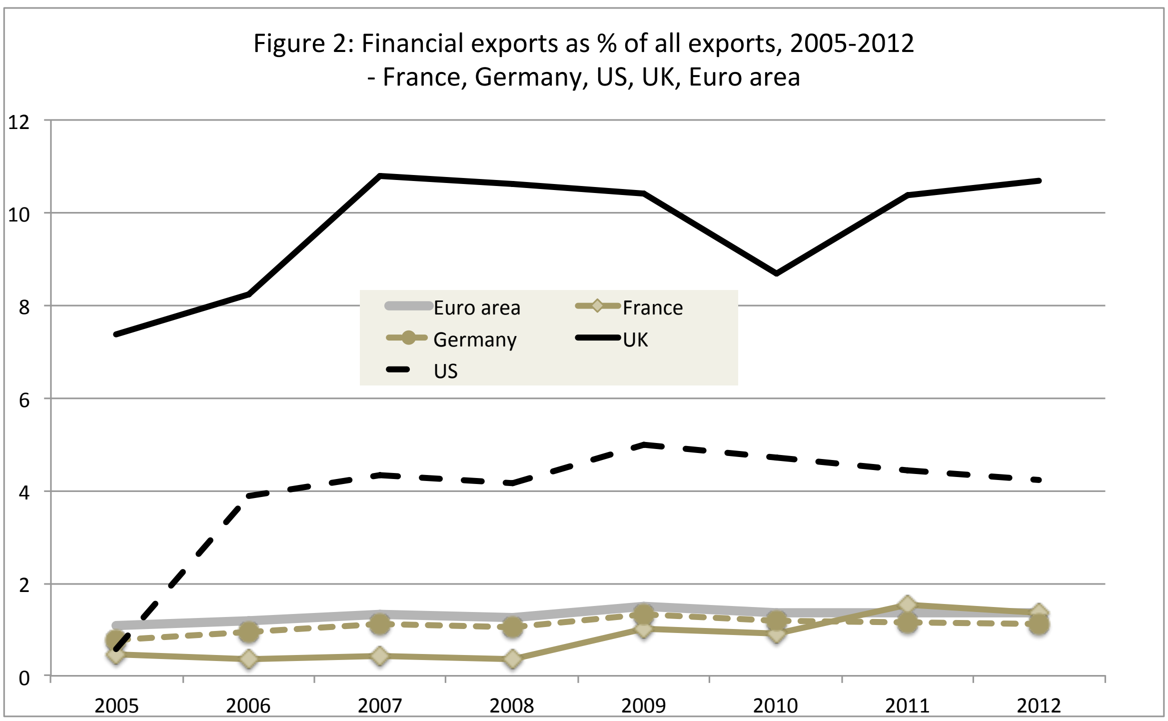
Figure 2: Financial exports as % of all exports, 2005-2012
- France, Germany, US, UK, Euro area
Euro area
France
Germany
UK
US
12
10
8
6
4
2
0
2005
2006
2007
2008
2009
2010
2011
2012

Figure 3: Annual percentage change in overall domestic credit flows by domestic banks, 2000-2012, Selected countries

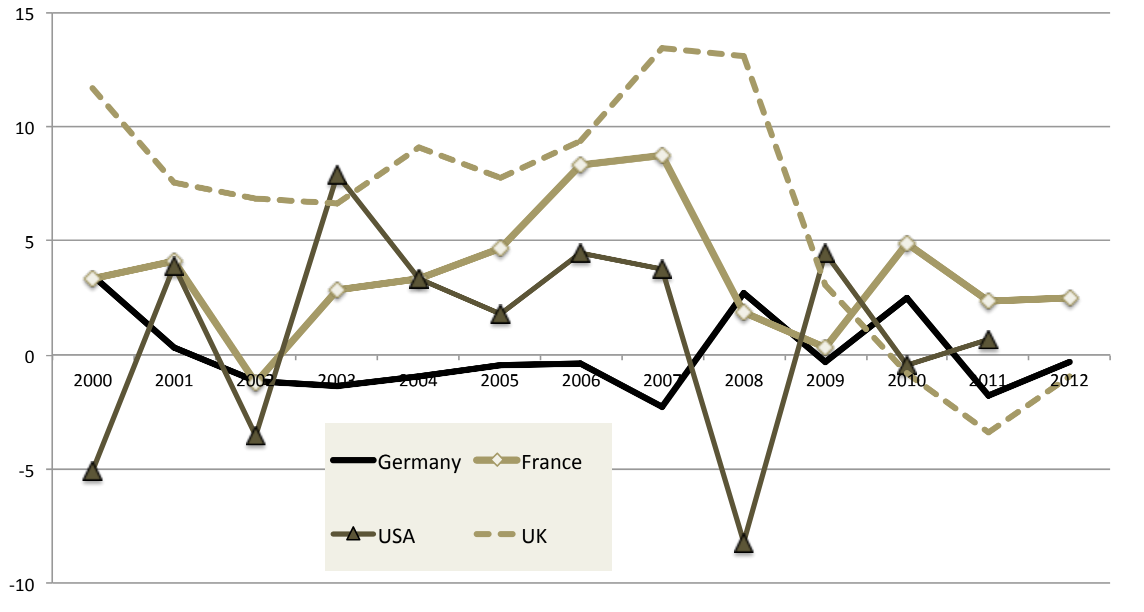

Figure 4: Domestic credit to private sector as % of GDP, 1995-2012 - France, Germany, UK, US, Euro area