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Abstract

Much of the work examining the Eurozone crisis focuses on either the role of peripheral European states' current account deficits, or German neo-mercantilist policies that promoted its export surplus. This paper considers how German financialization and input on the Eurozone's financial architecture promoted those deficits, increased European systemic risk, and facilitated the onset of Europe's subsequent crises. It argues that the increase in German financial sector competition encouraged those banks' increase in securitization and participation in global capital markets, as well as German policy-makers' support for financial liberalization embedded in the Maastricht Treaty. Financial liberalization of the Eurozone created a new marketplace for German financial institutions, which increased the risk of crisis as current accounts diverged between core states like Germany and peripheral states like Greece. Once global financial crisis ensued in 2008, German losses on international securitized assets prompted a retrenchment of domestic and international lending, paving the way for the Eurozone's sovereign debt crisis. Reexamining the role of financial liberalization in facilitating German and European financial crises may prevent the Eurozone from repeating these performances in the future, at significant domestic, European, and global cost.

JEL Codes: E02, F36, G01, G15, O57

Keywords: Finance-led Growth, Financial Crisis, Financial Liberalization, Economy-wide Country Studies

1. Introduction:

Conventional stories of the causes of the Eurozone crisis tend to focus on peripheral European states' dysfunctional fiscal balances and excessive borrowing, or on the role of German neomercantilism that benefitted from the trade dependency of the European periphery on German exports. (Lucarelli, 2012) While these dynamics were drivers of the Eurozone crisis, German financialization in the 1980s was an important precursor to these processes. German financialization from the 1980s onward increased financial competition within Germany, diminished European financial stability in the 1990s and 2000s, exacerbated the consequences of the German financial crisis in 2008, and contributed to the Eurozone crisis in 2009 and onward. This paper examines the history of that process and its consequences at the national, European, and global levels, and argues that this issue merits more attention both in debates about the causes of the Eurozone crisis, and in discussions of how to move on after the Eurozone crisis.

From the 1980s onward, German financialization has taken the forms of increasing the scope of financial activity performed by its different banks, the overall financial liberalization of Europe's Economic and Monetary Union (EMU), and the array of partners its financial intermediaries lend to and borrow from. These processes have magnified the systemic risk of the German banking system as a whole, as large private banks, public banks (Landesbanks), and smaller cooperative banks have increased their issuance and acquisition of new financial assets, including subprime mortgage backed securities. Further, the German vision of an expanded financial stage in Europe under the Maastricht treaty and the Single Market Program (SMP) opened other European economies to increased inter-European capital flows, particularly from German banks, as well as greater risks of financial crisis. As European capital flows expanded rapidly under EMU, these German directed policies set the stage for a greater potential of financial contagion in Europe and the world.

These practices undermined German and international financial stability, particularly within Europe. These processes, and other events in the moment of the financial crisis, exacerbated the costs of global financial crisis, which ultimately transformed into the Eurozone crisis. After the onset of the 2007 subprime mortgage crisis and the 2008 Global Financial Crisis (GFC), the German government and other European governments bailed out national banking systems. German lenders' increasing skittishness about the global financial climate led them to increasing pressure on other states to pay back sovereign debts. Germany's political and economic power within the EMU enabled its usage of political apparati to guarantee the conditions for its banks' loans to be repaid and the implementation of austerity programs by peripheral European states.

The outcomes of German financialization have been problematic at German, European, and global levels. As German systemic risk increased due to German banks' increasing consumption of foreign securitized assets, German banks' borrowers paid costs of increasing uncertainty about the banks' liquidity and solvency following the subprime mortgage crisis. As German banks have failed following the crisis, classes of German consumers who relied on Landesbanks for lower cost financial services have lost access to credit because of those banks' riskier behavior in an environment of increased financial competition. German banks that lent heavily to borrowers outside of Germany suffered the consequences of bursting bubbles in Ireland, Iceland, and other European markets; borrowers in those countries have paid the costs of those failures in higher interest rates. Greater German participation in international financial markets increased the overall risk of financial contagion within Europe. As the German state has used the EMU's political apparatus to ensure that German banks recoup the debts non-German borrowers accrued, citizenry of those states pay the costs in austerity and bad economic conditions that include low to negative growth, high unemployment, and myriad social costs. Finally, as Germany's traditional trade partners in the European periphery have suffered years of protracted recovery, German exports have fallen, the risk of deflation looms, and German economic partners like the US worry about future German economic decline.

Some conventional analyses of the Eurozone crisis have focused on the role of peripheral European borrowing, and German neo-mercantilist practices that enabled the creation of its trade surplus leading up to 2008 at the cost of peripheral European states' balances of payments; others have drawn attention to the likely costs of continued austerity mandated by the German state following the Eurozone crisis, for Europe and the world at large. (Lucarelli, 2012; Bellofiore, Garibaldo, and Halevi, 2010) However, few have acknowledged the role that German financial development played in creating the circumstances for Europe's ongoing crisis. This paper identifies the problems of German financialization and their relation to the Eurozone crisis, and proposes alternative policies that will protect Germany and Europe from further exacerbating these problems.

This paper is structured as follows. The next section shows how German financial competition increased overall German financialization, and how that process increased German systemic risk. The third section presents the consequences of Germany's push for European financial liberalization under EMU, Europe's changing financial architecture – namely, the changing financial flows, securitization, and systemic risk of the EMU. The fourth section examines German and European level responses to the GFC, the disparate costs of the Eurozone crisis, and the consequences of German and European policy changes since. The final section concludes.

2. German Financialization and Domestic Consequences

From the 1970s through the early 2000s, German banking changed structurally to increase its propensity for financial crisis. Changes included the separation of roles in its traditional three-pillar financial system, which increased competition and risk-taking between different categories of German banks, increased reliance on international capital markets, and new methods of financing real sector development in Germany. These developments occurred in the absence of a centralized financial supervisory authority until 2002, which was well into another set of major financial changes that increased the risk of German financial crisis. All of these factors increased the German propensity for crisis and magnified the scope of financial and economic damage that were to result from ensuing crises in the late 2000s.

Germany historically had a three pillar banking system, consisting of large privately owned commercial/investment banks, public banks (Sparkassen, savings banks, and Landesbanks, larger state level banks), and credit cooperatives, all of which were universal banks. The large privately owned banks and commercial banks were typically Germany's largest, and most profit-motivated financial institutions. Landesbanks and credit cooperatives were historically lower risk and more secure depository and lending institutions for German households and local economic development. (Bleuel, 2009, Detzer et al, 2013) Banks across the pillar structure facilitated the development of major German industry, from the 1890s and through the 1970s, through lending and having seats on corporate boards of major German firms. (Deeg, 1999) A key component of German managed capitalism, banks traditionally had significant authority in real sector development and decision-making, and governments trusted those sectors to collaborate effectively for German economic growth. (Deeg, 1999, Lutz, 2000)

From the 1970s onward, changes in German banking, particularly in large private banks and Landesbanks, reflected a trend toward increased participation in global capital markets, particularly in the issuance and purchase of financial derivatives, and decreased traditional lending by these financial intermediaries to German SMEs and larger industrial enterprises. German banks have shifted from the provision of credit to domestic firms and banks to participation in trading (see Figures 1 and 2 in Appendix A), while German firms have pursued credit in international capital markets rather than in the domestic sphere. (Howarth and Hardie, 2009)

Another persistent trend in this period was the erosion of Landesbanks' protected status under German law, which had negative effects for German financial stability as a whole. Private banks and the European Banking Federation brought suits against various Landesbanks for unfair treatment under German financial law and under European financial law, namely on the basis of the Landesbanks' access to political subsidies and alleged receipt of high credit ratings from the German state, and German lawmakers have steadily eliminated state guarantees for public banks that insured domestic German capital markets' access to capital and creation of new financial products. (Lütz, 2006) In the newly liberalized global financial architecture, the IMF has written reports on the relatively low profitability of Germany's Landesbanks relative to its private banking pillars, despite the fact that the Landesbanks were not primarily designed to be profitable. (Deeg, 1999) As Landesbanks have lost their state guarantees, they have come to compete with Germany's large private banks for business, despite their historic role as stable, non-profit, providers of credit to German citizens and enterprises. (Allen, Beck, et al, 2011)

These changes in competition altered the structure of the German financial system. Mergers and takeovers have occurred among different pillars of the German financial sector, as apparent in Figures 3 and 4 in Appendix A, which show the decline in total numbers of banks, concentrated in commercial banks and particularly in Landesbanks. As the incentive structure for Landesbanks changed, these banks increasingly competed with other types of German banks, namely the large private banks, for profits, and as the German financial system's pursuit of profits intensified, the propensity for losses increased throughout the system. These banks have also pursued greater business outside of Germany, which is explored in greater detail in the next section. (Allen, Beck, et al, 2011) These practices increased German banks' exposure to systemic risk, and to contagion by foreign financial sectors.

A consequence of increased financial competition in Germany has been increased financial activity demonstrated by financial intermediation ratios, measured by the OECD as total financial assets of financial corporations over the total financial assets of the economy, and viewed in Figure 5 in Appendix A. As German financial institutions' assets grew relative to total financial assets throughout the German economy, the relative importance of the German financial sector within the overall economy grew, as did the potential cost of a banking crisis to the overall economy. Official measures of the German financial system's leverage and debt-to-equity ratios (see figure 6 in Appendix A) present a contradictory story – OECD data show diminishing bank leverage and debt-to-equity ratios for the German financial system between 2002 and 2007. However, their calculation involves the value of risk-weighted-assets, and reflects the prevalent underestimation of risk of different securitized assets that banks throughout the world, particularly German ones, were likely to add to their balance sheets in the lead-up to 2007.

Increased securitization and shadow banking, two more responses to increased competition in the German financial system, have also increased the German propensity for financial crisis. Securities and shares constituted an increasing percentage of German banks' assets, particularly relative to long-term lending. Securitized debt came to represent a larger share of German liabilities. (See figures 7 and 8 in Appendix A). This trend started for Landesbanks between 1999 and 2004, and accelerated for commercial banks and the 'Big 5' between 2005 and 2007. This dynamic developed in part due to German financial laws that allowed banks to hold less capital on hand as they moved these assets into German structured investment vehicles (SIVs), which increased the potential for German banks' insolvency.

(Acharya and Schnabl, 2010) These regulatory changes enabled banks to hold less capital on hand, which increased the potential for insolvency and resulted in German investment via SIVs in international capital markets, through the acquisition of US and UK assets as well as "unspecified countries in Europe, Italy, Spain, the Netherlands, and other European and Asian countries." (Acharya and Schnabl, 2010, pp. 43)

These financial actions were facilitated by global trust in the soundness of German financial institutions. German banks, particularly Landesbanks, benefited from credit rating agencies' tendency to give them high scores, and conduits created by those banks were subsequently given high ratings. (Hardie and Howarth, 2009; Acharya and Schnabl, 2010) Figures 9 and 10 in Appendix A show the changes in different types of German banks' holdings of securitized assets, and the overall change in lending as a percentage of different types of banks' total assets. Specifically, they show a general decline in German banks' lending to monetary and financial institutions (MFIs) and non-MFIs relative to total bank assets in the years preceding the sub-prime mortgage crisis of 2007, and a rise in banks' holdings of securitized assets as a share of total assets in the same period, particularly among Landesbanks.

These trends reflect the growing importance of securitized assets, as well as the diminished importance of traditional lending as a component of these banks' asset portfolios. At the same time, bank capital holdings fluctuated by type of bank in this period – see figure 11 in Appendix A. While capital holdings by Landesbanks increased relative to total assets, a predictable result of the removal of guarantees of their liabilities by the German government, capital holdings by commercial banks and the big five German banks declined relative to total assets in the years immediately preceding the sub-prime mortgage crisis, as the risk of those securitized assets grew.

Throughout this period of major change, German finance lacked a centralized financial regulatory apparatus, despite having a strong institutional culture of monetary stability. Only in 2002 did the the Bundesbank establish the *Bundenstalt für Finanzdienstleistungsaufsicht* (BaFin), which was to "supervise the entire financial sector, taking over functions previously performed by the three different authorities responsible for banking, securities, and insurance. When the Act concerning the integrated supervision of financial services entered force in May 2002, the Federal Banking Supervisory Office, the Federal Supervisory Office for Insurance Enterprises, and the Federal Supervisory Office for Securities Trading were amalgamated in order to form the German Financial Supervisory authority." (Quaglia, 2008, p. 448) The Bundesbank maintained its responsibility to "analyze the documents, reports, annual accounts, and auditors' reports submitted by the institutions… According to an informal 'gentlemen's agreement', the BaFin mainly supervises large banks (both private and public), whereas the Bundesbank focuses on savings banks, cooperative banks, and small private banks." (Quaglia, 2008, p. 449) Though the Bundesbank apparently lobbied for increased regulatory authority within Germany, this aim was undermined by German involvement in the EMU, and the conflicting interests of the ECB relative to national central banks such as the Bundesbank. (Quaglia, 2008) Given the rapid level of change and integration of new types of financial institutions, however, both the Bundesbank and BaFin were not likely to keep pace with scope of change in new security markets, and new sources of financial and economic instability. (Detzer et al, 2013) Without adequate supervision, German banking changes continued apace and allowed destabilizing trends in banking to continue to grow.

Financial liberalization and deregulation set the trend from the 1970s until the 1990s for the booms in lending that would ultimately increase these German and other European nations' financial fragility, as well as the competition that prompted risky profit seeking ventures by formerly well-regulated and risk averse banks. The next section addresses how German financial interests helped design and benefited from the financial integration of Europe's economic and monetary union.

3. Supranational Financialization in the EMU and Its Consequences

German financialization and attitudes toward financial liberalization at the European level played a strong role in increasing the potential systemic risk of the European financial and economic system at large. Germany helped design a broad component of European financial policy in the lead-up to the Maastricht treaty, given its history of a strong currency and status as the premier European economy Despite some European opposition to the removal of barriers to capital and trade flows, Germany prevailed in setting these preconditions for such an environment in the European economic union. The environment of increasingly globalized finance at the European stage created a market for German lending, while increasing the potential for financial contagion at the supranational level. At the same time, European integration helped undermine components of German financial regulatory structures, and to increase the competitive pressures that particular pillars of the German financial sector faced to earn profits. Finally, the increase in Europe-wide financial intermediation, and particularly its involvement in the US sub-prime mortgage backed asset market, enabled by the European embrace of the Basel II accords, increased systemic risk at the European and global levels. (Shin, 2012)

In exchange for German participation in Europe's economic and monetary union, Germany demanded an independent central bank for the union, removal of capital controls, and a significant expansion of the tasks banks could perform within the EMU. (Story and Walter, 1997) These demands were enshrined in the Maastricht Treaty as the Second Banking Coordination Directive (SBCD), under which a bank needed to perform a bundle of tasks, commercial and investment in order to be certified within the EMU, and the Single Market Passport (SMP), which mandated the removal of barriers to trade and capital throughout the EMU. The SMP and SBCD increased the scope of activity that financial sectors throughout the union were expected to provide, magnifying potential systemic risk in the EMU's financial arena, and helping to destabilize the EMU's economic system by opening banks up to markets, financial instruments, and activities they were not legally equipped to monitor or regulate, and hence to unforeseen destabilizing shocks. (Eichacker, 2015)

Germany's negotiating power stemmed from its historically strong currency, and the desire of economies like France, Italy, and smaller European economies to benefit from the stability it might lend to the European economy as a regional block to counter larger economies of the time such as the USA and Japan. (Story and Walter, 1997) Though Italian and German interests debated the terms of financial liberalization of the EMU, France's overarching desire to benefit from the stability of the German currency provided the basis for its decision to side with Germany at the negotiating table.[i] Smaller, more peripheral European economies faced a choice to either liberalize their financial systems further, or to risk the possible sanctions of higher tariffs and other punishments for not joining the EMU, such as foregoing large investments promised as an incentive for joining. States like Norway, Denmark, and Sweden ultimately refrained from joining the EMU, perhaps due to their experiences with financial crisis in the early 1990s; however, these were stronger economies than Ireland, Portugal, Spain, and Greece. The 'carrot' of aid from the core to member states with weaker economies would have been hard to resist. (Dyson and Featherstone, 1999; Eichacker, 2014)

As different stages of European unification took effect, intra-EMU lending and borrowing increased substantially. Empirical surveys reveal positive trends in intra-European lending and borrowing, and in international financial activity in general. BIS locational data show that European claims and liabilities increased substantially after the EMU's implementation, and that total lending and borrowing grew relative to European countries' GDP over implementation, and through the present.[ii] European claims and liabilities against other European states also increased steadily from the early 1990s onward, with accelerations at different phases. These capital flows increased both in absolute terms, and as percentages of the lenders' and borrowers' GDP, indicating increased financial integration within Europe. These rates of increase increased following 2003, when the EMU issued the Euro currency. In some cases, there have been brief spikes in capital claims in 2007, for example, from Italy to Austria and Germany, and from Ireland to Germany and the UK, perhaps demonstrating capital flight, though capital flows have fallen on the whole since the onset of 2008 GFC. As cross border financial flows increased under the new EMU financial architecture, more linkages developed between European financial systems, as did the risk of financial contagion in the EMU.

An additional source of instability was the asymmetry in capital flows between Europe's core, particularly states that assumed mantels of being major financial centers, such as the UK, Germany, and the Netherlands, to Europe's newly liberalized periphery. A disparity grew between capital flows as a percentage of lenders' GDP relative to the borrowers' GDP. German banks, in particular, lent increasing volumes to EMU member states, particularly peripheral states, as well as to housing lenders in Eastern Europe experiencing real estate booms in the mid 2000s. (Allen, Beck, et al, 2011) Though this lending on a country-by-country basis accounted for a small percentage of Germany's GDP, the amounts German banks lent constituted much larger percentages of the borrowers' GDPs. In 2007, it lent 1.23% of its GDP to Portugal, which represented 17.68% of Portugal's GDP, 8.05% to Spain, which represented 18.56% of Spain's GDP, .48% of its GDP to Iceland, which represented 42.58% of Iceland's GDP, and 5.03% to

Ireland, which represented a 64.35% of Ireland's GDP. In 2008, Germany lent 6% of its GDP to Ireland, a volume worth 84% of Irish GDP. (BIS)

Germany lent larger percentages of its own GDP, the largest of European national GDPs, to peripheral EMU nations relative to its lending to richer European economies. These financial flows were more likely to have disruptive effects for the borrowers than for the lender, and reflect a lack of oversight on the part of asset management. Between 1999 and 2011, Germany led other European countries, EMU and non-EMU, in sending these potentially disruptive capital flows to borrowers. This lending practice from relatively sophisticated financial centers to countries with less recently established financial sectors helped destabilize European financial systems more vulnerable to rapid capital inflows, and set up conditions for large-scale capital flight in the event of a crisis.

European level financial competition increased in this period, with subsequent consequences for systemic risk of the European financial system. Merger activity within the financial system first accelerated within national borders, and later grew at the supra-national level. (Cabral, Dierick, and Vesala, 2012) Certain large German banks acquired domestic banks, and entered national markets within the EMU. (Koetter, 2008; Dermine, 2002; Cerutti et al, 2007) These movements increased access to capital within the Eurozone, but magnified pressure within the Eurozone for remaining banks to widen the scope of the services and lending that they provided. (Dymski, 2002; Ekkayokkaya, et al, 2009)

Another effect of the new European financial architecture was an increase in European securitization, which also contributed to increasing systemic risk for the EMU financial system. Since the implementation of the SBCD, European securitization and consumption of exotic financial derivatives and other securities has grown. The value of European holdings of US originated asset-backed securities increased by billions of dollars from the early 2000s until shortly preceding the GFC. (Kamin and DeMarco, 2010) While these patterns varied considerably across EMU member states, German banks were among the EMU's top issuers and acquirers of such assets. (Hodson and Quaglia, 2009) The manner in which banks used these derivatives and securities differed significantly between countries. Spain and Portugal were the only two European countries to require full capital charges for both liquidity and full credit guarantees of assets, while other European states, such as Ireland, Germany, and Belgium, did not. (Acharya, Schnabl, and Suarez, 2010) This would have different implications for the amount of systemic risk borne by these different states' financial sectors – states required to hold capital reserves for their securitized assets would register smaller losses in the event of a change in the value of those assets down the line. As banks' holdings of these assets increased, European systemic risk increased as well, particularly if they purchased toxic subprime mortgage backed assets underwritten in the US. (Shin, 2012)

In addition to rising systemic risk, sovereign debt risk grew in this period as well. A consequence of these lending dynamics, and uneven development following the implementation of EMU, has been a broad rise in European total debt as a percentage of GDP, and particularly of financial debt relative to GDP – see figures 12a – 13b in Appendix B. It is worth noting that the growth in financial debt over GDP is particularly pronounced in core economies; the only peripheral EMU economy in which financial debt over GDP is comparable to the biggest financial centers of the core of the EMU is Ireland. As in the German case, financial sector leverage and debt-to-equity ratios (Figures 14a – 15b in Appendix B) did not broadly increase in this period in the EMU. However, these figures grew following the onset of the financial crisis in 2007 and onward. This likely indicates the inadequacy of risk-weighting calculations in the years approaching the sub-prime mortgage crisis, and the subsequent recalibration of risk scales.

Government debt as a percentage of GDP fell or held constant for most EMU nations (with the exception of Portugal, where government debt as a percentage of GDP grew steadily), until 2007, when government debt began to increase as a percentage of GDP for all members of the EMU; see figures 16a and 16b. However, following the creation of the EMU, cross-border acquisition of sovereign debt increased as well. (Pagano and von Thadden, 2004; Lane, 2006; Blundell-Wignall and Slovik, 2011) This occurred throughout the Eurozone, but German banks in particular acquired substantially larger portfolios of sovereign debt issued by other European states, and would not decrease holdings of those assets until 2010. (De Santis and Gérard, 2006; Blundell-Wignall and Slovik, 2011; Pisani-Ferry, 2012; Acharya and Steffen, 2015) These trade and government bond acquisition dynamics bound European states together in a way that may initially have appeared to constitute cross-border diversification, but which would ultimately lead to magnified risk of cross-border contagion. (Pisani-Ferry, 2012) Further, in the moment of the financial crisis, government debt over GDP increased throughout the Eurozone, reflecting governments' commitment to backstopping their financial systems, in order to minimize the costs of the ensuing financial crisis. This would have repercussions discussed in section four of this paper.

Even after German policy-makers helped change the financial architecture of the Eurozone in a fashion that would increase the market for German financial services and the overall systemic risk of the European financial system, the ultimate effects of EMU helped destabilize the German financial system and economy at large. First, the rise in German exports of goods, services, and capital flows to the rest of Europe helped grow the German economy, but the divergence of current accounts that ensued within EMU exposed Germany to the risk of sovereign debt in peripheral states. German acquisition of sovereign bonds from the European periphery opened German financial interests to these risks. German involvement in EMU also challenged the traditional structure of the Landesbanks – the governing body of the EMU challenged German government guarantees of Landesbank assets and liabilities, and the German state had to repeal those provisions. This would have consequences both for Landesbank risk leading up to the financial crisis, and for the viability of Landesbanks that incurred losses in the course of the financial crisis in 2007 and 2008.

4. Costs of the Financial Crisis of 2008 and the Eurozone Crisis, for Germany and Europe

The financial crisis of 2008 and its aftermath revealed the consequences of the increasing financialization of German and other EMU economies. The scope of German banks' losses revealed the risks that those banks – particularly the large commercial banks and Landesbanks – had taken in the lead-up to the sub-prime mortgage crisis of 2007; those losses had negative implications for the German real sector and German households. German banks' losses also had negative consequences for European economies – German banks' reticence to lend immediately following the crisis had similar consequences for the financial and real sectors of EMU economies. (Wyplosz, 2010; Eichengreen et al, 2014) Later, German concern over the potential for sovereign default across the EMU's peripheral economies led to different policy interventions, with substantial effects for economies like Ireland, Greece, Portugal, Spain, and Italy. German actions in the mediation policies following the onset of the Eurozone Crisis have overwhelmingly favored strict enforcement of debt repayment and the implementation of austerity measures, with little scope for debt forgiveness, even as other core European states and supranational institutions like the IMF have relented. Together, these policies have increased the costs of the crisis, facilitated by the large-scale financial liberalization in the late 1990s and early 2000s.

German banks registered substantial losses once the subprime mortgage crisis of 2007 took effect. As a consequence of these losses, German banks' profits decreased, lending practices changed, and mergers and acquisitions occurred. German banks were among those with the largest write-downs registered globally following the sub-prime mortgage crisis. In absolute terms, the volumes of write-downs were roughly equivalent between private and public banks. The major private banks that registered large write-downs following the subprime mortgage crisis were Deutsche Bank (7.7 billion US$), Dresdner Bank (3.49 billion US$), Commerzbank (1.1 billion US$), and HypoBank (3.9 billion US$), for a total of 16.19 billion US$. Two significant mergers and acquisitions that occurred among private German banks included Commerzbank's acquisition of Dresdner Bank, and Deutsche Bank's acquisition of Deutsche Postbank Ag. Alongside these writedowns, private banks laid off high numbers of employees in the aftermath of the 2008 crisis. Five major public banks that registered large writedowns following the subprime mortgage crisis included WestLB, SachsenLB, Landesbank Bayern, HSH Nordbank, and IKB Deutsche Industriebank Ag, which together accounted for 15 billion US$ in writedowns. Financial press estimates of total write-downs for public banks are 16 billion US$. As with private banks, these write-downs were accompanied by large layoffs of bank employees, as well as consolidations. SachsenLB was acquired by LB Baden-Württemberg, and other Landesbanks have been pressured to merge with others in order to increase overall public banking efficiency. (Hau and Thum, 2009)

Changes in German financial competition have had consequences for the distribution of the costs of the 2008 financial crisis. Though private and public banks have registered large losses, and received bailouts from the German states and banking groups, Landesbanks, which accounted for 21 percent of total banking system assets in 2008, accounted for 43% of total write-downs. (Hau and Thum, 2009) This likely reflects the disproportionate share of securities that public banks held as a share of their total assets, in their pursuit of profits. By pursuing profits through riskier ventures, German Landesbanks and savings banks courted larger losses in the event of financial crisis, which occurred in 2008. Landesbanks have been subjected to public scrutiny, with little attention to the context for why they were compelled to compete for profits in the first place. (Detzer et al, 2013)

Financial sector losses, bailouts and guarantees by the German government, and overall insecurity have had negative implications for the real sector and households in the German economy. Apart from the consequences of unemployment in the aftermath of financial sector layoffs, lending to households and small and medium enterprises declined in the years immediately following the 2008 crisis. Puri, Rocholl, and Steffen (2011) show that commercial and residential lending by German savings banks (particularly local and regional banks) steadily decreased since 2007, indicating the costs of German banking and financial crises for non-financial actors, despite those banks' greater propensity for counter-cyclical lending. Private banks and credit cooperatives were not likely to decrease their lending to German households and businesses, either because the core of their financial practices was focused on international capital markets in the case of the large private banks, or because they engaged in less risky financial activity leading up to the financial crisis, in the case of the credit cooperatives, these still had broader costs for Germany's real sector.

At the international level, German banks' exposure to subprime mortgage assets and subsequent losses was mirrored by other European banks' losses. In this atmosphere of uncertainty and loss, German banks and other German investors realized the extent of their exposure to debt in other parts of the EMU, particularly as those states entered financial crises and received bailouts from their own governments in order to bolster native financial sectors. This would not have been so extensive a problem for Germany if German banks had not invested so heavily in sovereign bonds from the EMU's periphery, on the assumption that debt throughout the Eurozone was fundamentally equivalent from a risk perspective. (De Grauwe and Ji, 2012)

Further, European banks' debts would not have been so great if German banks and other EMU financial centers' banks had not lent such destabilizing flows relative to the peripheral states' GDPs.

The transition in Europe from the GFC of 2008 and 2009 into the Eurozone Crisis of 2010 owed much to fears of contagion, exacerbated by the behavior of German banks. The actions that the German state took to protect those financial interests would exacerbate the likelihood of default and scope of recession occurring elsewhere in the Eurozone. Another consequence of the increased financial integration that resulted from the primarily German designed architecture of the EMU was increased sensitivity of European bond markets to spillover effects if credit ratings changed. (Arezki, Candelon, and Sy, 2011) As German and other private investors in peripheral EMU states' sovereign debt increasingly feared the prospect of default while credit rating agencies continually downgraded peripheral EMU states' credit ratings, private interests sold off bonds in private markets, creating feedback loops that further widened sovereign debt yield spreads, the chief metric for gauging risk of these markets, given the scarcity of consistent data on sovereign bond holdings by different states and their financial sectors. These rising spreads stoked greater fears of default, perpetuating the process, until European sovereign yield spreads outpaced what might have been predicted given comparable debt to GDP and current account fundamentals in non-EMU states at the time. (de Grauwe and Ji, 2012)

Eurozone bailout provisions have broadly benefitted the interests of creditor countries. The earliest bailouts, three-year plans for Greece, Ireland, and Portugal, designed by the European Commission and IMF "would be provided on condition that the recipient countries implemented fiscal austerity packages and structural reforms to boost growth… and recapitalized and deleveraged overextended banking systems." (Lane, 2012, 57) Since the level of funding was greater than that typically provided by the IMF, the EU "was the major provider of the funding." (Lane, 2012, 58) Within the EU, German and French interests have historically held leadership roles in the design of European level policy, and have had disproportionate sway in the terms of these bailouts. (Schild, 2013) Though Germany and France violated the Maastricht Treaty's Stability and Growth Pact, which mandated that fiscal deficit to GDP ratios not surpass a maximum threshold of 3%, in the mid 2000s without penalty, the Eurozone rescue package was designed specifically to resolve sovereign debt levels deemed destabilizing by the Eurozone's core. By 2010, German and French policy-makers differed in their attitudes toward what strategies for rescuing the Eurozone to pursue. French policy-makers favored more active interventions by the ECB, while Germany favored private restructuring, and broader austerity policies by the bailout recipients; German policy-makers prevailed in supra-national policy-making. (Schild, 2013)

In this context, policy responses crafted by the Troika (the European Central Bank, European Commission, and the IMF), reflected German interests, and privileged private investors at the expense of broader populations vulnerable to regional financial and economic dynamics that had resulted from Europe's unprecedented financial integration, which had been driven by German interests. Four prominent features in the architecture of the EU/IMF bailouts identified by Lane (2012) benefit lenders to the detriment of the peripheral countries in crisis: the three year timeframe, the penalty premium of 300 basis points for bailout recipients, the requirement that bailout funds be used to both resolve fiscal deficits as well as to recapitalize financial systems, and the failure require private sector creditors to agree to reductions in their debts. The short timeframe of the bailouts failed to allow peripheral states to legitimately restructure their economies or to halt recession tendencies in the context of the ongoing panic in financial markets about sovereign yield spreads, which exacerbated the costs of crisis. (Acharya, Drechsler, and Schnabl, 2014) The penalty premium of 300 basis points for bailout recipients constituted a penalty for states in crisis, given their obligations to privilege private debts to core EMU banking interests as they recapitalized banking systems. (Lane, 2012) Only in 2011 did the EU eliminate the penalty premium on its component of the bailout loans, which did not help peripheral states like Ireland that had largely paid off private debts by then. Finally, despite common IMF practice that mandates that bailout "funding is only provided if the sovereign debt level is considered to be sustainable," EMU architects of the bailout justified the bailouts on the grounds of the unsustainability of the EMU peripheral states' sovereign debt. When sovereign debt is unsustainable, the IMF "[requires] private sector creditors to agree to a reduction in the present value of the debt owed to them." (Lane, 2012, 59) Again, private creditors were only forced to accept haircuts by 2011, despite their contributions to the imbalances that developed under EMU leading up to the financial crisis of 2008. Despite German designed policies setting the stage for imbalances, German capital flows contributing to imbalance, and German financial policies contributing to sovereign debt yield spreads, the bailout policies, at least in their first years, indelibly privileged German financial interests at the expense of peripheral European economic recovery.

Finally, a comparison of domestic German financial stability policies with European level stability policies reveals a disconnect that leaves open the possibility of future imbalances and crisis at the European level. German domestic financial stabilization measures represent clear attempts to attribute domestic responsibility to banks that relied on tax dollars for stabilization in the months following the financial crisis of 2008. At the international level, policies include the slight strengthening of provisions of the Basel Accord (Basel III), and the creation of financial resolution funds, the European Financial Stabilization Mechanism (EFSM), which was ultimately replaced by the European Stabilization Mechanism (ESM) in 2013. Though international measures have recognized an unacknowledged need for financial stabilization mechanisms whenever financial systems are integrated, the reforms still ignore sources of instability and contagion that led to the crises of 2008 and 2009.

In response to losses in the German financial system in 2008, the German government created the Federal Agency for Financial Market Stabilization (FMSA), which was meant to be a temporary financial resolution authority in order to standardize state responses to financial crises and avoid ad hoc policies like the combination of bailouts, guarantees, and aid that resulted from the failure of Landesbanks and commercial banks in 2008. (Detzer et al, 2013) The FMSA was responsible for Financial Market Stabilization Fund (SoFFin), which would be tasked with 'the restoration of mutual confidence among banks and the confidence of society at large and business in the financial sector," as well as the Restructuring Fund, which has the authority to 'give banks … necessary capital, [purchase] newly issued bank shares… [and] give guarantees to … absorbing legal [entities] … for the purposes of asset transfer [and] give guarantees for debt securities." (FMSA website fmsa.de, 2015) Since 2011, the FMSA has had the authority to tax banks in order to avoid moral hazard problems and transfer the burden of financing bank recapitalization to banks, rather than taxpayers – "The amount of the bank levy depends on the size of the banks and its degree of interconnectedness within the financial system. The funds collected from banks serve to finance the Restructuring Fund… If the annual contributions raised do not cover the costs of the Restructuring Fund's measures or of its establishment and administration, the FMSA can impose special contributions." (FMSA, 2015) Finally, the Bundesbank has been further empowered to conduct audits on German financial intermediaries, and contributes prominently to European level financial supervision program design. BaFin's website indicates that it has imposed numerous fines on German and non-German banks that fail to maintain adequate capitalization. (BaFin, 2015)

At the European level, changes include the creation of the Single Supervisory Mechanism (SSM), an agency with powers to regulate systemically important financial institutions throughout the EMU; implementation of Basel III, the creation of the European Financial Stabilization Mechanism (EFSM) and the European Stability Mechanism (ESM), two resolution funds; and the increased supervisory authority of the ECB to mediate within national banking systems of member states. In the first phase of its implementation, the SSM monitors banks that hold assets in excess of €30 billion, assets that exceed both €5 billion and 20% of the GDP of the host country, or are among the three largest banks of a given EMU state. It has the authority to "authorize and withdraw the authorization of all credit institutions in the euro area… ensure compliance with all prudential requirements laid down in EU banking rules and set … higher prudential requirements for banks… carry out supervisory stress tests… impose capital buffers and exercise other macro-prudential powers," and other responsibilities until then held by national central banks throughout the EMU, who still maintain those privileges as well. (European Commission; 06/15) Relevant components of Basel III for the Eurozone include increasing capital standards and leverage ratios by 2% each from Basel II requirements, as well as increasing liquidity requirements relative to the size of banks' "total net cash outflows over 30 days." (BIS, 2010, p. 69) Finally, as many conventional discussions of the Eurozone crisis have addressed, the Eurozone has created different funds specifically for addressing financial crises, given the profound banking integration inherent to its structure.

While these changes represent improvements, they leave gaps that could lead to similar crises occurring within the Eurozone. The ECB recognizes criticisms that its SSM, responsible for thousands of banks in the Eurozone, may be unlikely to catch banks engaged in overly risky behavior given the failure of national central banks to monitor much smaller scopes of financial institutions in the years preceding the 2008 crisis, and, further, that national central banks may resent intervention from the ECB at the state level. (European Commission, 2012) Basel III's continued emphasis on risk-weighted assets as a basis for determining capital levels leaves open the possibility of miscalculating risk given perceptions of the relative safety of given financial assets. Innovation in security markets has not abated since the 2008 financial crisis, which should be cause for concern. Further, Slovik argues that banks have an extra incentive to acquire innovative assets in order to evade risk-weighted asset regulations; as long as there is uncertainty about the risk level of given instruments, banks will be tempted to use them to circumvent stability measures such as those included in Basel III. (Slovik, 2012) Finally, the EFSM and the ESM mandate extra supervision and an early warning system for banks and states that receive bailouts and aid from their funds that are at risk of default; this neglects the responsibility that lenders played prior to the onset of the financial crisis in lending destabilizing flows across borders and increasing overall contagion risks within the Eurozone. Without adequate oversight of lenders and borrowers, the Eurozone is destined to repeat its mistakes; unfortunately, the disproportionate sway of creditors like Germany within the EMU leave the ECB unlikely to radically change those supervisory strategies.

5. Conclusion

This paper is intended to counter and expand conventional narratives of the European financial crisis of 2008 and the Eurozone sovereign debt crisis from 2009 onwards were primarily caused by either profligate borrowing and fiscal expenditure by peripheral EMU states, or the result of German neo-mercantilist policies meant to expand European markets for its exports. It argues that German financial liberalization destabilized the German financial sector, and that Eurozone financial liberalization at the direction of German policy makers opened the Eurozone to the potential for larger financial crises with broader economic fallout. To this end, it presents empirical data showing changes in capital flows, securitization, and financial structure at the German and European levels, with particular attention to the divergence between core and peripheral European states' performances. It concludes with a discussion of the context and consequences of the sovereign debt crisis in the Eurozone, and the inadequacies of the resolution policies to protect European financial markets and economies from future crisis, particularly given the hegemony of Germany, and German financial interests, in the policy-making process.

By demonstrating these changes, this paper adds to the literature recognizing the challenges of German dominance on the European policy stage. Changes in the German financial system that increased domestic instability were transmitted to a broader scale at the European level through the design of EMU; failure to address these inherent sources of instability leaves Europe vulnerable to future crises. The costs of European crisis will be disproportionately borne by more vulnerable economies within the EMU, as long as policies meant to resolve crises privilege the interests of lending states and financial actors at large. Future work should explore the nature of German securitization, lending, and asset portfolio acquisitions, particularly cross-border and within the EMU, and the likely costs and benefits of those actions to German banks, non-MFIs, and non-German institutions.

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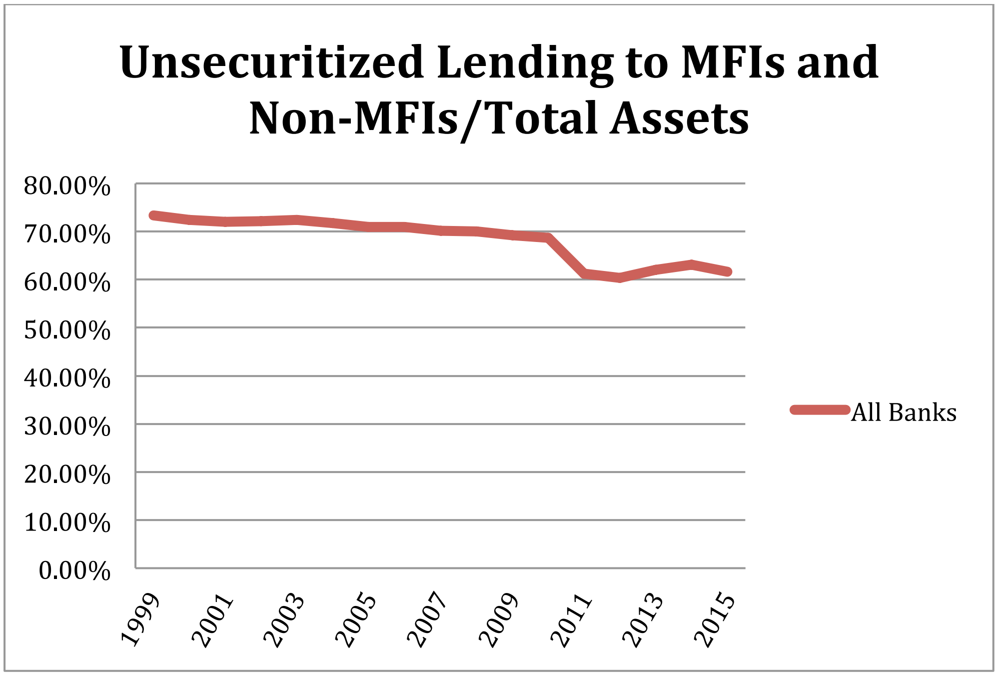
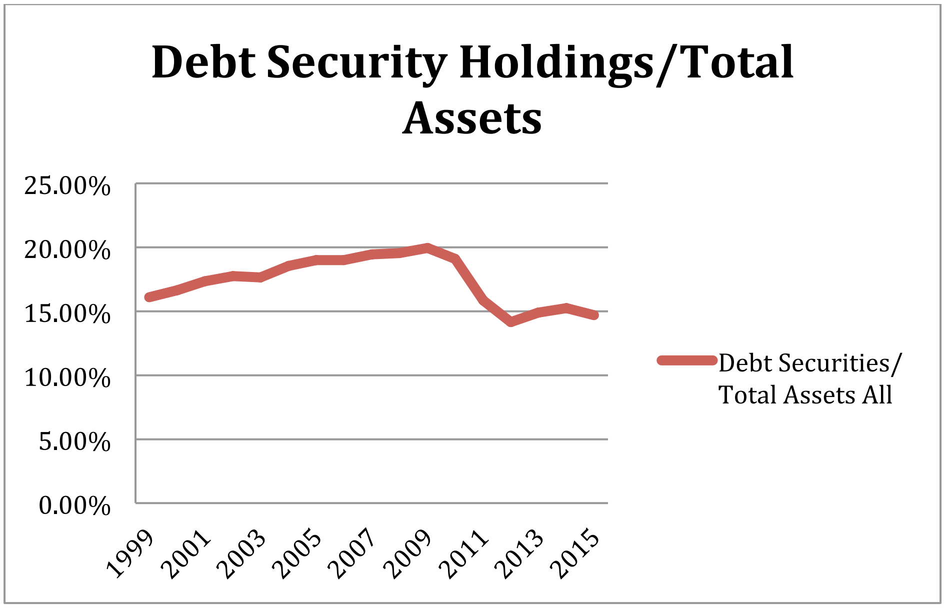
Appendix A: Domestic Trends in German Finance

Figure 1: German Unsecuritized Lending to Monetary and Financial Institutions (MFIs) and Non-MFIs as a Share of All Banks' Total Assets



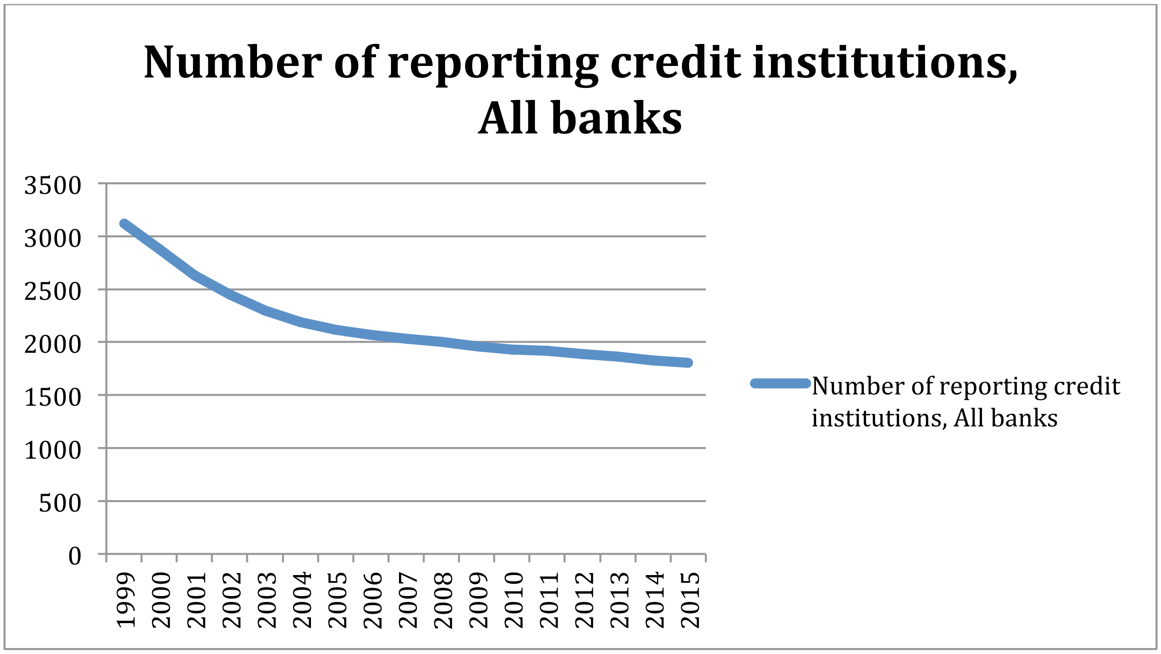
Source: Bundesbank, Macroeconomic Time Series Statistics, 2015

Figure 2: German Debt and Security Holdings Over Total Assets – All Banks



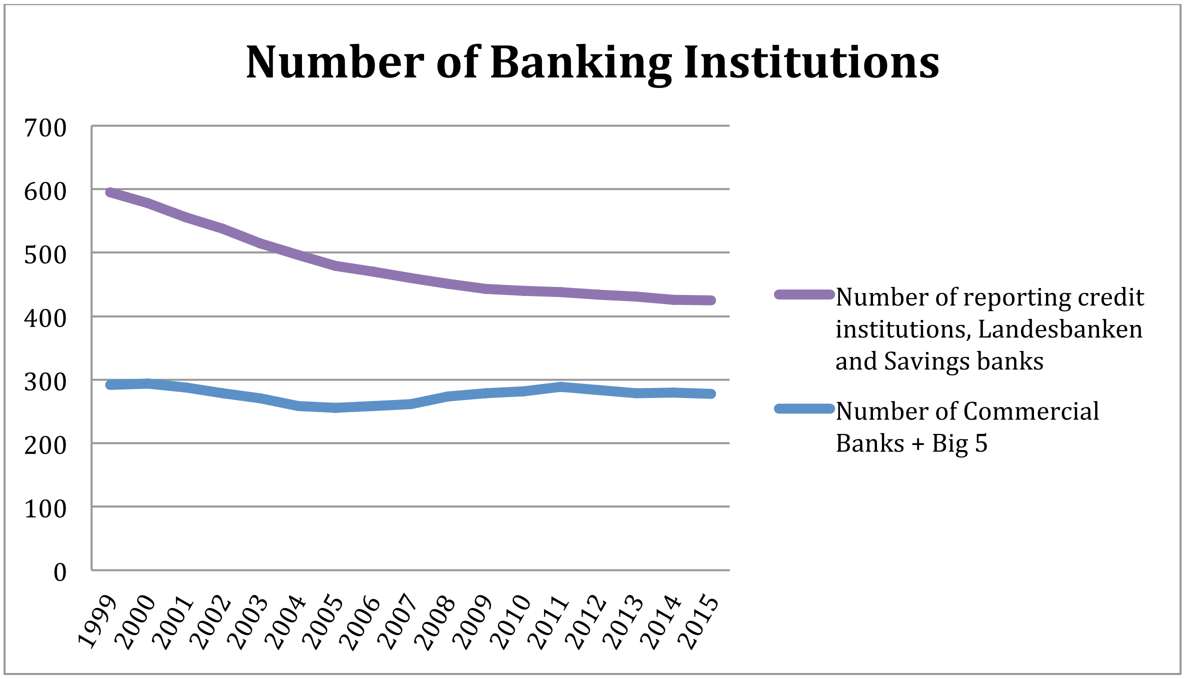
Source: Bundesbank, Macroeconomic Time Series Statistics, 2015

Figure 3: Change in Total Number of German Reporting Credit Institutions between 1999 and 2015



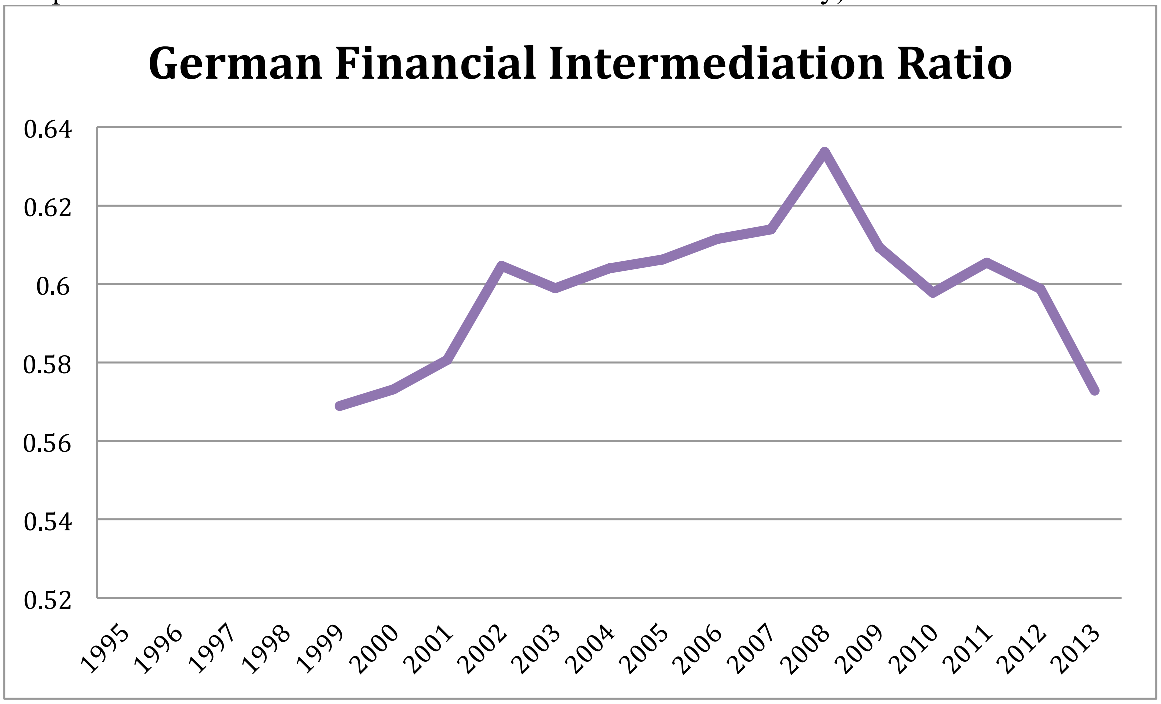
Source: Bundesbank, Macroeconomic Time Series Statistics, 2015

Figure 4: Change in Total Number of German Credit Reporting Institutions, Commercial Banks and Landesbanks



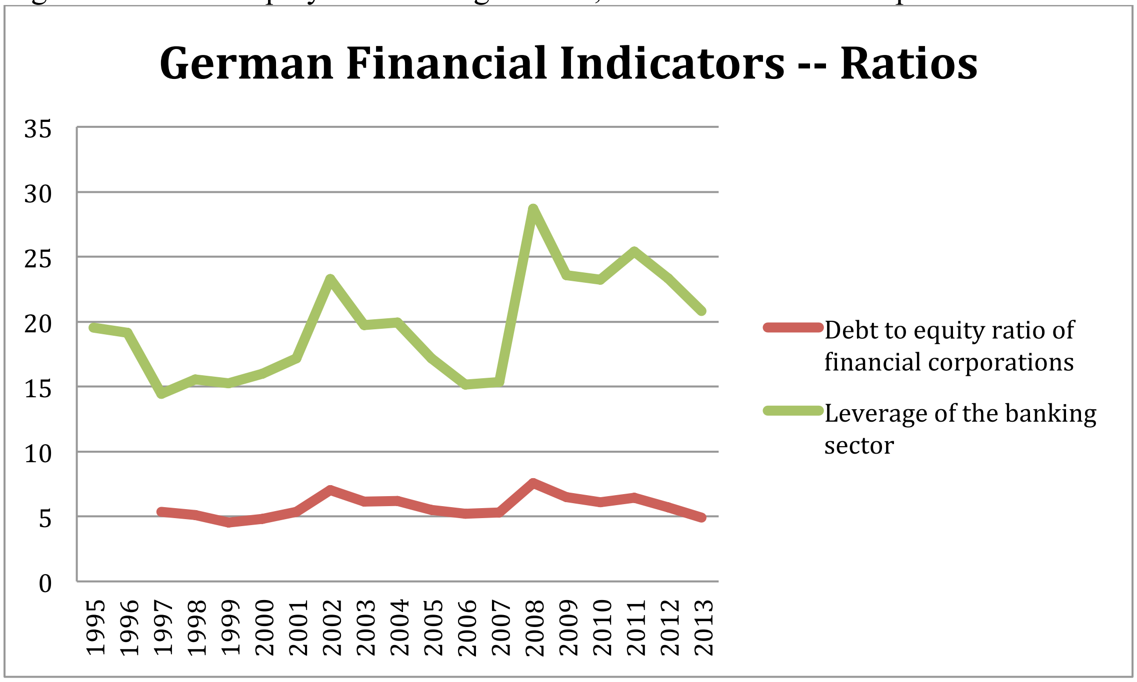
Source: Bundesbank, Macroeconomic Time Series Statistics, 2015

Figure 5: German Financial Intermediation Ratio (Total Financial Assets of Financial Corporations over Total Financial Assets of the Whole Economy)



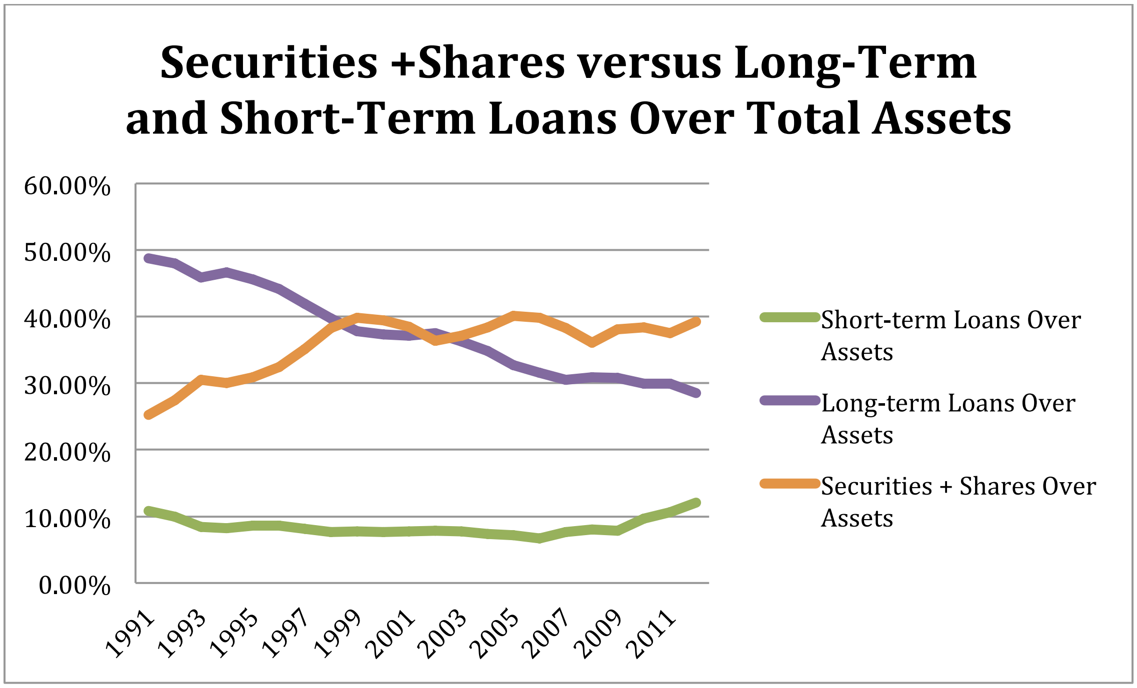
Source: OECD Statistics, 2015

Figure 6: Debt-to-Equity and Leverage Ratios, German Financial Corporations



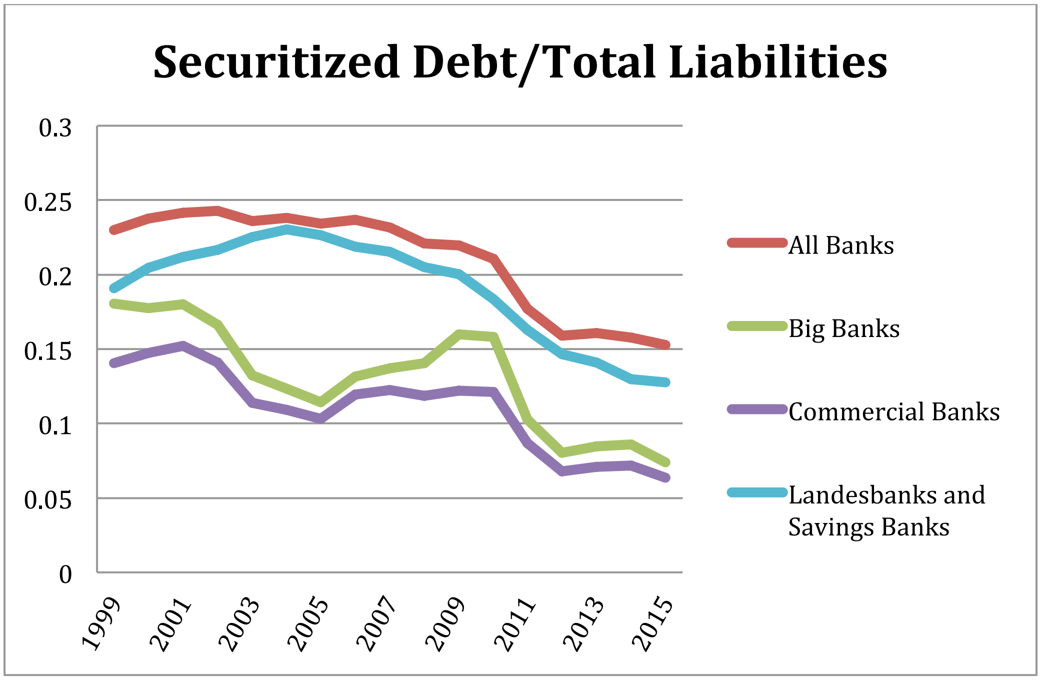
Source: OECD Statistics, 2015

Figure 7: German Securities and Shares Versus Long-term and Short-term Lending Over Total Assets



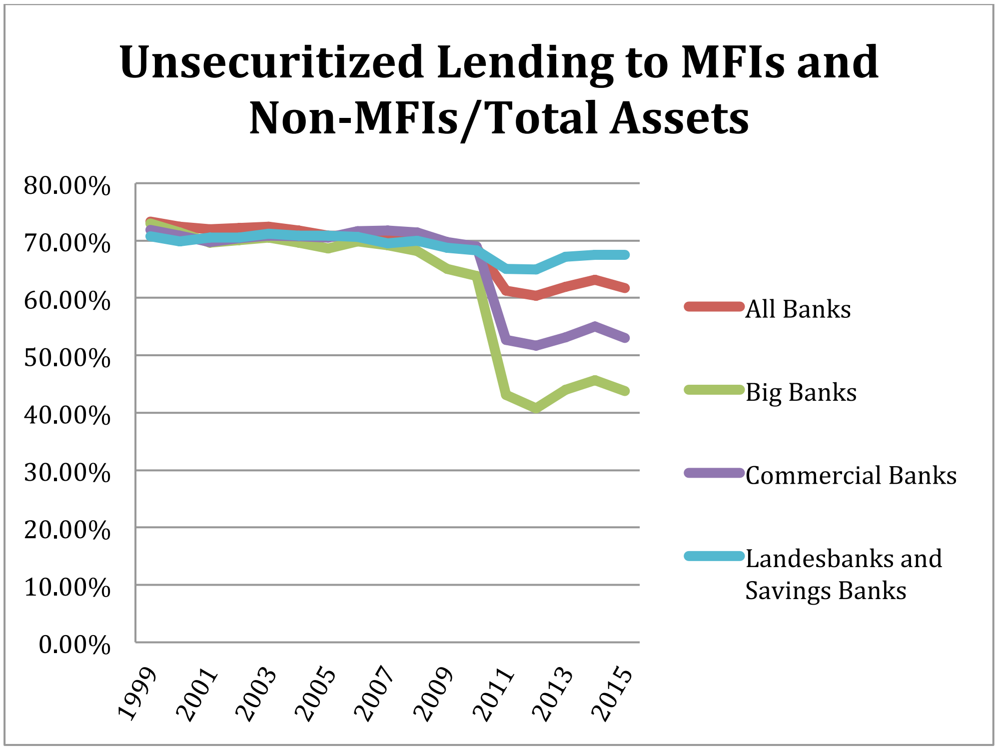
Source: OECD Statistics, 2015

Figure 8: German Securitized Debt Over Total Liabilities



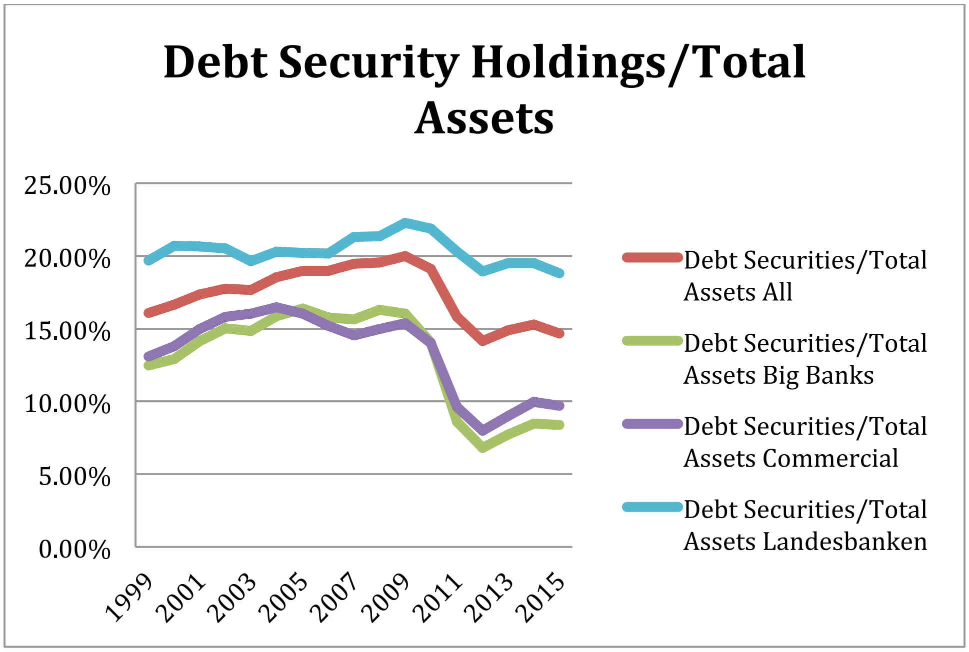
Source: Bundesbank, Macroeconomic Statistics, 2015

Figure 9: German Lending to MFIs and Non-MFIs Over Total Assets



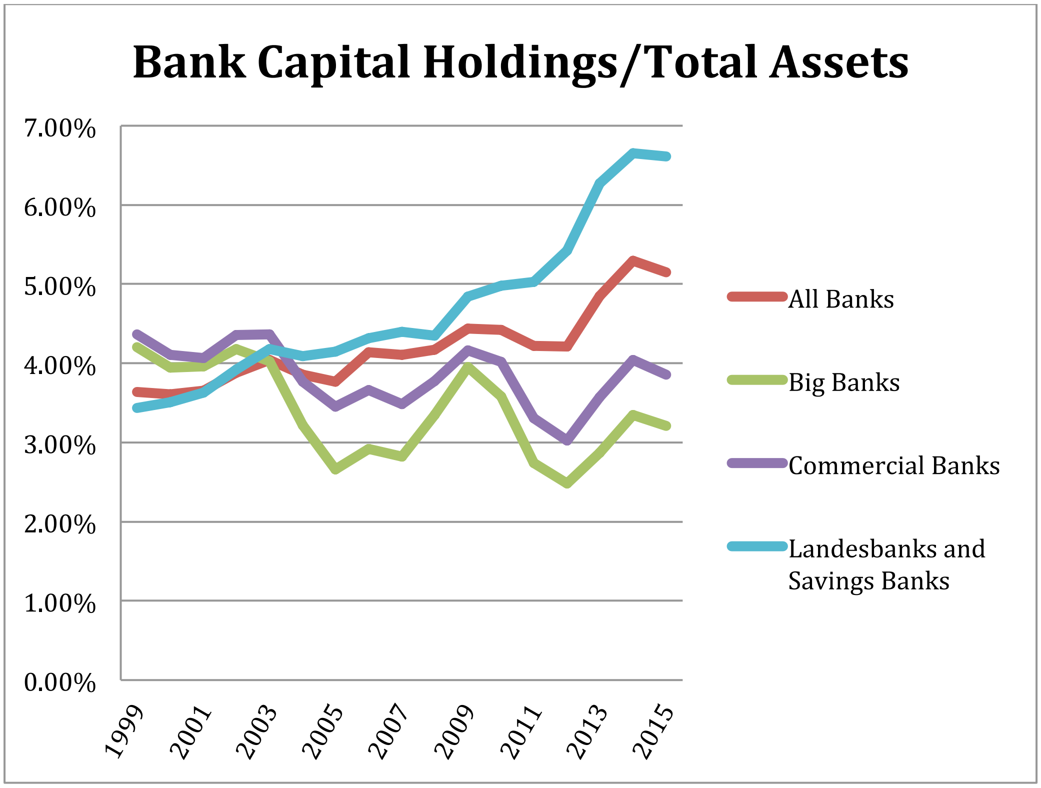
Source: Bundesbank, Macroeconomic Time Series Statistics, 2015

Figure 10: German Debt Security Holdings Over Total Assets, Pre-2007



Source: Bundesbank, Macroeconomic Time Series Statistics, 2015

Figure 11: German Bank Capital Holding Over Total Assets, Pre-2007



Source: Bundesbank, Macroeconomic Time Series Statistics, 2015

Appendix B: European Financial Trends

Figure 12a – European Total Debt/GDP; Core[iii]

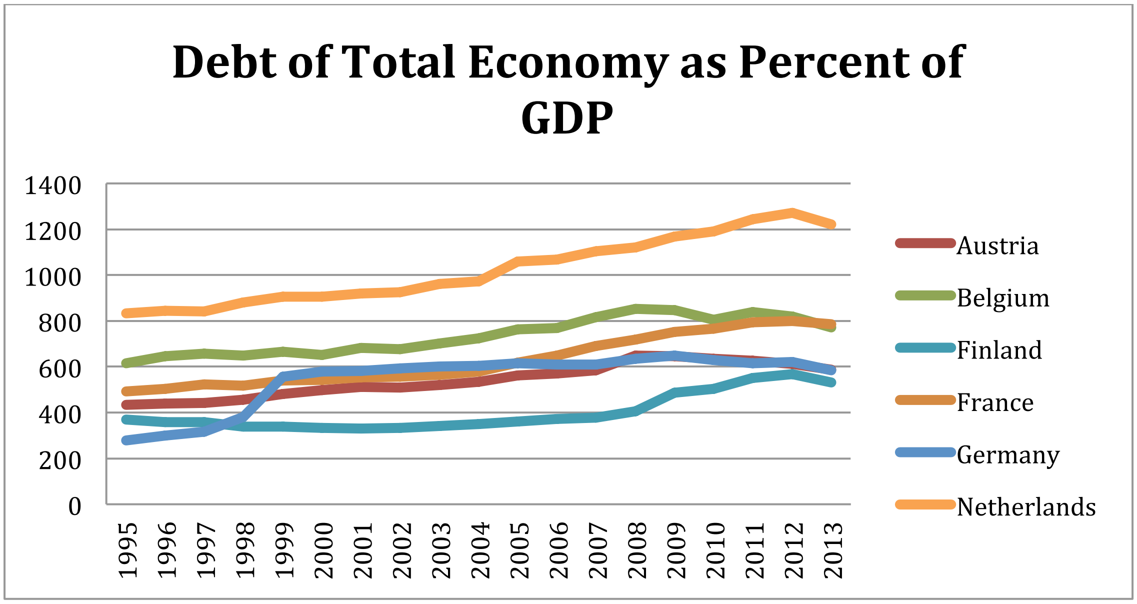
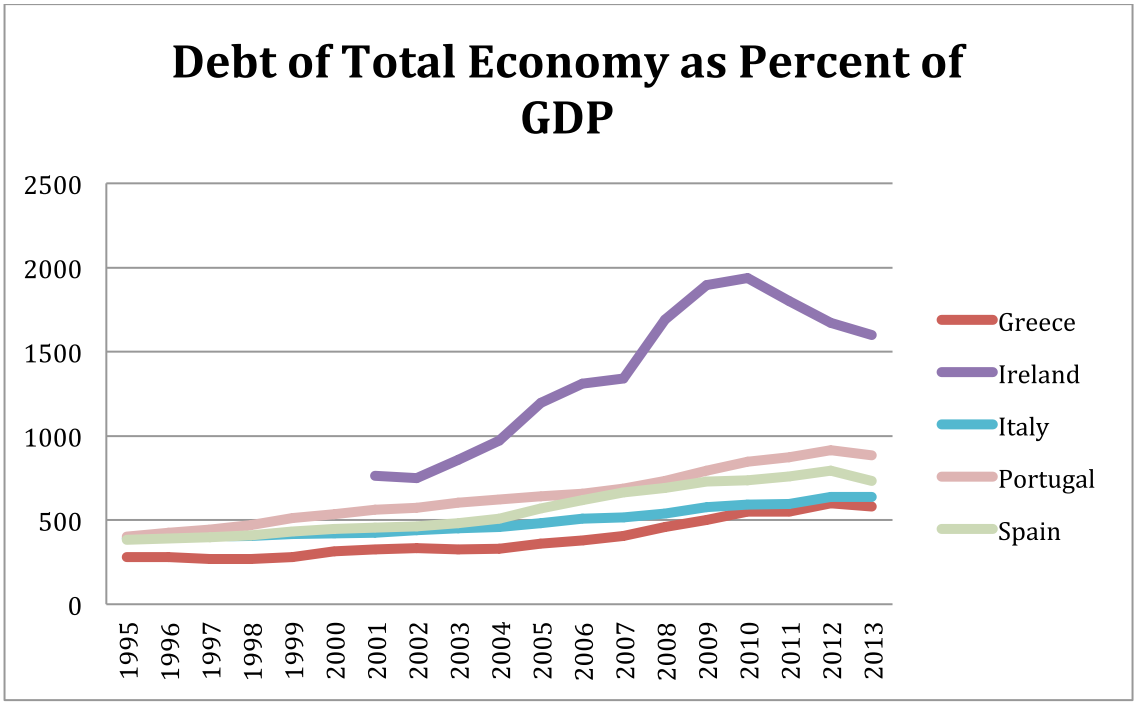


Figure 12b: European Debt of Total Economy Over GDP – Periphery



Source: OECD Statistics, 2015

Figure 13a – European Financial Corporations' Debt/GDP; Core

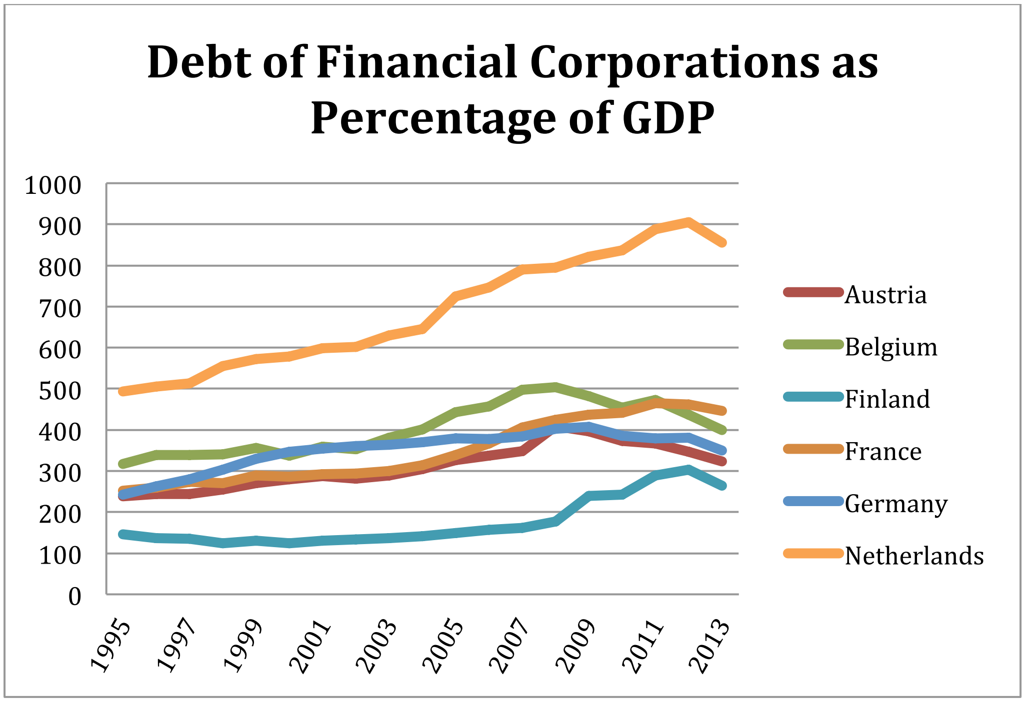
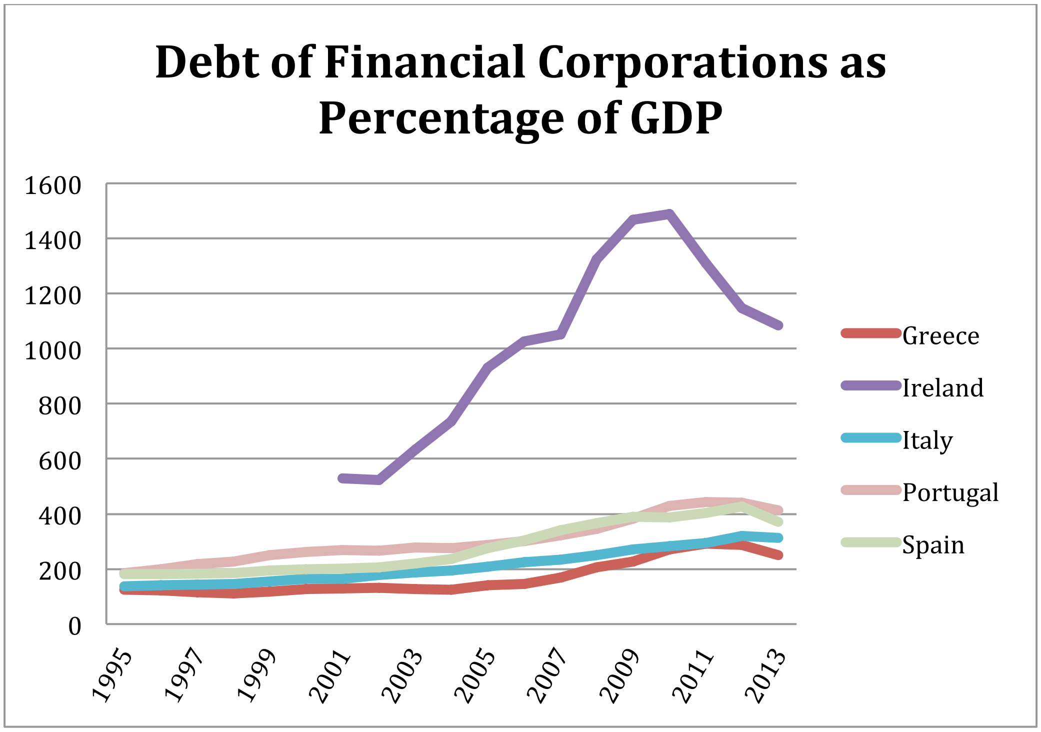


Figure 13b: European Debt of Financial Corporations/GDP; Periphery



Source: OECD Statistics, 2015

Figure 14a – European Financial Sector Leverage, Core:

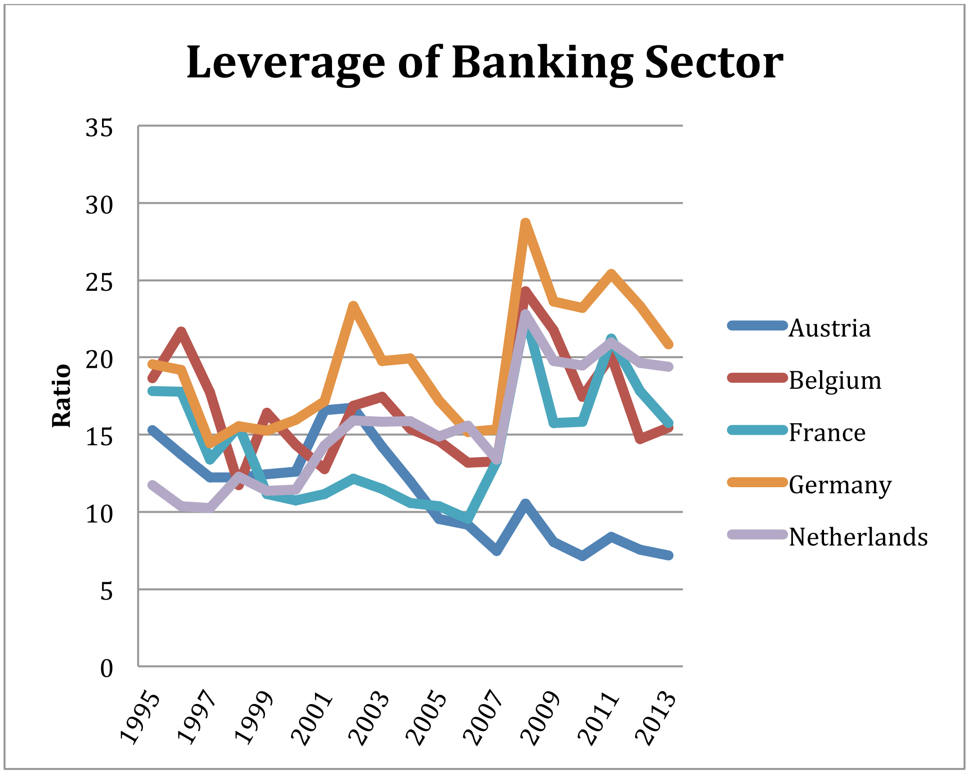
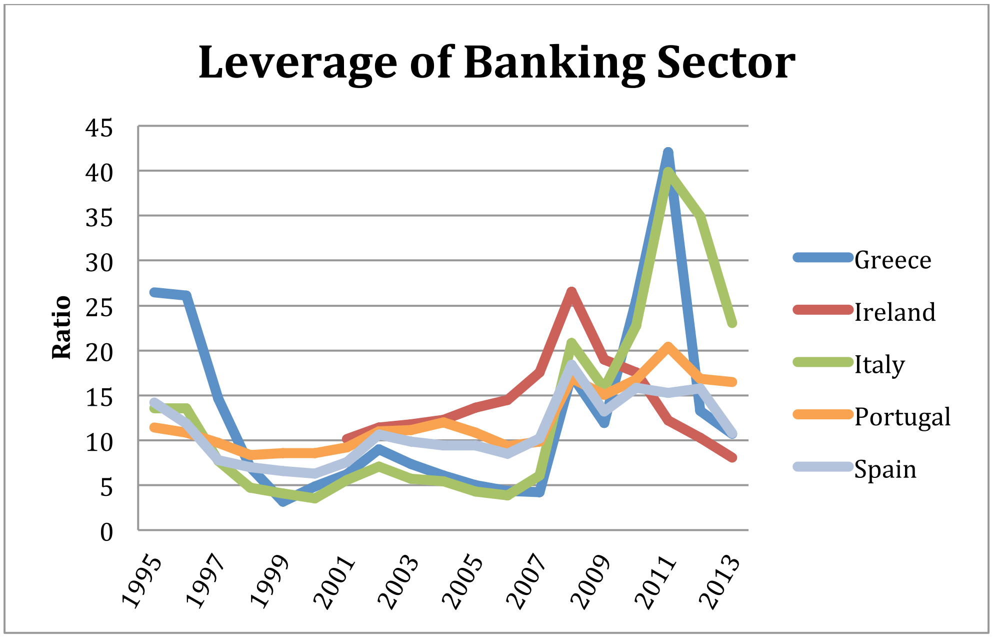


Figure 14b – European Financial Sector Leverage, Periphery:



Source: OECD Statistics, 2015

Figure 15a: European Debt-to-Equity Ratios, Financial Firms, Core

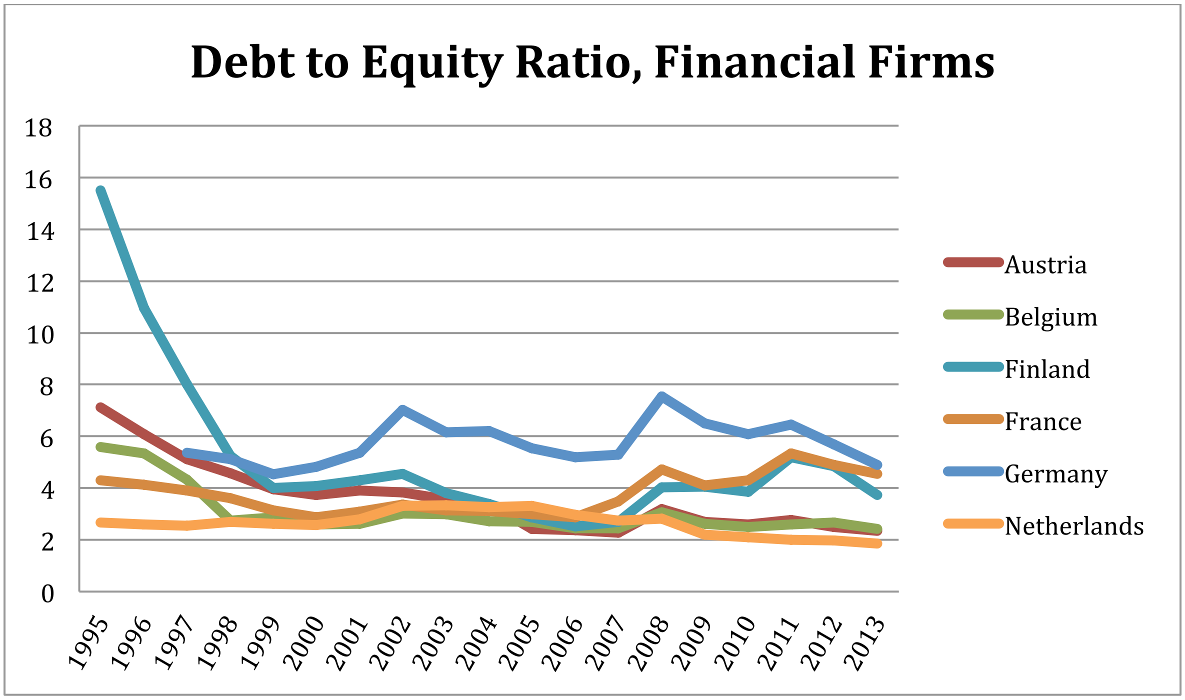
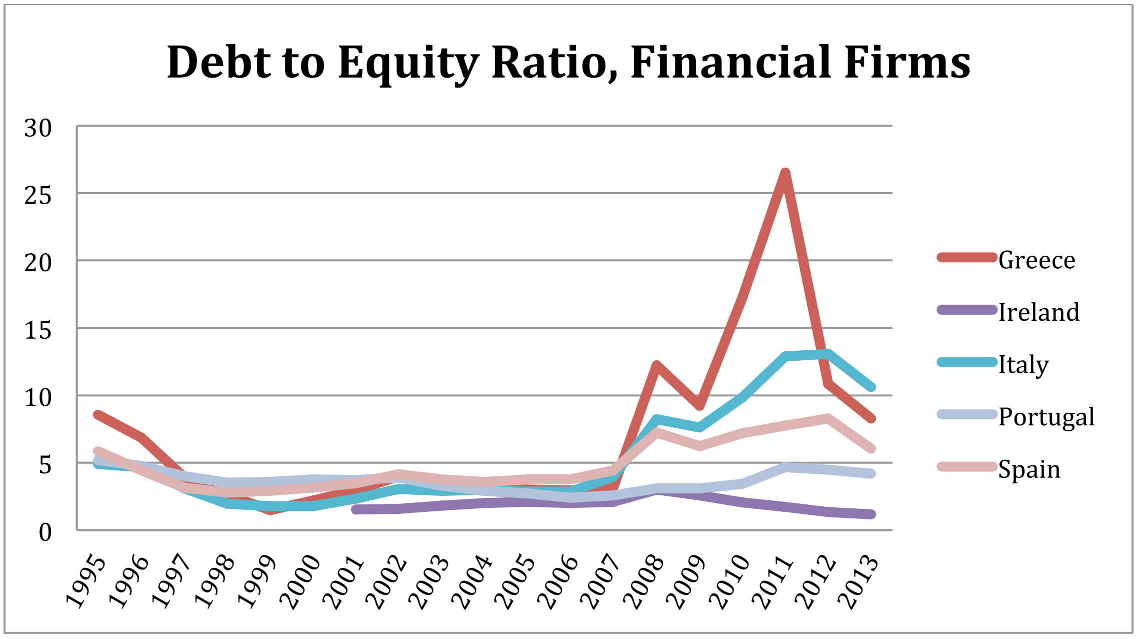


Figure 15b: European Debt-to-Equity Ratio, Financial Firms, Periphery



Source: OECD Statistics, 2015

Figure 16a: European Debt of General Government Over GDP; Core

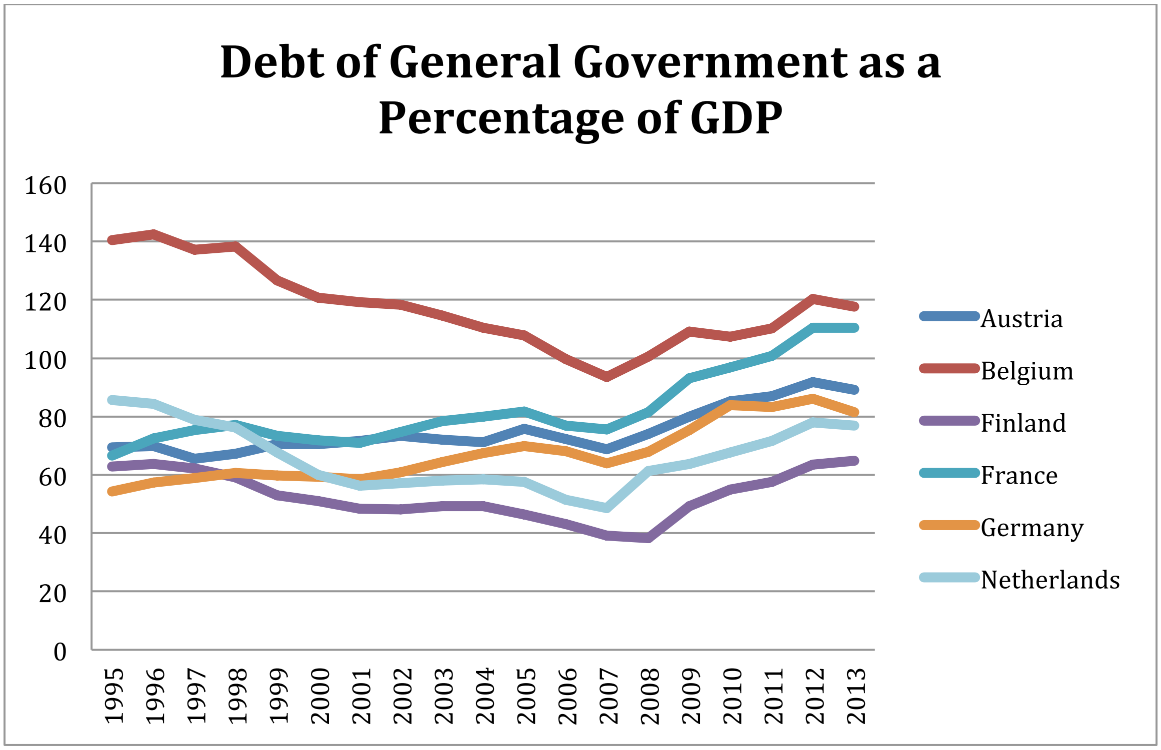
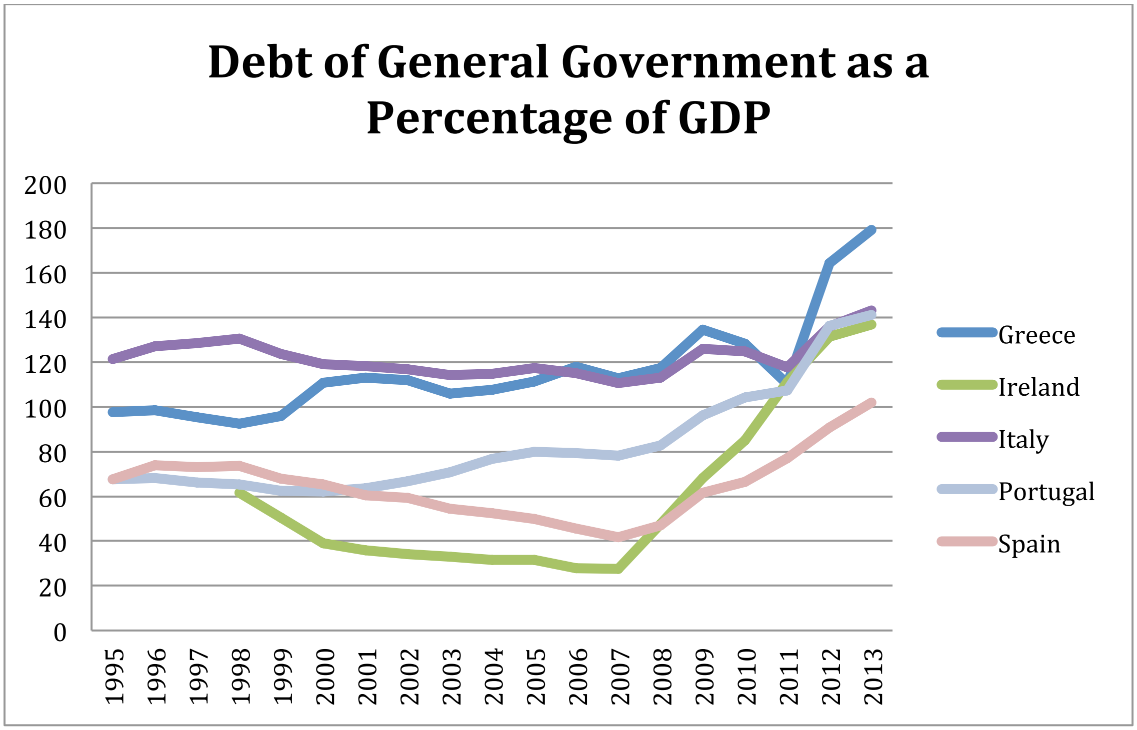


Figure 16b: European Debt of General Government Over GDP; Periphery



Source: OECD Statistics, 2015

[i] The monetary and financial reforms of the burgeoning EMU did not go far enough for the UK, which ultimately left the group. (Dyson and Featherstone, 1999)

[ii] The BIS defines international claims as the "sum of cross-border claims in any currency and local claims of foreign affiliates denominated in non-local currencies," and foreign claims as "financial claims on residents of countries other than the reporting country, i.e., claims on non-residents of the reporting country… foreign claims are calculated as the sum of cross-border claims and local claims … of reporting banks' foreign affiliates." (BIS, 54 – 55, 2014)

[iii] Core EMU States – Austria, Belgium, Finland, France, Germany, the Netherlands; Peripheral EMU States – Greece, Ireland, Italy, Portugal, Spain