“German Public Banks, Financial Competition, and Crisis: Institutional Change in German Banking and Financial Vulnerability Before the Global Financial Crisis”

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Abstract –

This paper asks why Landesbanks, public banks designed to provide credit to German firms in regions underserved by private banks, embraced risky asset and liability balances in the years before the Global Financial Crisis, and subsequently lost billions of dollars in write-downs after the US subprime mortgage bubble burst in 2007. It argues that the German government’s decisions to eliminate protections for Landesbanks increased competitive pressure for public banks, increased the propensity for those banks to adopt risky strategies in order to maximize profits. These actions by Landesbanks and large private banks exposed German households and firms to greater risk and financial vulnerability, and indirectly exposed European financial systems to subprime mortgage risk. It uses balance sheet analysis for different sectors of German finance to show that Landesbanks and Germany’s large private banks adopted higher risk asset and liabilities, engaged in more international activity, and shifted from lending to security acquisition while competing for profits, while Sparkassen, small public savings banks, did not adopt such risky strategies, and successfully shielded German households and small businesses from credit market spillovers following the Global Financial Crisis. The paper contributes nuance to debates about whether public banks are beneficial institutions to promote, and shows that Landesbanks’ failures stemmed from external pressures for them to increase their profits, which increased financial and economic instability in Germany and beyond.

JEL Codes: E02, F36, G01, G15, B52

Keywords: Competition, Public Banks, Financial Liberalization, Germany, Crisis

Introduction:

At the time of writing, there is a burgeoning literature in Post-Keynesian economics advocating for public banks as a counterweight to private financial intermediaries' prioritization of profits over more democratic provision of credit, contributions to income and wealth inequality, and promotion of financial instability that has underpinned economic instability and crisis, exemplified by the decades preceding the 2008 Global Financial Crisis (GFC). (Seccareccia, 2011; Marshall and Rochon, 2019; Herndon and Paul, 2020) Germany, one of the core economies of the European's Economic and Monetary Union (EMU), has had a history of public banking since the 19th century, with large state-level banks, Landesbanks, and smaller savings banks, Sparkassen, that were designed to provide credit to households and domestic firms ignored by private banks, and continue to serve the largest share of the German public's credit and depository needs. (Deeg, 1999; Lewis, 2011) Interestingly, the Post-Keynesian literature on public banking thus far has not presented Landesbanken and Sparkassen as potential models for public banking in countries like the US and Canada, despite the importance Sparkassen played in sustained lending to German households and small and medium enterprises (SMEs) in the aftermath of the GFC.

One reason for this might be the bad publicity that Landesbanks received after the GFC, from academics, business journalists and economic commentators, when those public banks were discovered to have acquired billions of dollars' worth of toxic mortgage-backed assets during the US's Subprime Mortgage Bubble, and to have lost so much when that bubble burst in 2007. (BBC 2008a; BBC 2008b; Landler, 2008) Economists, including Hans-Werner Sinn (1999), Isabel Schnabel and Tobias Körner (2012), and Harald Hau and Marcel Thum (2009) have argued that Landesbanks are relics of German financial history that they should be privatized in the name of increasing financial efficiency and profitability. Business commentators with large audiences like Michael Lewis in *Vanity Fair* and Frances Coppola with *Forbes* have also criticized Landesbanks, for their

willingness to acquire toxic assets during the subprime mortgage bubble and for incurring losses on investments in the German shipping industry shortly before the GFC. (Lewis, 2010; Coppola, 2015 and 2017) Lewis's critiques of German losses during the GFC implicitly singled out public banks as a reason for billions of dollars of writedowns on German banks' assets; Coppola explicitly held Landesbanken and Sparkassen failures up as arguments against increasing public banking services in the UK and beyond.

Unfortunately, these critiques of Landesbanks and public banking writ large perform several sleights of hand by ignoring that Landesbanken were not alone among German financial institutions, nor most of the Western financial system, in the risks they took and the losses they incurred in the context of the Subprime Mortgage bubble and bust. Large private banks in Germany made similar errors and required large bailouts from the German government in the aftermath of the GFC. NordLB's decision to invest in German trade infrastructure was rational given Germany's pivot toward export-oriented growth strategies in the mid 2000s; its management's failure to predict the GFC placed it in the company of most financial intermediaries' leaders, with the exception of several clever hedge fund managers. (Lewis, 2010) Most remarkably, none of these critiques questioned why public credit institutions were competing for profits with large private banks in the first place; Landesbanks' demand for risk and propensity to fail increased after deregulation of German finance in the 1990s and 2000s. (Hüfner, 2010) Papers published since the GFC have shown that in the aftermath of the crisis, other smaller public savings banks (Sparkassen) and credit sustained Small and Medium Enterprises (SMEs), while larger German firms that relied primarily on large private banks and Landesbanken faced liquidity crunches as the value of those banks' assets declined under the GFC. (Puri, Rocholl, and Steffen, 2011) Despite this, financial economists continue to argue that public banks should be privatized, or that private banks should be empowered to more easily merge with and acquire public banks, on the grounds that public banks are unprofitable, despite their

origins as democratic credit institutions intended to lend widely with less profit motivation. This paper explores why large public banks in German took on the risks that engendered those failures after the GFC, in order to support the broader case for public banking as an institution, with some caveats.

This paper argues that Landesbanks shifted from prioritizing stability and equitably providing credit to German households and businesses (Deeg, 1999) to maximizing profits in competition with large private banks in response to the German government's pivot from prioritizing access and financial stability, to promoting the interests of private financial interests and promoting competition with international capital centers like Wall Street and London. It argues further that the Landesbanks' focus on maximizing profits has increased the German economy's vulnerability to crisis, by increasing the risk of financial activity and generating more uncertainty for the real sector that those financial institutions serve. Before the 1960s, the German government limited financial competition between pillars of German finance to promote stability and viability of both Landesbanks and Sparkassen; since then, it has gradually promoted competition in service of profitability. (Seikel, 2017, Detzer and Hein, 2014) As competition has increased between large private banks and Landesbanks, the total composition of German banks' liabilities and assets has become riskier, more internationally oriented, and more concentrated in finance than in non-financial industries. Together, these shifts increased German vulnerability to financial crisis, and to the economic spillovers that would result.

At the same time, smaller public banks shielded domestic German interests from financial spillovers that came with the onset of the GFC. In contrast to Landesbanks, Sparkassen held a greater share of loans as assets than securities, engaged in more domestic transactions than international financial activity, and did a greater share of business with non-financial sector partners; they also refrained from creating Special Purpose Vehicles (SPVs) – shell entities that would hold

risky assets to make parent banks' balance sheets look safer – despite the lower possibility for profit by forgoing these means. In the aftermath of the GFC, Sparkassen helped to stabilize German finance by continuing to lend to domestic households and smaller enterprises, while larger German banks, public and private, reduced their lending activity. (Hüfner, 2010; Puri, Rocholl, and Steffen, 2011) This example is a positive argument for public banking, as long as those banks are not pressured into destabilizing profit-chasing activity as a result of competition.

This paper presents a Post-Keynesian institutional analysis of the role and reception of public banks in Germany over the second half of the 20th century. It presents the history of how a sector of German finance that was designed to prioritize stability and equitable access over profit came to compete with private banks to provide those services, to shift to riskier balances of liabilities and assets, and to increase the scope of their international financial activity relative to domestic activity. It uses comprehensive balance sheet analysis of different sectors of German finance to illustrate these changes and their consequences. It considers the implications of changing the relative competitiveness of German finance through deregulation as well as the effects of globalization of German finance that was further enabled by the creation of the European Union and the Single Market for Goods and Capital. These analyses rely on James Crotty's synthesis of Marxian competition theory with Keynesian and Minskyian theories of financial instability, mediated through the lens of power imbued by the German state. German law created the space in which Landesbanks and Sparkassen first operated; the decision by German courts to respect the EU mandate that government protections for Landesbanks violated EU law effectively ended their protected status, setting the trajectory for their greater risk taking in the years before the GFC.

This paper contributes to several literatures. First, it explores the puzzles of how private and public banks fit in the German transition from bank-based finance to market-based finance, and the roles those shifts played in Germany's experience with the GFC. The IPE literature on varieties of

capitalism has many explorations of transitions to market-based finance, and the destabilizing consequences of it, especially at the European level. Yet, few of these studies consider the political and economic forces propelling German banks' decisions to adopt riskier asset and liability balances in the years before the GFC. It likewise provides financial context for IPE and Neo-Mercantilist analyses of the consequences of Germany's export-led development model, and its consequences for Europe. (Braun and Deeg, 2020; Stockhammer and Onaran, 2011; Fuller, 2018) Second, it contributes to the burgeoning field of Critical Macro Finance, which argues that transitions to market-based finance are destabilizing, and that state mechanisms and market power can favor particular interests over others. (Gabor, 2020) By investigating the role that the German government played in gradually prioritizing large private banks' interests through the elimination of protections for Landesbanks, it shows on a national level how interest groups and receptive governments can generate financial and economic instability with dispersed consequences.

These topics hold extra resonance at the time of writing, as the Covid-19 pandemic generates economic uncertainty for all, especially households and small businesses, and in which the potential for financial crisis looms as the economic costs of the global pandemic accumulate. There have long been debates in the US about the benefits of maintaining a system of public banks to serve the needs of households (x% of households wanting banking accounts with the Federal Reserve) both as an alternative to private commercial banks as well as more predatory institutions like pay-day lenders. (Seccareccia, 2011; Herndon and Paul, 2020) There has also been a marked decline of public banking in the Eurozone since the adoption of the Maastricht Treaty: while large public banks received great scrutiny in years immediately after the GFC, it may be in many economic sectors' interest for European policy-makers to reconsider the role of public finance, and promote more public banking across the Eurozone. (Körner and Schnabel, 2012; Mertens and Thiemann, 2018)

The structure of the paper is as follows. The second section presents James Crotty's hybrid-heterodox-macroeconomic theory of competition as applied to finance, which provides the theoretical underpinnings for how an increase in competition can increase pressure to change balance sheet composition so as to increase risk and instability, as well as the potential risk of increasing international financial activity. The third section presents a history of the roles played by different pillars of German finance over the twentieth century, and how different interest groups representing the relevant pillars promoted (or failed to promote) sectoral interests in German financial policy, as well as how the German government's treatment of these pillars changed over time. The fourth section surveys statistics of German financial practice in the second half of the twentieth century, to show the consequences of these changes. It maps changes in the proliferation of different types of banks, bank profitability, asset and liability composition, relative international orientation of public, private, and cooperative financial institutions, and the eagerness of these different sectors to engage in shadow-banking practices of repo finance from the 1980s through 2008. The fifth section considers the fallout of the Global Financial Crisis across German finance, and draws lessons for policy-makers moving forward. The final section concludes.

Theory

This paper relies on James Crotty's unified heterodox macroeconomic theory of competition and crisis, which merges Marxian theories about real sector competition inducing crises with Keynesian and Minskyian theories about finance as a destabilizing force unto its own. (Crotty, 1993) The unified heterodox macro theory of competition also emphasizes the institutional importance of the state as a defender of capital's interests; which helps explain the consequences of the German government's transition from protecting public banks toward promoting the interests of private banks in the second half of the twentieth century. (Deeg, 1999)

The unified heterodox macroeconomic theory of competition brings together strands from Marxian, Keynesian, and Post-Keynesian macroeconomic theories to increase the realism of economics, in contrast to more abstract macroeconomic models. (Goldstein and Hillard, 2009) The theory's most important principles for this paper are that the relationship between real-sector investment and financial sector activity is important; that banks affect economies through their "willingness or otherwise to provide loans and the terms on which they are provided impact on the level and structure of demand," as well as the potential propensity of bubbles and crises in an economy at large; and that open economies expose domestic economies to volatility determined by external economic changes. (Sawyer, 2009, 29)

Competition increases instability across firms and financial intermediaries, with broader economic consequences that may exacerbate each other. Crotty's work on competition centers around the tension between fraternal competition, in which rival enterprises "coordinate their activities in a manner that bounds the intensity of competition among them," with coercive competition, which "has as its mainstay destructive price competition." (Goldstein, 2009, 39) Under coercive competition, firms may engage in price wars, innovate too rapidly, and increase risk in order to capture markets. As a firm's financial fragility increases, it may reduce its investment expenditure if lower "expectations of future profits [force] firms and lenders to alter their perceptions on short-term and long-term levels of acceptable debt." (Goldstein, 2009, 42) In financial markets, the expression of competition may be some combination of instability generating credit booms, new growth strategies, or expansion into new markets. (Goldstein, 1995) This paper will show how increasing financial competition at German and European levels has been correlated with riskier financial strategies.

While governments' attempts to reduce competition to favor certain sectors or actors may contribute greater stability to an economic system, the results may be ambiguous in practice.

Governments' willingness to intervene in markets can resolve market failures and increase general welfare, but they may also help economic interests preserve their rents by preventing competition. (Crotty, 1999) Keynesian and Post-Keynesian analyses of competition and government intervention have tended to focus on the welfare costs of monopsony, oligopoly, and monopoly, as well as in the provision of public goods, which private firms have less incentive to produce. (Pressman, 2007) States may have competing ends in their interactions with firms – at times, they may actively limit the size or scope of a firm if its power in an industry will have overwhelmingly negative effects for the public good; at others, it may preserve large firms' advantages in order to prevent competition that may have perverse consequences for general welfare. These interventions are likely to have distributive effects, which may further influence economic and political outcomes; thus, understanding the role of stakeholders and their relative influence over government action is also necessary to understanding both the likelihood of government intervention in markets, and in whose benefit that intervention may be. (Köhler and Stockhammer, 2015)

The unified heterodox macroeconomic theory integrates Minsky's Financial Instability Hypothesis (FIH), which absorbs "endogenous money supply/credit ... to endogenous expectations about the buoyancy of real and financial markets" into its aggregate economic framework. (Goldstein, 2009, 45) Minsky argued that "the way prices of capital assets are determined or how positions in capital assets and investment activity are financed," generates instability that links real and financial sectors of the economy. (Minsky, 1982, 16) The balance of assets and liabilities banks maintain may increase the potential for crisis, especially as banks compete with other intermediaries for lending opportunities or search for profit opportunities in securities markets. (Gabor, 2020) In a fragile financial system, changes in the value and liquidity of assets affect the ability of banks and other institutions to pay their debts; as fragility increases so does the propensity for financial and broader economic crises, which affect both real and financial sectors. (Minsky, 1982) Banks have an

incentive to “induce speculative finance in others,” and to “develop liabilities that enable those who would otherwise hold cash to dispense with cash.” (Minsky, 1982, 30) Any for-profit bank will have the incentive to tinker with liability structures, issue assets, and innovate in the creation of those assets, to increase their potential yields. Regulatory structures inhibit these practices, while liberalization exacerbates them. Finally, the presence of a lender of last resort, an institution such as a central bank that will “prevent a generalized fall in asset values by extending credit to organizations with refinancing problems,” can create a moral hazard problem, if banks, other financial intermediaries, or firms believe that their obligations will be paid in a moment of crisis. (Minsky, 1982, 35) Similarly, the rise in shadow-banking, and novel means of funding bank activity generate new sources of instability, as private intermediaries take on larger importance in a financial architecture. (Gabor, 2016) This paper will show how German banks’ reliance on securitized assets increased relative to lending prior to the GFC and the Eurozone Crisis.

The unified heterodox macroeconomic theory also considers how globalization can increase economic instability. Free trade and financial liberalization “[can shorten] managerial planning horizons and [divert] funds to speculative financial investments away from investment in physical capital.” (Goldstein, 2009, 46) Financial liberalization and globalization deny governments tools to shield their economies from international crises or limit exposure to destabilizing capital flows. Keynes argued for keeping manufacturing and financial flows domestic when “reasonably and conveniently possible.” (Lee, 2009; Keynes, 1933, 191) International financial liberalization increases the propensity for capital flight and the potential for banking, currency, and balance of payment crises. (Crotty, 1983) Declining aggregate demand in one economy begets financial and real sector crises across borders, which can transform into new financial crises with unique real sector and financial sector implications. The rise of shadow banking, and increased European reliance on bundles of sovereign debt from a range of EMU countries as collateral for repurchase agreements

further increased linkages within the system, and the potential for financial crisis in the event of a run on the repo system. (Ban and Gabor, 2015) This paper will show how increased cross-border financial activity opened German finance to new risks, and increased the scope of German and European financial losses during the GFC.

History

The German government has long dictated the structure, competition, and profitability of the German financial system, from the 19th century onward, and intervened directly to promote the interests of one group of banks over others. (Deeg, 1999) From the early 1900s through the 1960s, German financial regulations typically promoted Landesbanks' interests over private banks' interests in order to ensure financial stability and democratize access to credit. In the postwar period, by contrast, the government gradually reversed course, by actively promoting competition between pillars of German finance in the name of profitability, with the paradoxical effect of reducing bank profits throughout the system. (Fischer and Pfeil, 2003; Seikel, 2017) Despite efforts by Germany's central bank, the Bundesbank, to periodically strengthen capital stringency over this period, German banks gradually embraced riskier asset and liability balances, which increased German vulnerability to financial crisis. This section first examines the history of the three main pillars of German finance before the 1960s, when the German government largely protected the interests of Landesbanken to the detriment of large private banks. Then it considers the period after the 1960s and before the implementation of the Maastricht Treaty, when the German government began to deregulate German finance in ways that promoted private banking interests to the exclusion of public banking interests. Finally, it examines the period from the 1990s through 2008, after the creation of the Eurozone, when private banks used EU laws to eliminate the last existing German protections for public banks. Throughout, it charts how these institutions changed over time, and how the evolution of German financial regulations, interest group promotion, and public opinion changed in ways that

prioritized private banks' interests, competition and profit maximizing over stability oriented banking, and increased German banks' vulnerability to financial crisis.

Public banks have, since the 19th century, played a strong role in providing credit to German households and nonfinancial businesses. Public savings banks and credit cooperatives were designed as low-risk depository and lending institutions for households and local development, with little profit motive, in contrast to large private banks. (Deeg, 1999; Seikel, 2017) They historically worked with local governments, competed with private banks and credit coops, and provided services for local banks that private ones would not. (Deeg, 1999) Regional concentrations of types of banks have varied over time – the heavily industrial Ruhr region historically had a larger proliferation of private banks, while areas with fewer industrial resources had larger proliferations of Sparkassen and credit cooperatives. (Deeg, 1999) The German government shaped Germany's financial system through regulation and “direct intervention.” (Deeg, 1999, 24) Strict competition rules applied: mergers could not occur between different types of banks, so competition emerged gradually at the group level. (Seikel, 2017; Deeg, 1999) State- and national-level government actively promoted the status of public banks, in response to inconsistent financial service provision by private banks through the country, and also in response to demand by small businesses, the self-employed, and farmers, who thought public banks and credit coops better served their interests than private banks. (Deeg, 1999, 32) After a global capital shortage in 1907, Sparkassen and Landesbanks lobbied for greater government intervention in finance, and received two kinds of liability guarantees to Landesbanks: guarantor liability, which eliminated limits for liability guarantees, and “institutional liability, [which] obliged the guarantors to ensure the uninterrupted economic existence of,” public banks. (Seikel, 2017, 159) This reflected both bank management interests as well as state-level governments' interests, who relied on the existence of regional banks. (Deeg, 1999) Since Landesbanks were guaranteed to remain viable under German law, regardless of their funding status,

their credit ratings soared relative to their competitors,’ lowering some of their operating costs relative to private competitors. (Deeg, 1999)

From the early 1900s onward, private banks routinely lobbied the German government to relax its protections for public banks, and also to liberalize competition regulations to allow private banks more opportunities for profit across Germany. In the early 1930s, large private banks tried competing for business in territories that had previously been served only by credit cooperatives and public banks; their strategy backfired in 1931, when the German government increased private banks’ “licensing requirements,” to match those of public banks. (Fischer and Pfeil, 2003, 9) These changes deterred private banks from entering markets served by public banks and cooperatives. In 1934, the government approved laws to strengthen domestic banks’ capital requirements; by 1936, German banks across the pillars agreed to fix interest rates to promote investment according to the Nazi party’s wishes, an arrangement that would hold until the 1960s. (Fischer and Pfeil, 2003) These regulations preserved individual banks’ (especially public ones’) viability, allowing banks to prioritize safety over profitability, and were intended to promote real sector activity through lending. (Deeg, 1999)

In the post-war period, the German government’s interventions in domestic finance gradually changed to favor private banks and competition, rather than stability and equitable access. The government removed branching limitations and increased the scope of securitization activity banks could undertake. In 1958, the government abolished bank branching restrictions in response to political pressure from the left to move away from Nazi-era policies. (Seikel, 2017) This benefited private banks, by allowing financial institutions across pillars “to open branches everywhere in the country without passing a public needs test,” especially since Sparkassen and credit coops were unlikely to invade other such banks’ local markets. (Fischer and Pfeil, 2003, 10) Sparkassen and credit cooperatives’ fraternal unwillingness to compete allowed those pillars’ branches to maintain

their profitability for a time, while private banks gradually encroached on their markets in the early 1960s, introducing more fratricidal competitive dynamics, and illustrating the dynamic that Crotty's work on US competition predicted. (Detzer and Hein, 2014) In 1965 and 1967, the German government eliminated interest rate coordination and all interest rate controls respectively, which allowed banks to compete on the interest rates they charged, and led to a decrease in overall banking profits. In 1968, Germany's central bank, the Bundesbank, limited foreign competition in securities markets by mandating that only German could underwrite Deutsch Mark denominated securities; it expanded this provision in 1980, then abolished it in 1985, effectively reintroducing foreign competition to security issuance. (Fischer and Pfeil, 2003). In 1974, the government created different types of deposit insurance schemes for different types of banks, and authorized the Federal Banking Supervisory Office (FBSO) "to audit single institutions without special reason and defined limits on losses experienced by credit institutions that lead to mandatory closure by the FBSO." (Fischer and Pfeil, 2003, 13) In 1985, the government passed a third amendment to the Banking Act, which strengthened capital requirements for banks, but also "raised the threshold of the reporting requirement for large loans from around €500,000 to €1500000." (Fischer and Pfeil, 2003, 13) These amendments would increase stability in the banking sector in some ways, and increase risk in others.

At the same time that the German government dismantled protections for public banks, German negotiations over the creation of economic and political unions with other Western European countries, and the institutions that resulted, created new sources of instability for domestic banks, especially through the architecture of the single market for finance and the elimination of capital controls within Europe. In the years following the end of WWII, Germany emerged as a major continental center of finance, and German banks were early lenders to institutions and actors elsewhere in the Europe. (Story and Walter, 1997) German negotiators consistently advocated for unions and signed treaties that removed barriers to international finance

and trade, from the Treaty of Rome, which established the European Commission (EC), which recommended actions for member states, and the European Economic Community (EEC), a customs union that would pave the way for a common European market. German negotiators contributed to the design of the 1970 Werner Report, which proposed creating a common European currency, liberalizing capital flows, and other financial deregulations, as well as a supranational central banking system for Europe. Though the plan ultimately failed due to a confluence of national interests, the global collapse of Bretton Woods, and supply shocks like the oil crisis, German representatives continued to advocate for the elimination of European financial barriers, ultimately finding purchase in the 1980s as architects of the Delors Report, a precursor to the Maastricht Treaty, finalized their design. (Story and Walter, 1997; Verdun, 2000; Abdelal, 2007) Globalization of European finance created a market for German lending, and increased the potential for financial contagion at that level.

Large private banks were the only German financial institutions that formally lobbied to create a European economic union. Business groups – institutions that lobby on behalf of industries or firms – from across Europe contributed proposal designs at different stages of negotiation for European integration. (Van Apeldoorn, 2000; Greenwood, 2017) In aggregate, German banking groups' relative support for a supranational European monetary union was ambiguous, and their ex-post efficacy in changing policy outcomes is not much apparent, but representatives from financial ministries, banks, and especially large private intermediaries in Germany like Deutsche Bank – shaped and supported the creation of the SEA, and the liberalization of European capital flows. (Grossman, 2004, Pagliari and Young, 2014) Private German banks' support of European financial integration was the exception to most of German finance's opposition to integration, though they were part of a larger group of large financial interests that supported the creation of a single market for European capital. (Mügge, 2010) While large private banks saw a route to dominating public

banks under EMU and the SEA, public banks feared losing their protected status. (Fischer and Pfeil, 2003; Seikel, 2017)

Ultimately, German banks that were prepared to engage in international lending and participate in international capital markets stood to benefit from two financial elements of the creation of the Eurozone: the Single Market Passport (SMP), and the Second Banking Coordination Directive (SBCD). The SMP removed barriers to trade and capital throughout the EMU, and the SBCD mandated that banks be allowed to perform a bundle of tasks in host countries that they could legally provide in their home country. (Gruson and Nikowitz, 1988) The SMP and SBCD increased the functions that Europe's financial intermediaries could provide throughout the union, as well as the extent of activity that banks were expected to provide. This encouraged member countries to liberalize financial systems, which magnified systemic risk in the EMU's financial arena, and subsequently destabilized the EMU's economy by opening banks up to markets, financial instruments, and activities they were not legally equipped to monitor or regulate. German banks with experience lending in Europe and beyond had toeholds in the supranational market for goods, credit, and services, and German banks that were 'universal banks', capable of underwriting and distributing securities, lending, and more were likewise poised to benefit from the creation of a new space in which they could operate. This standard best positioned large private banks among the German banking pillars, since they had long experience operating as universal banks, both underwriting securities and lending directly to firms and other borrowers.

The terms of the Maastricht Treaty and the SEA prohibited national government protections for banks under EMU, which both accelerated pressure for the German government to eliminate protections for Landesbanks and Sparkassen. In this legal environment, Germany's private banks brought more suits against public banks. (Seikel, 2017) Though these attempts to undermine protections for public banks had failed in German courts as recently as the 1980s, the European

Court of Justice (ECJ) and IMF helped private banks make their case. (Fischer and Pfeil, 2003) In the 1980s, the ECJ allowed the German Directorate-General of Competition (DG-Comp) to bring suits against all subsidies public banks received from the government, impeding sources of low-risk funding for those banks. (Seikel, 2017)

As private banks brought suit against the Landesbanks, public and institutional opinion supporting the government's protection of them began to decline, further diminishing their popular institutional support structure. Under the new financial regulations, the DG-Comp, reversed its previous opposition to private banks' suits against public banks. After 1992, the DG-Comp moved in favor of private banks, by bringing suit against Landesbanks in front of the European Court, and arguing against all state aid to Landesbanks and public savings banks in Germany. (Seikel, 2017) Despite government attempts to protect Landesbanks and Sparkassen's status, the German association of public savings banks and the German government ceded to the DG-Comp's position against the Landesbanks by the late 1990s. The European Court ruled in 2001 against Landesbank protections, and Landesbanks received a four-year transition period in which they retained some government protections. In this twilight, Landesbanks acquired the most profitable assets they could while their assets and liabilities were still guaranteed, and created SIV conduits described in the previous section of the paper to maximize their potential profits. (Seikel, 2017; Detzer and Hein, 2014) These decisions would destabilize German banks and the economy by the time of the GFC.

At the same time, the German government continued to liberalize domestic financial markets in ways that increased pressure on all German banks, including Landesbanks and Sparkassen, to compete for profits. In 1994, it allowed money market funds (MMFs) to operate and offer retail finance services to German consumers, which increased competitive pressure for retail lenders throughout Germany, especially cooperatives and Sparkassen. By 1998, the government allowed banks to use proprietary risk assessment models, despite the simultaneous mandate for the

FBSO to ensure against mismanagement of financial firms. (Fischer and Pfeil, 2003) This policy encouraged banks to take on more risk if they could credibly argue their solvency. This allowed German banks to embrace riskier assets like asset-backed-commercial-paper (ABCP), which they could move off of balance sheets, to boost profits at the expense of increasing systemic risk.

(Georgescu and Laux, 2007) These changes occurred in the midst of innovation throughout the global financial system, and an increasingly globalized securities market. The pressure to compete with banks in the US and UK was omnipresent; large German banks adapted to their new circumstances by increasing their accumulation of risk to boost profits. (Crotty, 2008)

European promotion of shadow banking also increased aggregate risk throughout German finance, despite attempts by the Bundesbank to prevent domestic banks from engaging in the practice. French banks adopted repurchase agreements under the auspices of the Banque de France earlier than their EMU peers; though large German private banks like Deutsche Bank appreciated repo's profit opportunities, the Bundesbank imposed reserve requirements for repos, to limit financial volatility. (Gabor, 2016, 976 – 978) Private German banks responded by using French and UK affiliates for repo transactions, and nonfinancial German firms brokered repos with UK intermediaries. (Gabor, 2016, 979 – 980) German banks lobbied the Bundesbank to relax repo standards during EMU; it gradually yielded the changes they desired. The Bundesbank and ECB gradually came to accept repo finance as an attractive strategy for funding bank activity in the midst of European financial competition. (Gabor, 2016, 983) European developments facilitated private German banks' liberalization aims: in 1999, the European Commission recommended integration of an EMU wide repo market, and "the 2002 Collateral Directives" standardized legal frameworks for the cross-border use of collateral, which sidestepped domestic attempts to regulate repo markets, and neglected to impose EU-level regulations or oversight. (Gabor and Ban, 2015, 623) Membership in the Eurozone undermined domestic attempts to regulate German banks' repo activity just as the

ECB actively promoted European repos to provide liquidity to banks. (Gabor, 2016, 984) At the same time, the burgeoning market selling US subprime mortgage backed assets spurred the creation of SPVs by large private German banks and Landesbanks to purchase those assets without affecting parent banks' capital standards. (Lewis, 2010; Acharya and Schnabel, 2010) German banks – particularly large private banks and Landesbanks – acted both as parties, through their sale of bundles of assets to financial intermediary counterparties, as well as counterparties, through their purchase of assets, including subprime mortgage backed assets from US-based banks. (Pozsar et al, 2010; Hüfner, 2010) These practices worked to undermine European stability on the one hand, and expose German banks to US-originated financial risk on the other.

The German financial architecture embodied contradictions over the 20th century: while the government promoted public finance, even during the global rush to privatize financial systems in the Reagan/Thatcher era, it allowed most banks to engage in universal financial activity. Though banks were historically limited in how and where they could open branches, and independent regulatory bodies had powers to intervene in bank management, Germany eliminated interest rate controls and other prohibitions on banks activities before its peers. (Fischer and Pfeil, 2003) Government motivation was central to these directives, especially in liberalization after the SEA. Eliminating protections for public banks, in the face of private bank pressure and new EU banking regulations that the German government had lobbied for, increased competition within German, European, and global finance at large. The next section explores how banking changed as a consequence of these changes from the 1970s onward at the national and supranational levels, and their implications for competition, profitability, stability, and crisis.

Stylized Facts – Empirical Evidence

This section explores how German banking changed in response to regulatory changes in finance from the 1980s onward. Throughout, trends emerge of an increasingly competitive, less

profitable, and riskier financial system, especially between the large private banks and Landesbanks. The increasingly risky strategies of Landesbanks and large private banks reflected in part its government's attempt to become a global financial capital, as well as increasing risk for large private and public banks, and the globalization of the new financial architecture that directly exposed German banks to housing bubbles in the US, and indirectly exposed peripheral European economies to those risks through the sovereign debt dominated repo finance occurring in the EMU. Together, they show how rapid liberalization of finance, even in a sophisticated Western European economy, can increase systemic risk, which would eventually bottom out in the GFC. They also show how certain pillars and economies in Europe emerged as leaders in their respective financial markets, despite falling profit rates all around.

From the 1970s through the 2000s, domestic and global competition increased for German banks. Though neoclassical theory predicts that rising concentration should increase profitability, something closer to Crotty's fratricidal competition emerged, as banks rushed to cut prices and costs, leading to disequalizing profits and increased exit from the market. (Hüfner, 2010; Crotty, 1993 and 2008) Despite declining profits, certain banking sectors and economies emerged as leaders in Germany as a competitive pressure increased. The number of German banks operating dropped from 4370 in 1985, to 3435 in 1995, to 1934 in 2005, and eventually to 1805 in 2015; mergers and takeovers occurred within different pillars of the German financial sector, particularly in small savings banks and credit cooperatives, and typically resulted from the resolution of a troubled bank, rather than a profit grabbing move across sectors. (Bundesbank Statistics, 2019, Hüfner, 2010) While assessments of the changing concentration of German financial markets vary by scope, Herfindahl-Hirschman Indices fell, and total financial market Concentration Ratios of German finance increased from the 1990s through 2012. Decomposing these figures by pillar of bank and by region show sharper increase rates. (Fischer and Pfeil, 2003)

Though consolidation threats motivated banks to cut costs, banks' profitability fell in Germany. From 1980 until 2000, German banks' returns on assets (ROA), and net interest margins fell, before plateauing in the early 2000s. Decomposing this by sector of German bank, the largest private banks had the largest losses: their Return on Assets, the ratio of net income to total assets, fell from a peak of 4.01% in 1983 to a plateau around 1.6% in 2000. Sparkassen and credit cooperatives' ROA declined from approximately 3.5% to 2.4% in 2000, where they are at time of writing, yet their profitability is higher than all other pillars of German finance. Historically the least profitable sector, Landesbanks' ROA declined from 1% in 1983 to .7% in 2000. (Deeg, 1999; Seikel, 2017) As Landesbanks lost state guarantees, and changed the structure of their financial activity, their profitability stayed low. Regardless of declining bank profitability, certain winners emerged. The overall asset share held by public banks steadily declined from 39% in 1975 to 26% in 2015; in this period, private banks' share of total German banking assets rose from 20% in 1975 to 37% in 2015. In 2010, private banks overtook public banks' share of total assets, despite continually falling profits over this time. (Bundesbank Statistics, 2019)

Asset shares grew riskier over this period, as profit rates fell. German data reveals decreasing lending to non-financial firms relative to financial firms. (Röper, 2018) Average domestic rates to nonfinancial firms and households see-sawed from 1973 through the 1990s, after which, both rates declined on average. Bundesbank and ECB discount rates predicted these changes by roughly a year. Interest rates fell repeatedly, even as GDP rose and investment maintained a roughly constant share of 20% of GDP; declining investment by firms and decreasing interest rates imply that this decline had a demand component. Though lending decreased overall and relative to total assets for German banks after the 1970s, it maintained a share close to 90% of all Sparkassen and cooperatives from the 1970s onward. Landesbank's decline in lending from 55% in 1992 to 40% of total assets in 2007,

and large private banks' decline from 68% in 1992 to 47% drove the overall trend. (Bundesbank Statistics, 2019)

Securities grew as a share of bank assets for Landesbanks and large private banks over this period. Security issuance and securitization of loans increased from the 1970s through 2008, only decreasing as a share of bank assets after the GFC. This trend was not unique to Germany in this period; large financial centers like the US and the UK, disguised balance sheet risks by moving liabilities off of balance sheets and reducing banks' capital requirements. (Grahl, 2011) Increasing securitization relative to lending started for Landesbanks between 1999 and 2004, and accelerated for private banks between 2005 and 2007, after German financial laws changed facilitate regulatory arbitrage with SIVs. (Acharya and Schnabl, 2010) These changes increased 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 other European and Asian countries. (Acharya and Schnabl, 2010) If the global asset market were robust, German financial intermediaries would easily be able to liquidate these assets; if those asset markets lost stability, investors risked greater losses. Lax regulatory standards for German banks that created SIVs make it impossible to show decomposed pillar level data about asset backed commercial paper (ABCP) holdings in the years before 2008. However, analyses of major banks that failed have shown particularly large holdings of ABCP by large private banks, followed by Landesbanks. These appear to have been a response to tightened competition between the two pillars, and would have implications for those sectors' losses in the ensuing GFC. (Georgescu and Laux, 2007)

European financial market integration encouraged cross-border financial activity, increasing the potential for contagion, sudden stops, and instability in the event of a downturn. Before EMU, German bank assets were increasingly international, and this trend accelerated for Germany and Europe as a whole after the 1990s. German lending to foreign counterparts grew relative to

domestic lending as a share of total lending from the 1980s onward, accelerated after the 1990s, and only declined after the 2008 GFC. Private banks and Landesbanks accounted for most of this shift – their lending to foreign counterparts increased from 15% and 10% in 1980 to 49% and 40% in 2008. (Bundesbank Statistics, 2019) Private banks' and Landesbanks' shares of foreign securities also grew (respectively) from 15% and 11% in 1980 to 51% and 54% of total security holdings in 2008, even as overall shares of securities were increasing. (Bundesbank Statistics, 2019) Increased financial globalization exposed German banks to international instability, especially in opaque asset markets.

German exposure to contagion risk increased in this period, as gross flows increased between EMU members. After European unification, intra-EMU lending and borrowing increased. BIS locational data show that core European international claims and liabilities increased from 58% of GDP in 1992 to 316% in 2007, and that peripheral EMU claims and liabilities increased from 37% of GDP in 1992 to 121% in 2007. (BIS Statistics, 2019) European claims and liabilities against other European countries increased steadily from the 1990s onward, with accelerations at different phases. (Fuller, 2018) These capital flows increased as percentages of lenders' and borrowers' GDP, indicating increased financial integration within Europe, and these rates accelerated over time, particularly after Euro notes and coinage went into circulation in 2002. As cross-border financial flows increased, the risk of financial contagion, sudden stops, and reversals of capital flows in the EMU followed.¹ Another source of instability was asymmetric flows between Europe's core, such as the UK, Germany, and France, to Europe's newly liberalized periphery.² Disparities grew between capital flows relative to lenders' and borrowers' GDP. In 2007, Germany lent on average 8.05% to Spain (18.56% of Spanish GDP), 48% of its GDP to Iceland (42.85% of Icelandic GDP), and 5.03%

¹ From 2009 onward, these flows decreased, reflecting the worsening Eurozone Crisis. (BIS Statistics, 2019; Thompson, 2015)

² This paper includes Austria, Belgium, France, Finland, Germany, and the Netherlands as core EMU economies, and Greece, Ireland, Italy, Spain, and Portugal as peripheral EMU economies.

to Ireland (64.35% of Irish GDP). In 2008, Germany lent 6% of its GDP to Ireland, a volume worth 84% of Irish GDP. (BIS, 2019) This is an obvious relationship, but the scale of these flows to smaller economies should have predicted future crises.

As banks' asset shares grew riskier throughout the Eurozone, their liabilities likewise transformed. Private sector debt, especially financial sector debt, increased in Germany and the rest of Europe, overall and relative to GDP. Financial debt to GDP growth was greatest in core economies; the only peripheral EMU economy with a comparable ratio of financial debt to GDP was Ireland. In Europe, liability shares of currency and deposits decreased relative to loans, shares, and other securities. (OECD Statistics, 2019) Though EMU financial sector leverage and debt-to-equity ratios stayed roughly constant in this period, they grew after the financial crisis in 2007, indicating the inadequacy of risk-weighting calculations in the years approaching the sub-prime mortgage crisis, and the losses and write-downs of capital following the GFC. Sovereign debt risk grew in this period. Though government debt fell as a percentage of GDP for most EMU nations until 2007, when government debt began to increase as a percentage of GDP for all members, cross-border acquisition of sovereign debt increased throughout the Eurozone. (Blundell-Wignall and Slovik, 2011) German banks acquired larger portfolios of debt issued by other European states, and would not decrease those holdings until 2010. These dynamics bound European states and increased cross-border contagion risk, and also reflected irrational assumptions of country-level default risk in a downturn. (de Grauwe and Ji, 2012) After the GFC, government debt over GDP increased throughout the Eurozone, reflecting governments' commitment to backstopping their financial systems and minimizing the costs of the financial crisis.

German banks, especially large private banks and Landesbanken, were the largest European participants in shadow banking; the primary assets these banks (or their affiliated SPVs) purchased in repo agreements were mortgage-backed securities that had originated in the US. (Pozsar et al,

2010, 32; Düwel, 2013, 4; Kerl, 2018, 19) These appear to have been a response to tightened competition between the two pillars, and would have implications for those sectors' losses in the GFC. (Pozsar et al, 2010, 32; Georgescu and Laux, 2007, 24) This is partially explained by federal insurance for Landesbanken liabilities until 2005: Landesbanken had an incentive to use repo strategies to avoid capital requirements for particular assets and liabilities, though large private banks also engaged in the practice. (Arteta et al, 2013, 23; Koch and Kerl, 2015, 498) Foreign branches of German banks were particularly likely to engage in foreign asset acquisition and repo, as well as international lending, and to require liquidity support from their parent banks after the 2008 crisis. (Kerl, 2018, 4) At the same time, German banks were likely to sell bundles of European sovereign bonds as collateral for repos with non-bank financial intermediaries in Europe. (Gabor, 2016) German government bonds were popular collateral for repos; German sovereign debt eventually emerged as a safe asset throughout the Eurozone during the Eurozone Crisis. This had implications for the subsequent subprime-mortgage asset losses yielded throughout the financial system, and had repercussions for peripheral European governments' ability to sell bonds later on. German sovereign debt remained in high demand, while sovereign debt by peripheral economies became ever more expensive to service. (Gabor and Ban, 2015, 629)

Landesbanks' and large private banks' shadow banking practices reveal a contradiction that would shield German financial institutions during the

Eurozone Crisis. While German banks incurred risk by setting up SPVs to facilitate repurchase agreements using risky US mortgage bonds as collateral, increasing German financial instability, the popularity of German government debt in sovereign bond collateral bundles eventually made German debt effectively a safe asset within the Eurozone, insulating it from liquidity crunches during the Eurozone Crisis (Gourinchas and Rey, 2016, 10; Van Riet, 2017, 20-21). Though German financial practices, a response to competition within German finance as well as

with international counterparts, encouraged behavior that generated risk in the German financial system, the popularity of German sovereign bonds would shield the country from larger liquidity crunches as the Eurozone crisis escalated.

This section has shown how banking practices changed across German banking pillars from the 1970s through the early 2000s, and throughout EMU after 1992. Increased competition in Germany between large private banks and Landesbanks, which held the largest shares of German assets, caused them to increase systemic risk in pursuit of profits. Both sectors increased issuance of securitized assets and international activity. These dynamics increased German exposure to financial instability and international risk. In Europe, competition brought consolidation and declining profits, increased cross-border financial flows, and more sources of financial instability. German acquisition of sovereign bonds from the European periphery opened domestic interests to risks of sovereign debt crisis. While German banks' increasing exposure to risk in the US and global housing markets mirrored Western countries' financial trends in the securitization developments, the scale of its activities was second only to the United States, and surpassed other EMU peers. In the moment of the collapse of the sub-prime mortgage backed asset bubble, these connections would become relevant with major financial and economic consequences.

Crisis

The financial crisis of 2008 and its aftermath revealed the consequences of German financial liberalization, and the increasing emphasis by large private banks and Landesbanks on securitized assets, shadow banking activity, and international financial orientation. Core global economies with current account surpluses, including Germany, "did as badly in terms of bank stock returns as deficit countries like the United States and the United Kingdom, with Germany ... doing the worst." (Acharya and Schnabl, 2010, 4) German banks' losses revealed the risks that large commercial banks and Landesbanks had taken before 2007, and their spillover effects for German and European

nonfinancial firms and households. (Hüfner, 2010) Germany's increased financial interlinkages with European counterparts exposed peripheral Eurozone economies that had not engaged in similar financial shifts to risk originating in the subprime mortgage boom; the ECB's and German government's unwillingness to roll over financial obligations increased the economic costs of the crisis at the European level. (Thompson, 2015)

German banks lost billions of dollars in the subprime mortgage crisis of 2007, leading to decreased bank profits, changed lending practices, and mergers and acquisitions. German banks had some of the largest global write-downs following the 2007 crisis. Write-downs were close in value between private and public banks – the four private banks with the largest write-downs on subprime mortgage lost a total of 16.19 billion US\$, while the five major public banks that registered large write-downs lost 15 billion US\$. (Landler, 2008; BBC News 2008 (a, b)) Mergers and acquisitions occurred among private German banks and public banks, and many private and public bank employees were fired after 2008. (Hau and Thum, 2009) Though both private and public banks registered large losses and received bailouts from the German states and banking groups, Landesbanks, which accounted for 21 per cent of total banking system assets in 2008, received 43 per cent of total write-downs. (Hau and Thum, 2009) This likely reflected the disproportionate share of securities among public banks' total assets. (Acharya and Schnabl, 2010) Lax capital standards under German banking laws had allowed German banking risk to increase by 2007, leaving the government vulnerable to bank failure. Landesbanks increased appetite for profit and risk increased their potential for loss in a crisis, which occurred in 2008. (Hüfner, 2010; Detzer et al, 2013)

Financial sector losses, bailouts and guarantees by the German government, and overall insecurity hurt nonfinancial firms and households. Lending to households and SMEs declined in the years immediately following the 2008 crisis. Commercial and residential lending by German banks steadily decreased after 2007, disproportionate to the decline of nonfinancial firms' attempts to

borrow. (Puri, Rocholl, and Steffen, 2011) Smaller banks – private, public, and cooperative – were unlikely 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. (Hüfner, 2010)

German banks' international exposure to subprime mortgage assets and losses mirrored other core European countries' financial losses. (Acharya and Merrouche, 2010; Brunnermeier, 2009) Complex funding arrangements by German and Western banks and the increased scope of cross-border lending and borrowing within the Eurozone exacerbated European financial system and economic system's fragility as a whole. (Gai, Haldane, and Kapadia, 2011) German financial intermediaries realized the extent of their exposure to debt in the EMU, as those states entered financial crises and received bailouts from their own governments. (Thompson, 2015) 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, assuming that debt throughout the Eurozone was equivalently risky. (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 peripheral states' GDPs. After the GFC, credit flows from the core to the periphery declined, sometimes reversing direction. There is a statistical correlation between changes in the scale of lending and borrowing, and the increasing risk of banks' balance sheets, and the incidence of financial crisis, consistent with this story of the changed European financial architecture, German banking practices, and the broader European crises that followed.

The transition in Europe from the GFC of 2008 and 2009 to the Eurozone Crisis of 2010 reflected fears of contagion. The German government's actions to protect domestic financial interests increased the likelihood of default and scope of recession throughout the Eurozone, and

the European Central Bank's refusal to roll over obligations by EMU governments or to act as a lender of last resort for European financial intermediaries exacerbated these effects. European financial integration increased the sensitivity of European bond markets to spillover effects if credit ratings changed. (Arezki, Candelon, and Sy, 2011) As fears of default increased, German creditors and other private interests sold off bonds in private markets, creating feedback loops that widened sovereign debt yield spreads. (Gourinchas and Rey, 2016) 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. (de Grauwe and Ji, 2012) This was avoidable: the ECB could have bailed out failing banks, or acted as lender of last resort to governments in crisis.

This section has shown how the GFC revealed the excessive risk that large private banks and Landesbanken had accrued in prior years, and the consequences of their failures. By contrast, smaller Sparkassen that did not assume similar financial risk between 2000 and 2008 effectively shielded their German clients from credit spillovers in the aftermath of the GFC. German bank failures were not unique to Landesbanks, and public banks were not universally vulnerable to crisis. At the same time, Germany's economic status within the Eurozone and global demand for its debt effectively shielded German financial institutions from greater repercussions. German banks did not suffer from Doom Loop dynamics, in which private creditors rejected their sovereign debt from collateral, and the Troika managed to leverage peripheral European economies' need for bailouts into promises for austerity, despite peripheral EMU economies' lack of engagement in risky subprime assets.

Conclusion

This paper has shown that German financial deregulation that eliminated protections for Landesbanks and fostered competition between Landesbanks and large private banks destabilized

the German economy, and contributed at least indirectly to the scope of the Eurozone crisis. It has shown that despite being a core economy at the global level, and within Europe, German banks, especially large private banks and Landesbanks, failed to hedge against risks, and generated widespread economic fallout for the German economy, and, later on, for the Eurozone economy too. Crotty's unified heterodox macroeconomic theory predicts that shifts from fraternal to fratricidal competition, especially in the context of financial deregulation and rising securitization, will elicit crisis. Large private banks led public banks in taking on more risk; in their haste to maximize profits and remain viable, Landesbanks adopted similar tactics, acquiring riskier assets, funding activity with riskier liability and asset mixes, and engaging in more international financial activity than domestic activity; both pillars of banks wrote down large losses in the moment of crisis, with negative spillovers for their clients. Yet, the paper has also shown that German banking pillars that did not adopt the riskiest strategies – Sparkassen and financial cooperatives – were better able to serve their predominantly nonfinancial and domestic customers after the onset of the GFC.

The 2008 financial crisis revealed the consequences of German financial liberalization and securitization. German banks' losses revealed how risky private banks, Landesbanken, and foreign branches of German banks had become before 2007, and created liquidity problems in Germany and Europe. (Thompson, 2015, 858; Kerl, 2018, 3) The rise of repo finance that prioritized EMU sovereign bonds as collateral increased German exposure to government debt, and motivated its decision to stop rolling over peripheral economies' obligations, with negative consequences for Europe's economy at large. (Thompson, 2015) At the same time, European demand increased for German sovereign debt as a safe asset, which shielded the German economy from doom loops, even as the German government promoted austerity for the EMU periphery. (Gourinchas and Rey, 2016, 35) These policies and market developments reinforced each other negatively for the Eurozone periphery.

This paper presents a nuanced assessment of the successes and failures of Germany's public banks in the context of the GFC. Landesbanks assumed greater risk, and lost billions of dollars in writedowns following the US subprime mortgage bubble burst; yet, smaller scale Sparkassen succeeded in preserving credit lines to domestic customers. Persistent arguments to privatize Sparkassen, despite evidence of their role in shielding domestic households and smaller firms from spillovers in the GFC resort to arguments that Germany has too many banks per capita, or that profitability of Sparkassen remains low. These are not a priori arguments for private finance; German banks competing most heavily for profits were most likely to engage in the risky behavior that popular commentators criticize in the aftermath of the global crises.

This paper raises the questions of how Landesbanks might have operated in early decades of the 21st century if their protections by the German government had not been eroded, or if their focus had not been redirected to profit maximization over democratic provision of credit. German financial liberalization increased competitive pressure in German finance, encouraging more market-based banking practices, price-cutting behavior and financial innovation that increased systemic risk, particularly in large private banks and Landesbanken. The new financial architecture helped private banks eliminate protections for Landesbanken; competitive pressure from private banks, abandonment by quasi-public entities, and the government's promotion of international securities created perverse incentives for Landesbanken to acquire the riskiest assets before 2006. (Detzer and Hein, 2014, 6) More stringent capital standards, greater leeway for banks to determine their relative risk and need for capital, and financial arbitrage innovations helped Landesbanken to hide their risk, with major costs for the German economy after the crisis. When banks compete for profits, they cut costs, reduce secure asset holdings, and innovate in risky ways. This paper argues for regulations that consistently apply financial regulation to reduce destructive competition among banks. Though this may reduce financial profitability, the stability gains for an integrated financial system, are important.

The paper also argues for protecting smaller banks, public and cooperative. Sparkassen and credit cooperatives, which maintained the lowest shares of securitization and international activity as a share of assets among German banking pillars, managed to shield their clients from the credit crunches that followed the GFC in the west. This dynamic supports Keynesian arguments that stability minded financial policy that focuses on the long-run rather than short-term profit maximization yields stability and growth for the system at large. The support that German banks operating in the US received from the Federal Reserve likewise supports the extension of liquidity protection and lender-of-last-resort (LOLR) services in a global scale. German banks benefited from emergency liquidity support abroad; providing similar access to such services at home, and allowing other European NCBs and the European Central Bank to provide LOLR services would limit the need for direct government intervention in financial activity, and the vulnerabilities that rising fiscal deficits may create.

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