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EXECUTIVE SUMMARY

As the global financial and economic crisis drags on European regulators and policy-makers are continuing in their attempts to find a path from crisis toward stability, while balancing the public interests of independent sovereign nations desirous of a deeper financial, economic, political and fiscal union. Concurrent with these attempts, the media and government officials in the core of Europe are characterizing the crisis as one stemming from profligate borrowing and reckless spending by peripheral Eurozone economies.

Past Eurozone growth, particularly in Germany, did not come from meaningful improvements in productivity, ***but rather on the back of household wage reductions and industry-friendly reforms to the labor market – the Hartz reforms – which transferred wealth from the people to the banking and export-driven sectors of the economy.***

While German and French taxpayers are justifiably angry, their anger is largely misdirected. **Rather than embracing the false narrative blaming only peripheral nations for requiring bailouts, *the anger should more rightfully be directed at:***

- *Designers of the European Monetary Union who, at the creation of the EMU, ignored regular and repeated warnings, from noted academics, analysts and policy advisors, that structural weaknesses would lead us to the crisis we now face;*

- *Banks, in the core, with weak internal controls and excessive leverage, which were profligate lenders in search of yield, to weak private, corporate and sovereign creditors in the peripheral countries;*

- *Those officials and technocrats who failed to properly regulate the domestic banking industry and allowed bankers to treat all sovereign debt as equal regardless of the differing debt capacity of the issuer;*

- *Rating agencies that failed to offer meaningful analysis of sovereign credit capacities and also assumed that too-big-to-fail financial institutions ratings should reflect an implied or explicit guarantee by their home country;*

- *Political leaders who, since the beginning of the crisis, downplayed its ultimate costs and, thus, delayed its resolution and increased the ultimate costs to taxpayers;*

With this as a backdrop, it logically follows that the German government and central bank are seeking to protect the markets for German exporters and the German banking sector. Accordingly, the German government will be forced to choose either a large share of the costs of supporting a further integration of the European Monetary Union or, alternately, the larger economic and social costs of its failure, including the massive costs of recapitalizing German banks and financial support for German industry Either approach will lead to German debts rising markedly while its economy contracts. The costs will be astounding.

The longer it takes for political leaders to offer their constituents full disclosure and transparency, the more costly any solution will be. For this reason, Eurozone political leaders must act decisively.

This paper will not suggest a particular path. Rather, this paper will show the constraints on choosing a path forward are the results of a lack of political will, not economic ability. ***The lack of will is a failure of politicians to lead and of technocrats reticent to deliver unwelcome, but necessary news to the German people.***

In Germany, where real wage declines early last decade robbed households of consumption and represented a transfer of income to domestic exporters and banks, ***the news that taxpayers will now be responsible for bailing out these firms, while accepting reductions in national sovereignty will be a particularly bitter pill to swallow.***

In several Eurozone countries rising nationalistic sentiment threatens to derail the Euro project. A disorderly collapse will result in an outcome far more costly to core countries than fully recognizing losses, recapitalizing financial institutions and integrating Eurozone economies. This paper will explore:

- *Why, in the wake of unification of East and West Germany, Germany was uniquely poised to benefit from a monetary union;*

- *The role that Germany and its banking sector played in setting the stage for a crisis in the periphery;*

- *Germany's current economic and fiscal condition and existing commitments to the periphery;*

- *The possible German debt to GDP implications of various crisis management approaches;*

- *The likelihood German bond yields will no longer remain detached from fundamentals; and*

- *A fair basis on which to consider German obligations to the periphery.*

The longer leaders wait and the less decisive their approach, the greater the risk that German bunds and German banks will lose their status as the "safe haven" assets of Europe. These risks are already on the rise as witnessed by recent the deterioration of global investor appetite for German government and bank securities.

Maastricht: Union that Foresaw its Failure but Closed its Eyes

Although the European Monetary Union is barely a teenager, its conception and gestation precede its birth by decades. Its first conceptual roots trace back to the end of World War II. The first substantial movement toward a common economic and monetary union among members of the European Communities commenced in 1969, when government leaders met in the Hague to craft a plan for the implementation of a union by the late 1970's. This effort was doomed by currency volatility resulting from the global oil price shocks of 1972 and the collapse of the Bretton Woods agreement resulting from U.S. President Nixon's decision to abandon the gold standard.

It was not until June 1988, when the European Council mandated the creation of a commission to "study and propose concrete stages leading towards economic and monetary union"[i] that planning for the current EMU began in earnest. On April 17, 1989, this commission, the Delors Commission, composed of twelve European Central Bank presidents, three independent experts, the European Council President and another European Council Commissioner drafted a report detailing the steps toward such a union and unanimously agreed on its contents. It is questionable as to whether there was enough meaningful public debate on its contents until after the signing of the Treaty on European Union (Maastricht Treaty), which incorporated nearly all of the recommendations put forward by this group of central bankers. It was thus that European governments transferred their national sovereignty over monetary policy to a new European Central Bank.[ii]

While the commission report provided for a map toward integration and a proposed timeframe it also recognized several "problems and perspectives", problems that are among the most significant causes of the current crisis. The report recognized that increases in economic interdependence between members and the creation of a 'single market' would reduce the room for independent policy maneuvers and thus amplify the cross border effects of developments originating in each member country.[iii] With "full freedom of capital movements and integrated financial markets" the report continued, "the integration process thus requires *more intensive and effective policy coordination,*[iv] even within the framework of the present exchange rate arrangements, not only in the monetary field but also in areas if national economic management affecting aggregate demand, prices and costs of production."

Recognizing that many decisions on wages, production, savings, investment, social security education and other government revenue and spending would remain with each sovereign government the report warned that "uncoordinated and divergent national budgetary policies would undermine monetary stability and generate imbalances in the real and financial sectors of the Community."

Where prior attempts to create a monetary and economic union had failed, European leaders pushed forward even in the face of an event within the community which, by its very nature, was tectonic in scale and threatened to sow the seeds of imbalance into the roots of the union.

German Reunification and the Seeds of Imbalances in the Community

"As regards wage formation and industrial relations, the autonomous negotiating process would need to be preserved, but efforts would have to be made to convince European management and labor of the advantages of gearing wage policies largely to improvements in productivity. Governments, for their part, would refrain from direct intervention in the wage and price formation process" – Delors Commission Report

In May 1989, only one month after the Delors Commission report was delivered, Hungary removed its border fence and opened a literal and figurative hole in Iron Curtain. By the end of the year the Berlin Wall had fallen and in August 1990 the Federal Republic of Germany (West Germany) and the German Democratic Republic (East Germany) signed a unification agreement. The process of German reunification did not delay plans to create a European Monetary Union, sowing the seeds of Germany's current crisis, and the fiscal, social and economic imbalances of the Eurozone.

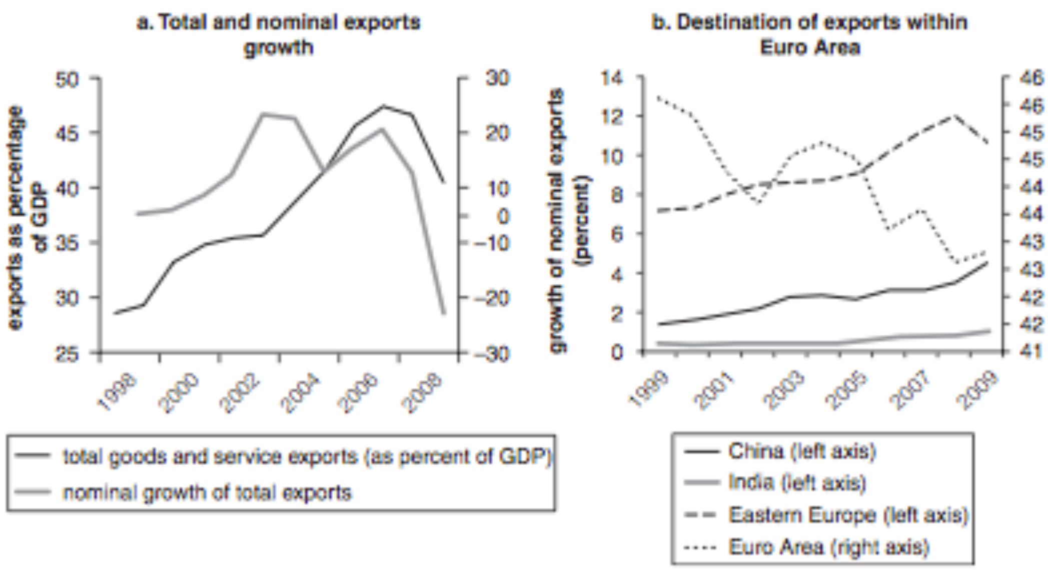
Before the reunification West Germany was large net capital exporter with large current-account surpluses. All of this changed, almost overnight, as reunification commenced. The former West Germany redirected capital to investment in domestic infrastructure needs and the social programs necessary to absorb the former eastern bloc nation. The withdrawal of German capital from the rest of Europe led neighboring economies into recession while, at the same time, the redirecting of that capital domestically drove an economic boom at home. Each year between 1991 and 2003 the west spent four to five percent of GDP on the east.[v]

As a result of the new labor capacity from reunification, Germany was faced with high levels of unemployment to which they responded by creating massive training and job creation programs. The government also instituted a program of unemployment benefits that sought to maintain a worker's social status during unemployment (rather than as a safety net) by providing 6-32 months of benefits at a compensation rate of 67% of the workers last net income (with a maximum of €4,250/month) for workers with children and 60% for those without children. Even after a worker had exhausted these benefits Federal taxes were used to provide benefits of 57% of their last net income for an unlimited period (53% for those without children).[vi]

When the Monetary Union finally came into existence, ***Germany found itself with the reunification boom dissipating, high levels of unemployment, unprecedented government debt, high wages relative to productivity and a currency that had materially appreciated relative to its European trading partners.***[vii] Given the weakness in their economic circumstances, relative to their EMU peers, and social demands limiting the pace at which austerity could be implemented, Germany's Chancellor Schröder sought to undermine key portions of the EMU's "Stability Pact"[viii] which obliged members to maintain budget deficits at or below 3 percent of GDP and a sovereign debt load less than 60 percent of GDP. ***Ironically, Germany's profligate spending a decade ago now represents significant bailout obligations for German taxpayers as they confront the unbridled growth in peripheral debt that resulted from their own actions.***

As domestic investment and consumption slowed, and austerity programs took hold, the effects of German reunification represented an asymmetric shock to the country's Europe neighbors.[ix x]

While Germany's entry into the EMU at an overvalued exchange rate led to several years of suboptimal domestic economic performance, it also set the stage for an export boom largely financed by German banks, lasting through the crisis.

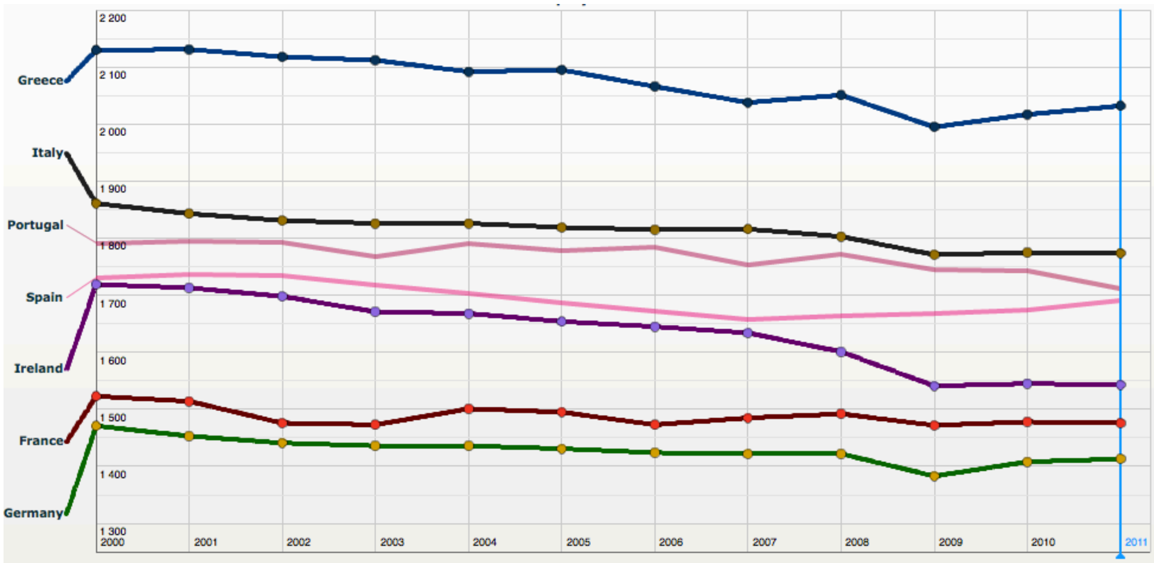


Sources: AMECO database (European Commission); IMF 2010a.
Note: Eastern Europe includes the Czech Republic, Hungary, Poland, and the Russian Federation.

Source[xi]

In 2002, with the unemployment rate at 8.7% and still increasing, German Chancellor Schroeder asked his friend Peter Hartz, former Human Resource Director at Volkswagen, to chair a commission tasked with restructuring the German labor market. ***Under Hartz's leadership the commission redefined the German workforce, reducing traditional full-time employment and introducing the concept of "minijobs." These so-called "minijobs" provided German companies with the ability to hire short-term workers without restrictions on hours worked and who were terminable at will. While "minijob" workers did not pay taxes on earnings; the earnings maxed out at a meager €400.***

Actual Hours Worked per Worker

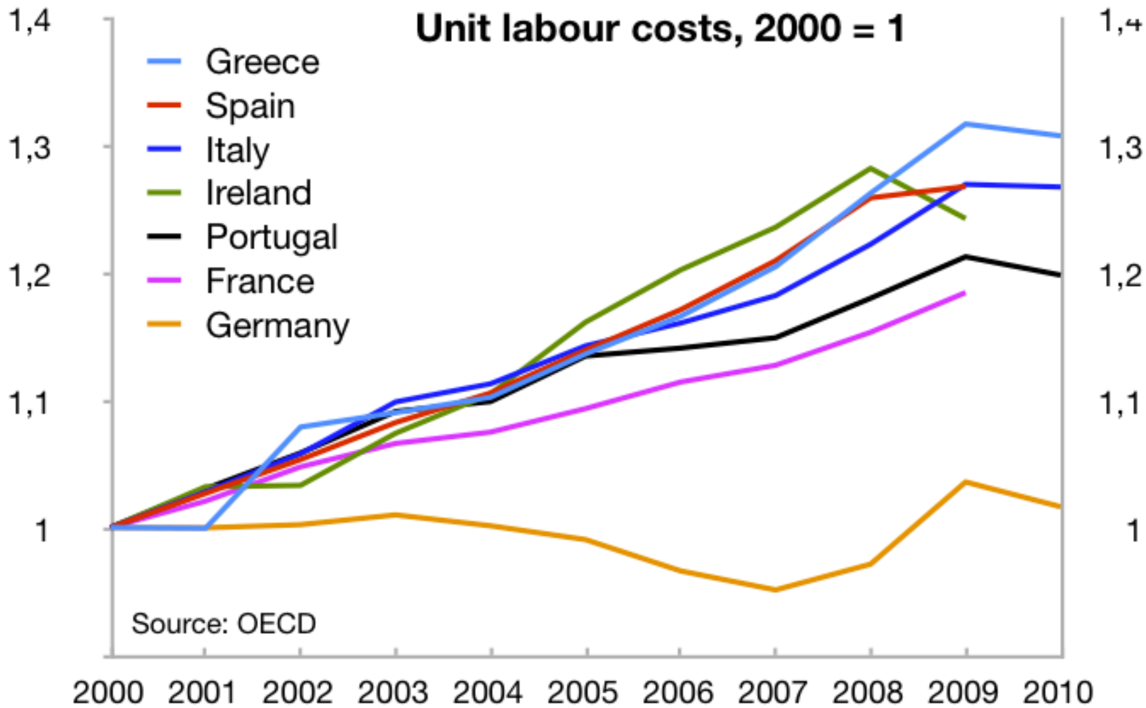


OECD data

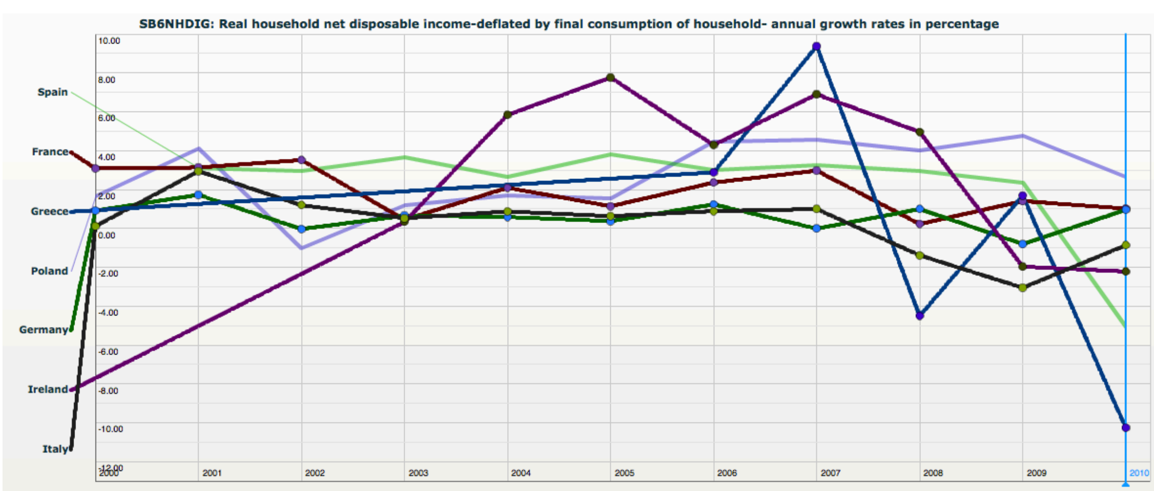
From 2002 to 2005, the German public and private sectors embarked on a series of massive Hartz reform austerity measures focused on using the high levels of unemployment to extract meaningful wage reductions from public and private labor. Even though the Delors Commission report, the intellectual basis of the monetary and economic union, specifically stated that governments should convince business and labor of the advantages of "gearing wage policies largely to improvements in productivity" rather than direct intervention in the wage and price formation process, the German government interpreted this language in ways the authors never intended.

The cuts in real wages for German workers, and reductions in Government programs, benefitted the German financial sector and exports. They also indirectly but substantially supported the country's low cost of funds, giving German business a competitive advantage relative to its EMU peers.

Germany's success during the last decade resulted from its current account surplus within the Eurozone supported by pressure on pay and working conditions rather than superior productivity growth.[xii]



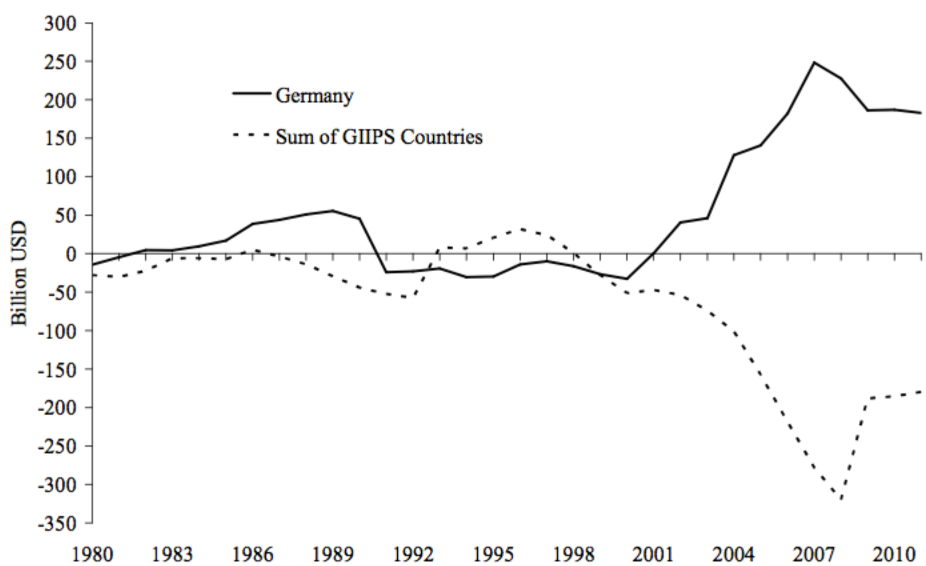
Unfortunately for the German population, while German business profited handsomely, and German Banks exported capital to the rest of the world, the costs were borne by German workers who faced wage pressure. German households never reaped the fruits of their labor. The imbalances that Delors warned about were being built into the very structure of the Eurozone by the German government's sole focus on protecting domestic business interests at the expense of their own population.



OECD

The German population has been led to believe, over the past decade, that they are frugal and that frugal is good. German's are indeed frugal, but not entirely by choice. This is a perverse spin on the real situation, the German people have been deprived of wage increases and therefore of consumption of goods.

Figure 5: Current Account Balances of Germany and GIIPS Countries



Source: IMF.

German Banks and the Search for Yield

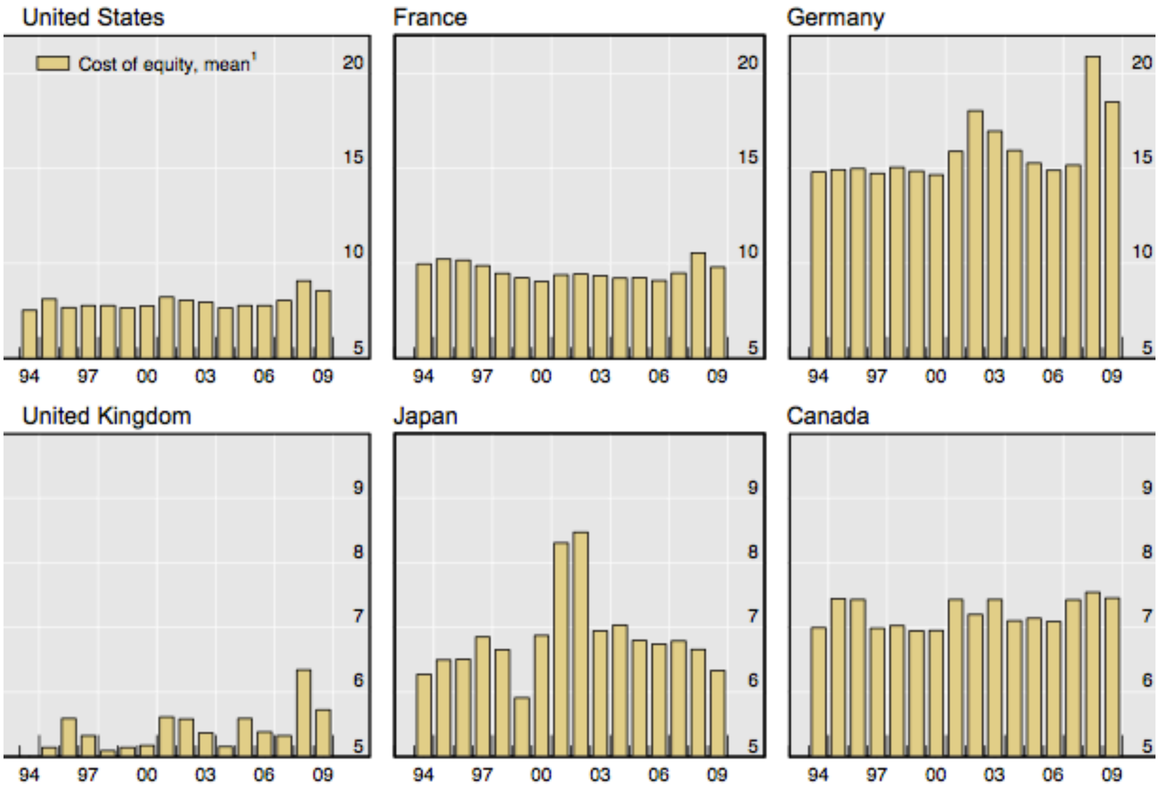
While many agree the global economic crisis was triggered by a crisis in the funding of U.S. structured securities backed by residential mortgage debt, there is little consideration of the role that banks in the core economies of Europe played in stoking the asset bubble in that market and in fomenting unsustainable expansions of debt in peripheral European economies. Without considering the role of core European banks in the global economic crisis we are left with an incomplete picture.

As much as the current European crisis can be correctly viewed as a crisis of over-borrowing in the periphery it must also be recognized as a crisis of negligent and excessive lending by banks in the core of Europe. ***Through this lens the nature of the current bailouts becomes clearer and populations in the core can better understand why political leaders and economic policymaker efforts are less about a transfer of wealth to the periphery than a transfer from the core's public sector to core's banks and exporters.***

By the time the U.S. subprime market crisis hit, European banks had amassed enormous exposures to U.S. subprime assets. Deutsche Bank, the 4th largest issuer of these securities, had helped spread these toxic assets throughout Europe including placing many of them directly with the state owned Landesbanks that had newfound pressures to deal with.
Early in the last decade the European Commission demanded the German government remove its guarantees from the Landesbanks. German Landesbanks' cost of capital increasingly reflected the real risks of ratings downgrades[xiii] because existing portfolios lacked regional and asset diversity and they no longer received government support. With a higher cost of equity capital Landesbanks had more reason to reach for yield[xiv] in an effort to support the "stand alone" ratings they would likely garner when privatized.

Required return on equity and business cycles (inflation-adjusted)

In per cent



[1] Annual estimates of the cost of equity for each country's banking sector are calculated by averaging all values for the banks headquartered in that country on an equally weighted basis. For each bank, the cost of equity figures represent the estimated required equity market return for the bank in excess of the risk-free interest rate. The bank-specific cost of equity is equal to a sum of estimated betas (market, value and size beta) multiplied by the average factor returns. The figures are expressed in real terms by subtracting inflation expectations which are taken from consensus forecasts.

With weak oversight by banking regulators German banks chased yield through increases in leveraged lending[xv] into riskier assets including those of U.S. subprime securities[xvi] and investments in peripheral economies.

When the US subprime market collapsed German banks had enormous exposures to losses on these subprime assets. By January 2008 four German state banks had already amassed a combined exposure to subprime securities of almost €80 billion.[xvii] The salesmen of subprime securities were, at best, amoral and the buyers were, at best, clueless to the possibility that the ratings agencies might be wrong.

Faced with seemingly few options and without a full understanding of the scale of the losses, the German government accepted the obligation, on behalf of their taxpayers, to guarantee the losses and fund the recapitalization of IKB, Sachen, BayernLB and WestLB. To do so, in 2008, the government set up a €480 billion financial market stabilization fund.

It was not only the Landesbanks that sought government guarantees and assistance, Commerzbank, HypoReal and HSH Nordbank and others also required various forms of assistance from German taxpayers. Subsequently, the SofFin transferred the assets of HypoReal to a "bad bank", FMS Wertmanagement, to manage the wind-down of €176 billion of assets. While the ultimate amounts of losses to be recognized are as yet unknown, SofFin recently announced another $17.4 billion (FMS $12.6 billion) for 2011.[xviii xix]

When the focus shifted from the U.S. subprime real estate crisis to the unsustainable peripheral EMU country debt, the German government continued to perpetuate the false notion that German banks' exposure to the U.S. crisis was manageable.

Beyond the risks of subprime, a 'one size fits all' rate structure created by a single currency further endangered the risk management practices of German banks by lowering the borrowing costs to peripheral borrowers and thus providing opportunities for German banks and business to expand their reach into the periphery for diversification and incremental yield. By the end of 2009 French and German bank exposure to Greece, Ireland, Portugal and Spain equaled 16 percent and 15 percent of GDP, respectively.[xx]

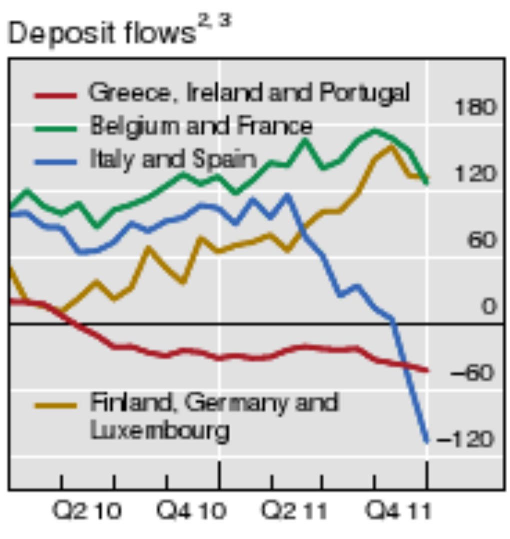
German banking authorities, like banking authorities in most of the world, chose to ignore growing risks by allowing their banks to hold sovereign debts of weaker economies without any consideration of the higher risks of default that these often underperforming and overextended economies posed. While the Basel Committee agreements had *allowed* national regulators to treat sovereign debt as a riskless asset they intentionally left the decision to do so to national regulatory authorities and the German bank regulators had turned a blind eye to imprudent risk management. The European Central Bank's easy money policy[xxi] and standardized collateral rules, which until recently treated all sovereign debt to the same zero risk weighting,[xxii] further incentivized arbitrage activity of banks in the core investing in higher yielding sovereign debt of peripheral issuers.

By June of 2010 French and German banks had held almost 61%, or $950 billion, of the $1.6 trillion of Spanish, Portuguese, Irish and Greek debt held by banks within the Eurozone. Only $174 billion of the German and French bank exposures were sovereign obligations of aforementioned peripheral states, the balance were from corporate and individual obligations in these countries.[xxiii]

As market funding for troubled peripheral governments and their banks dried up, governments in the core and European leadership demanded peripheral borrowers and taxpayers, rather than core creditors, assume the risks even on private obligations.

As example, instead of perpetuating the false notion that German banks' had limited exposure to Irish banks and then forcing Irish taxpayers to support Irish bank debts that resulted in losses to German banks as creditors, in a manner inconsistent with market best-practices, the German government should have demanded the orderly liquidation of Irish bank assets. This would have enabled the return of some assets to German banks and other creditors. Thereafter, creditors should have been required to write off any remaining uncollectible debts.

Instead, Market participants increasingly came to an understanding that these peripheral countries, rather than the German or French banks or their governments, would have to stand behind these debts. Investors began to flee both the bank debt and the sovereign debt of the peripheral economies. As a result, over the past few years, and more significantly in the past year, problems in these peripheral economies have led to large scale deposit flight as foreign investors and domestic populations moved their deposits out of peripheral banks and into the core banks of France, Belgium and Germany.[xxiv]



Consequently, capital flowed from the periphery into 'safe-haven' German and French banks and governments, to the benefit of these core countries.

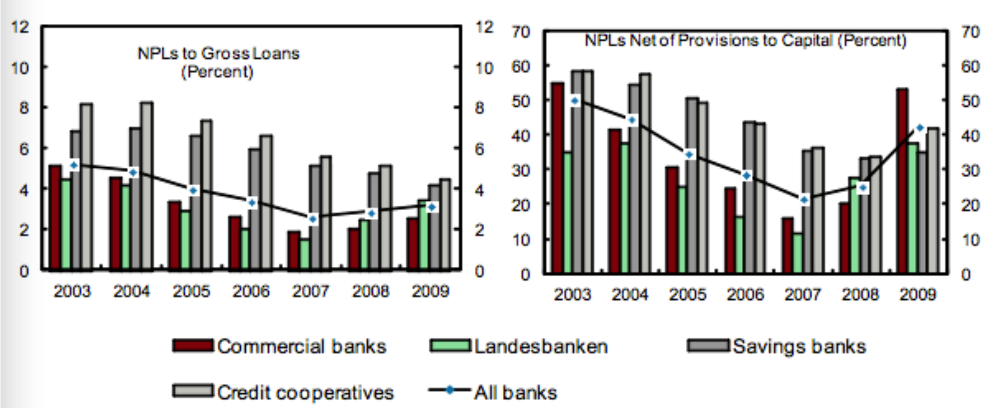
By pushing for government guarantees of troubled institutions European leadership continued to pretend the crisis confronting banks and the sovereigns themselves resulted from a lack of liquidity. If liquidity was really the underlying problem, the argument follows that providing sufficient liquidity would allow funding channels to normalize and losses to be avoided.

Unfortunately, with all of the support and liquidity offered by the ECB and various emergency programs this has not proven to be the case. ***If, however, the underlying belief of European leadership is incorrect and the problems are problems of insolvency rather than liquidity then these guarantees will result in real losses to taxpayer in each guaranteeing country.***

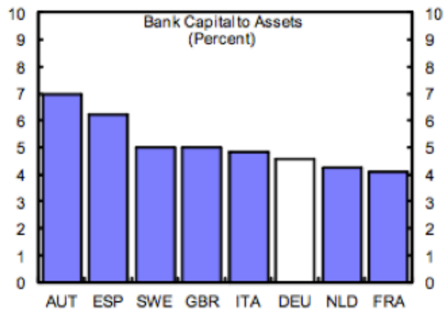
While the "troika" has required several countries to stand behind the obligations of their domestic banks, current negotiations surrounding a €100 billion package to support the Spanish banking system suggest a possible reversal of this approach. These reversals may be a step toward either mutualization of debt and a willingness of the ECB to regulate and recapitalize European banks. Still, many voices within the German government continue to oppose these changes without clearer centralized fiscal agreements from member countries.

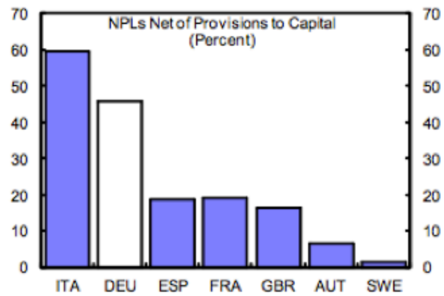
Recently, ECB leadership has pressed for lenders to accept losses.[xxv] ***Even though these calls were rejected, the increasing stresses in the Eurozone and ongoing failure of the German government to properly regulate or even recognize the risks of their poorly performing and overleveraged banks suggest that*** at some point ***the German public may again be forced to massively subsidize Germany's banks.*** This outcome will occur if either German banks are forced to accept losses or, on the other hand, there is an agreement to mutualize debt without the ECB becoming the regulator and source of funds for the recapitalization of European banks.
Profitability of the German banks, regardless of whether they are Landesbanks, savings institutions or commercial banks, is low when compared to their European peers.[xxvi] Deutsche Bank, as example, is 40% larger than it was in 2006 and is now 80% as large as the German economy. Though the company distorts their leverage ratio by netting out derivative exposures ("target definition")[xxvii], their leverage ratio (assets to Tier 1 capital) is close to 40x, Deutsche Bank is now almost 50% more leveraged than Lehman was when it failed.

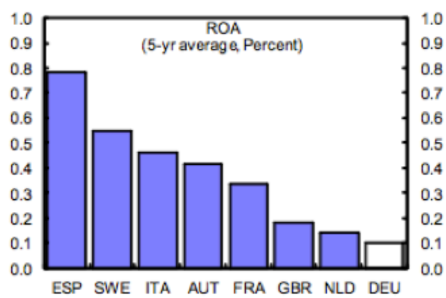
If one looks at the relative exposures, loss provisions and leverage of the German banking sector, German taxpayers have rational basis for concern.[xxviii]



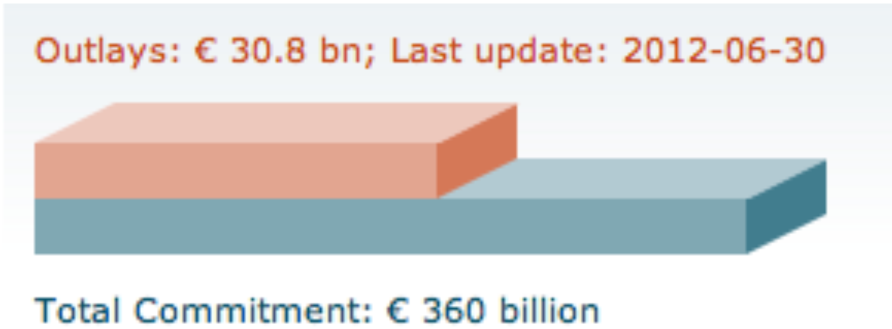
Source: Deutsche Bundesbank







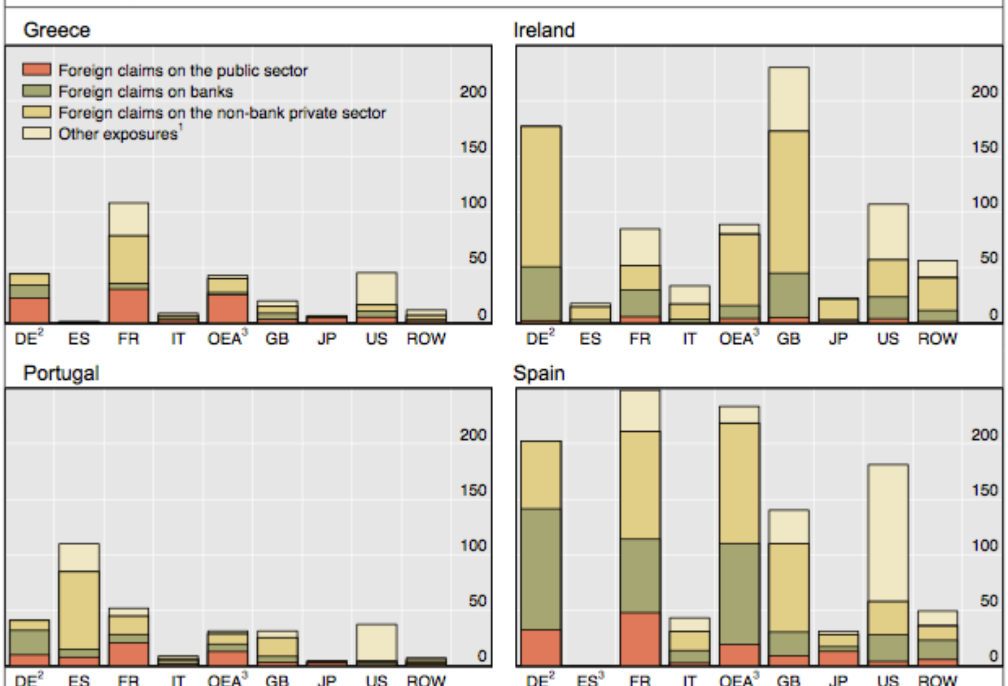
Simply put, regardless of the path that European leaders pursue to manage the crisis, the public cost of supporting the German banking sector is likely to be extraordinary. The least costly outcome will only result from an honest accounting of the exposures. Rather than relying on the kick-the-can and hide-the-ball approach, Germany must consider the increased costs to German banks and their export customers if Greece, Portugal, Ireland, Spain, Italy choose to default. Careful consideration of these costs will help move the German popular view toward the intended burden sharing originally envisioned in the Maastricht Treaty's economic and monetary union.



As Karl Otto Pohl, former head of the German Bundesbank pointed out, the 2010 rescue package for Greece "was about protecting German banks, but especially the French banks, from debt write offs." [xxix] The losses, to which German and French banks could be exposed, result less from funding of peripheral sovereign borrowers than peripheral households and private sector borrowers. By the end of 2008 only 17% Spanish external debt was government debt, in Portugal that number was 26% and in Greece it was 53%.[xxx]

Exposures to Greece, Ireland, Portugal and Spain, by nationality of banks

End-Q4 2009; in billions of US dollars



DE = Germany; ES = Spain; FR = France; IT = Italy; OEA = other euro area; GB = United Kingdom; JP = Japan; US = United States; ROW = rest of the world.

[1] Derivative contracts, guarantees and credit commitments. [2] International claims obtained from the BIS consolidated banking statistics (immediate borrower basis). Other exposures are not available for banks headquartered in Germany. [3] Claims of other euro area banks on the residents of each vis-à-vis country do not include the claims of banks headquartered in the respective country, as these are not foreign claims. Similarly, the claims of Spanish banks on residents of Spain are not reported, since they are not foreign claims.

Source: BIS consolidated banking statistics (ultimate risk basis). Graph 3

Several sources of funding stress induced by capital flight from peripheral banking systems are slowly spreading to Germany. Perhaps this is due to an increased understanding of Germany's necessary and significant role in funding the stabilization of the Eurozone. Moreover, there is an increasing awareness that the problems of peripheral borrowers ultimately may reside with German lenders.

Since the beginning of the global crisis cross-border claims on banks have contracted dramatically. In its most recent quarterly report, the Bank for International Settlements noted that cross-border claims on banks in the Euro area fell $364 billion dollars, representing 57% of the global contraction in cross-border claims. Where these contractions were more pronounced in the peripheral banks, foreign banks are now reducing exposures to the German banking sector[xxxi] and thus raising funding risks to German firms.

In early June, in the wake of an ECB interest rate cut several U.S. firms, including JPMorgan, BlackRock and Goldman Sachs announced they were no longer accepting new money for several European money-market funds given that the rate cut "will almost certainly move cash bids in short-dated instruments into negative territory, and so we have taken the step to restrict subscriptions and switches into the funds in order to protect existing shareholders from yield dilution."[xxxii]

By their nature most money market funds are invested in short term liabilities of sovereigns or banks. Banks typically fund with short-term liabilities, including these short-term debt issuances or demand deposits. Banks then use short-term funds to make loans or investments. A reduction in the willingness of money market funds to invest in the short-term debt of European banks represents a reduction in available funding and creates an increased risk of liquidity problems if depositors demand their money or money market funds choose to withdraw funding of these debts through redemptions.

Barring new central bank support, if banks lose access to short-term debt markets and face redemptions, this will trigger the liquidation of longer-term investments, leading banks to realize losses or to fail to honor redemption requests. As we saw in 2011, when investors in money market funds grew concerned about money market funds' exposure to European banks, the withdrawal of liquidity or willingness to fund only shorter and shorter durations exacerbated the problems faced by European banks. Moreover, as demonstrated by Chernenko and Sunderam[xxxiii] these impacts pose a risk to funding other non-financial firms in the region.

The closure of these funds to new investors appears likely to cap the short-term funding for German banks. In a worse outcome, if money market fund investors become concerned about their funds exposures to German banks, these same investors might actually reduce bank liquidity, leading to spillover effects which compromise the ability of banks to invest or make new loans. Banks are among the largest purchasers of sovereign debt, and more recently German sovereign debt. This, coupled with BlackRock and PIMCO becoming net sellers[xxxiv] of German bunds, increases the possibility of funding problems soon impacting core German banks and bond markets. Incremental movements away from German assets are not limited to

German bank obligations, official and private sector investors are increasingly diversifying away from German bunds as well.

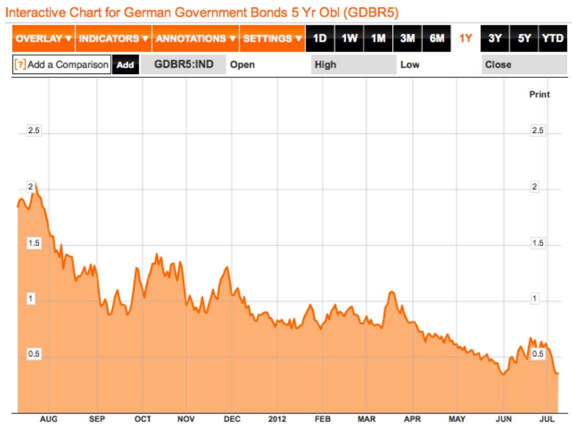
In the recent past, due to the Swiss National Bank (SNB) pegging their currency to Euros at 1.20, the SNB would buy German Bunds. This relationship was evident in market prices. This appears to no longer be the case as evidenced by a recent SNB[xxxv] release.

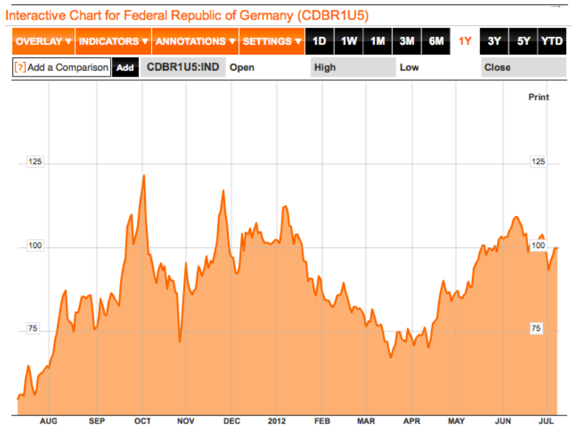
SNB policy is to maintain EUR exposure at around 50%; however, it appears the SNB has recently scaled back its EUR position and is now likely to be rebalancing their exposures[xxxvi] toward the British pound, Australian dollar, Swedish krona, Norwegian krone and Singapore dollar. Even with regard to their euro exposures it is being suggested that that the SNB may no longer be buying German Bunds and may be moving toward short-term Dutch paper[xxxvii] in an effort to reduce the duration of their foreign securities portfolio below the current 4 years. Recently, as the Bundesbank's release of its May balance sheet suggests, even Germany herself appears to be focused on reducing exposures to Europe.[xxxviii]

It is unclear whether these incremental reallocations away from the German Bund and the Eurozone to other assets will result in a full-blown liquidity run. What is clear is that the essentially risk-free rate at which the German government has recently been able to issue appears to have been supported not by German fundamentals but rather by the "flight to safety" movements of bank deposits, central bank allocations and institutional reallocation. According to recent analysis, German 10-year yields should be almost twice their current level or around 2.4%.[xxxix]

Posing further and longer terms risks is the possibility that Chinese authorities may, in the next few years, allow global central bankers to further diversify their reserves by acquiring reserves in the onshore CNY bond market, a market that is bigger than the German or British bond markets.[xl]

Looking at the credit default swaps chart below (CDBR1U5), it is clear that markets and the German people are coming to the realization Germany will ultimately bail out a large peripheral government or its banks, or risk exposure to a more costly outcome – the breakup of the monetary union. While the ability to price the ultimate costs of any of these eventualities is impossible, German bonds clearly do not reflect the burden of costs to which the Germans are already committed or the costs of a resolution.





Source: Bloomberg

Accordingly, one must consider the prospect that, with no movement toward a resolution, Germany's recent easy access to global capital could reverse, leaving the country unable to manage its own costs or play a constructive role in the resolution of the Euro-crisis. As the Delors report pointed out so many years ago:

> *"Experience suggests that market perceptions do not necessarily provide strong and compelling signals and that access to a large capital market may for some time even facilitate the financing of economic imbalances. Rather than leading to a gradual adaptation of borrowing costs, market views about creditworthiness of official borrowers tend to change abruptly and result in the closure of access to market financing. The constraints imposed by market forces might either be too slow and weak or too sudden and disruptive. Hence countries would have to accept that sharing a common market and a single currency area imposed policy constraints" – Delors Commission Report* [xli]

Germany: Both Feet Already in the Pool

While future costs of German taxpayer support for the German banking industry are important considerations, the obligations the German government has already assumed in management of the crisis are more responsible for the increasing costs of German CDS.

There is neither a clear path toward resolution of this crisis, nor is there the political will necessary to take decisive steps to meaningfully manage the integration of Eurozone economies, banking systems and fiscal systems. Since Germany has already committed itself to a massive series of commitments tied to the current "kick the can" approach, it is unable to effect a more orderly withdrawal of EMU members.

The lack of transparency and lack of clarity concerning the funding mechanisms for certain programs make it difficult, if not impossible; to fully assess the commitments that Germany has already accepted. Moreover, with no explicit or consistent disclosure, little information exists regarding the netting of TARGET2 exposures. This lack of disclosure increases the uncertainty of cost estimates of a default by one or more members. Additionally, there is greater uncertainty with regard to the severity of loss in the event of a breakup of the EMU. Below we have offered what we believe is a reasonable initial analysis of claims to date.

Gross German Exposures (excluding European claims on Germany)

From	To	Amount [Bill €]	Comment	Source
Bundesbank	Eurosystem (Target2)	699	As of May 2012	Bundesbank
Domestically owned Banks	Euro Area	792	As of Dec 2011	BIS
	PIIGS	323		
	Spain	113		
	Greece	10		
	Ireland	74		
	Italy	103		
	Portugal	23		
General Gov't Packages	Total	119	Based on DE participation	
	Greece via EU package #1	15		EC/ECB
	Greece via IMF package #1	1		EFSF/ECB
	Greece via EU package #2	42		
	Greece via IMF package #2	2		
	Portugal via EU	15		
	Portugal via IMF	2		
	Ireland via EU	12		
	Ireland via IMF	1		
	Spain via EFSF/ESM	29		
Enterprises/Individuals	EMU	394	As of March 2012	BuBa
	PIIGS	91		
	Greece	2		
	Ireland	28		
	Italy	24		
	Portugal	2		
	Spain	34		
	TOTAL EU+Target2	2,003		
	TOTAL PIIGS+Target2	1,128		

The Least Costly Solution is Costly

With the crisis continuing to unfold and tensions continuing to rise between European leaders about the most acceptable path forward, the most basic truth is that the crisis is today a political crisis more than an economic one. The political divide between the north and south of Europe stems from diverging views between those who seek to complete the Delors Commission's vision of creating a full union and nationalist interests who view a union as too costly to national interests.

Perhaps, through the fair assessment of the imbalances built into the structure of the EMU at its beginning it may become more clear that Germany's economic performance since the creation of the EMU provided significant benefits to German business relative to both the other members of the Eurozone and even relative to the German people.

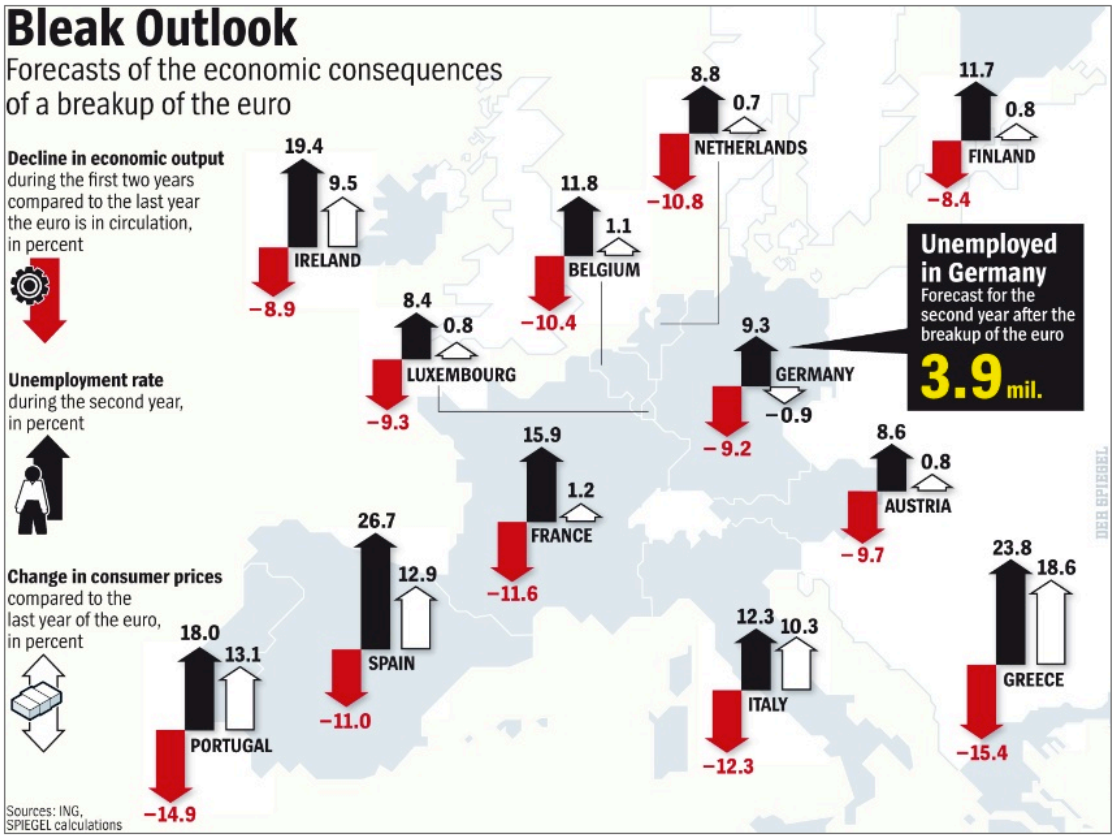
Regardless of the outcome of the crisis, it is an unfortunate reality that the structural imbalances that provided many of these benefits will require repair, with at least some of the costs borne by the German people, again. The politics preventing any meaningful resolution are being made more difficult by "Euro skeptics" [xlii] within Germany who argue that Germany should not be held responsible to bear the costs of "bailing out" the periphery. Unfortunately, these skeptics ignore the reality that the costs to Germany of a collapse of the Euro project will be higher, in economic, social and political terms, than the mutualization and harmonization of a Union. ***Unfortunately, with a lack of political leadership willing to provide the German people with an accounting of the relative costs of each outcome, because they are all quite costly, the costs are rising and the political lines becoming more complicated.***

The most likely outcomes from here can be broadly characterized as follows:

- *A full collapse of the European Monetary Union;*
- *The exit of one or more southern EMU members so that they could be free of the constraints of a single currency and devalue their new currency in an effort to regain competitiveness;*
- *The exit of one or more northern EMU members to protect their fiscal position and to allow the remaining members to revalue the single currency;*
- *A continuation of kick-the-can policies where individual problems are addressed in piecemeal form with no overarching solution;*
- *Mutualization of debts and movement towards an eventual financial, political, and fiscal union.*

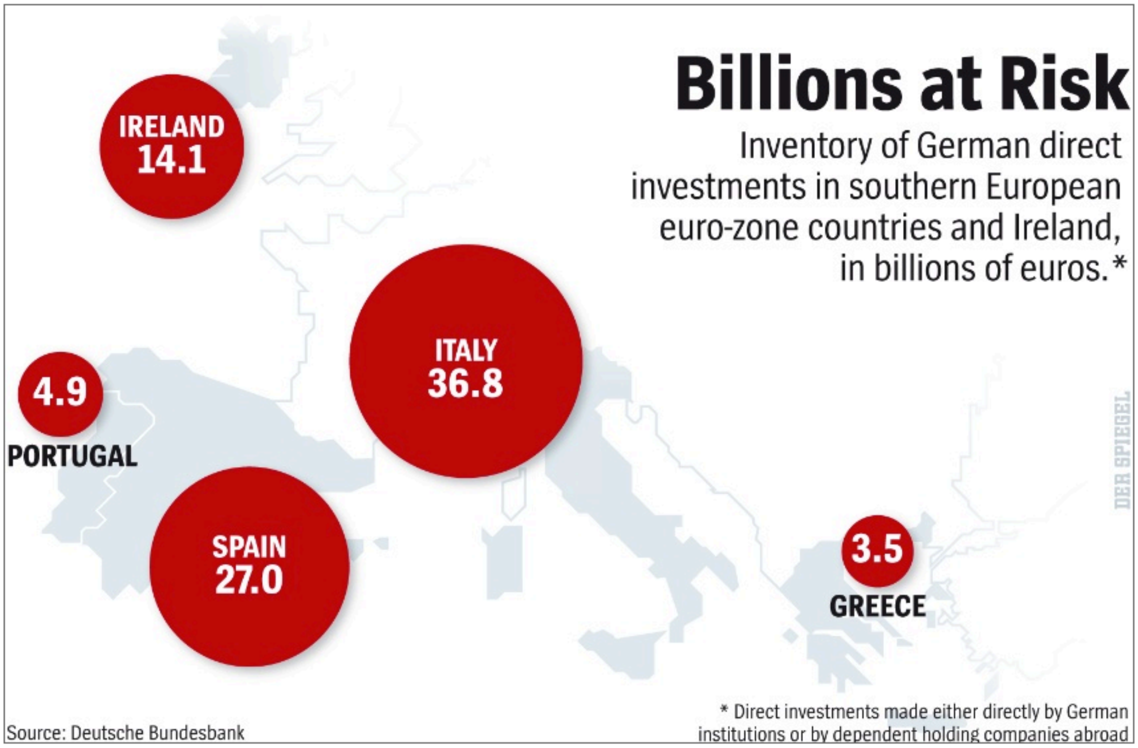
Break it up – A Full Collapse of the EMU

If the European Monetary Union collapsed, either by choice or a domino effect of one or more members leaving, the implications would be dire for Germany.



While Germany might see an immediate inflow of capital seeking the relative safety of the new Deutsche Mark, it is likely these benefits will be fleeting. A severe domestic slowdown will result in either a further migration of assets from Germany to non-Euro economies, or cause an increase in yields on German bunds.

In this situation Germany would have a difficult time maintaining exports as the currencies of trading partners devalued and German goods became more expensive. According to the Bundesbank, in 2010 German companies sold €218 billion of goods to Italy, Spain, Portugal, Greece, Ireland and Cyprus. That same year, Germany's foreign direct investment into these countries totaled €90 billion.[xliii] According to a once secret analysis prepared by the German Finance Ministry, the loss of exports and tax revenues would result, in the first year alone, in a ten-percent contraction in the economy and an unemployment rate above 10%.[xliv]



DER SPIEGEL

Apart from the impact on German exporters, the large international German banks will grind to a standstill as counterparty defaults will almost certainly require the German government to stabilize them. An analysis by Credit Suisse estimates that under such a scenario Deutsche Bank would suffer a €35 billion capital shortfall. Even if it were possible to avoid that likely outcome, Deutsche Bank alone has €30 billion in direct credit exposure to Italy and Spain. This analysis, however, fails to assess the correlation on related indirect exposures. Furthermore, according to this same analysis, insurer Allianz holds €31 billion of Italian government bonds on which they will take significant losses if the Italians choose to default in full or in part.

Under this scenario it is unlikely Germany will see full repayment of monies transferred in support of stabilization programs to date. The likely result would be default or a severe haircut. The German Bundesbank will also recognize several hundred billion Euros of loss on their net exposures to the TARGET2 system. While some argue that the Bundesbank could merely replace these losses on their balance sheet, doing so would result in damage to the credibility of Germany's central bank. This will place Germany in the unenviable position of considering its own devaluation.

Beyond the ensuing fiscal and economic apocalypse, as well as the attendant societal costs, there will be considerable uncertainty regarding nearly all domestic and cross-border contracts written in the past 15 years, as the terms are all denominated in Euros.

This possible outcome it is clearly the most costly and must be prevented at all costs or the sizable German economy with its significant trade balances and highly leveraged banking system will become the largest loser in Germany, decimating the German Treasury.

Somebody leaves

It is difficult, if not impossible to properly estimate the ultimate costs of any country's exit from the EMU or the knock on effects on trade, bank losses, unemployment and tax receipts. There have, however, been some attempts to calculate the losses that would be generated just on exposures to existing programs.

Earlier this year Eric Dor, head of research at the IESEG School of Management in Lille, offered several reports assessing the possible costs of a Greek exit.[xlv][xlvi] In his analysis, Dor suggests that if Greece exits and it therefore unable to make payments on existing obligations the cost to Spain might reach €39 billion. These losses will certainly complicate an already Spanish debt-financing environment and result in demands for further EMU support for Spain itself, even though Dor does not directly consider this point.

Even without considering these knock-on effects or the risk that they lead to a larger crisis threatening a full collapse of the EMU, Dor offers a reasonable assessment of the likely costs to Germany and France of a Greek exit (chart below). Dor suggests his estimated losses are "upper bound" losses, though it is possible that a Greek devaluation could reach 70%, rather than the 50% he posits.

	Upper bound of the losses Billions €	
	French State	German State
TARGET2 liabilities of the Bank of Greece	22.7	30.2
Greek sovereign bonds held by the Eurosystem: SMP	9.8	14
Bilateral loans to Greece in the context of the first programme	*11.4*	15.1
Guarantees to bonds issued by the EFSF to provide loans to Greece in the context of the second programme	8.4	11.2
Guarantees to debts issued by the EFSF in the context of its participation to the "Private Sector Involvement" – restructuration of the Greek debt:"sweetener"	6.5	8.6
Guarantees to debts issued by the EFSF in the context of its participation to the "Private Sector Involvement" – restructuration of the Greek debt: payment of accrued interest	1	1.4
Guarantees to bonds issued by the EFSF to provide loans to Greece in order to buy back sovereign bonds used by banks as collateral to obtain funding from the Eurosystem	7.6	10.2
Total	66.4	89.8

While Dor's analysis appears reasonable, it does not attempt to estimate the impact on Germany or France resulting from declines in trade or support of domestic banks. Greece represented only 2.3% of Euro-area GDP in 2011, leading one to believe the impact is likely to be manageable.

Again, without consideration of either a domino effect that could result from the exit of one weak country on other weak economies ability to avoid exit and default or the collateral damage these exposures are still large and will continue to grow. After all, there has been no resolution to the Greek economic problems, nor any solution to their financing gap.

This is particularly troubling given Spain and Italy's massive and unresolved debt funding needs. If one considers that Spain represents 11.5% and Italy 16.8% of European GDP, the particular distress of the Spanish banking system (and their greater interconnectedness to Germany's and France's banking sectors) the €90 billion dollars that Germany would likely suffer on a Greek exit should provide clearer lens through which to consider the potential costs and impacts on German debt that an Italian or Spanish exit from the EMU would represent.

In addition to the incremental costs of saving their own banks, these costs will add to the more than half a trillion Euros of obligations Germany has accepted to date.

Muddle Through / Kick the Can

Thus far, to date the European approach to the crisis has been of one of waiting for a funding crisis in a peripheral market and then cobbling together an approach acceptable to the consensus of European leaders. ***Depending on the analysis used, this flawed approach has already cost German taxpayers more than €500 billion.*** As the European parliament correctly noted: "The muddling-through approach European politicians have chosen to "solve" the euro debt crisis has failed to tackle the fundamental problems of competitiveness and other types of economic divergence within the monetary union." [xlvii]

> *"But even if governments made ultimately optimal decisions, the noise around the decision making process will raise the cost of a bailout more than it would be if the decision making authority were centralized at the level of a European economic government. A centralized European economic government could minimize these costs by eliminating collective action problems and reducing the noise and uncertainty in the bailout process. By contrast, the cost of decentralized governance shows up in the high yield differentials on sovereign debt between deficit countries and the benchmark German Bund, in the need for larger bailouts and the higher risk of bank failure. It follows that a centralized macroeconomic government is in the interest of all European tax payers, as it reduces the cost of bailouts and risks of defaults and bank crises (*Collignon, Esposito and Lierse)*."* [xlviii]

The general premise of this statement is quite correct but it misses the implicit risk in its own logic, namely that the longer it takes to come to a centralized solution the greater the risk that investors begin to recognize that the incremental increases in the costs of a solution will translate into a higher cost of funding not only for peripheral economies but for Germany and for its highly exposed banking system.

To date slow, ineffectual and fundamentally flawed responses have failed to address the immediate and intended needs of the EMU. The programs designed to fight the peripheral bank and funding problems are, due the political nature of their design, either inadequate to the task – such as the not yet ratified and controversial €500 billion European Stabilization Mechanism which would theoretically address the nearly €1.5 trillion funding needs of Italy and Spain (not to mention other countries needs) – or, like the EFSF, partial solutions that risk creating a run on even those economies seen as fiscally strongest and most resilient.[xlix l]

As Benjamin Franklin observed "time is money." Each day European leaders waste arguing over the structure of a banking union, debt monetization, fiscal compact and the relative balance of necessary stimulus or austerity, is another day for market participants to find reason to pull back from the funding of European assets, thereby increasing the ultimate costs of any solution.

This approach will likely result in the EMU moving toward disorderly debt workouts accompanied by the secession of one or more members, bringing us full-circle and leading once again to the most costly outcome.

Decisive agreement on a union

In the past two weeks reasonable discussions regarding a decisive solution have occurred within political circles." [li] A broad, but timely commitment to full unification will be a giant step toward the least costly solution.

The creation of a banking union under the supervision of the ECB would provide a mechanism for the ECB to provide liquidity to solvent institutions and begin the orderly resolution of fundamentally insolvent institutions. An ECB supervised banking union will also provide support for the troubled sovereign debt obligations of those institutions as the EMU moves toward the fiscal compact that would support mutualization of Eurozone sovereign debts. Moreover, discussions of a deposit insurance scheme for banks within the EMU, while not new,[lii] will support the separation of bank debt from sovereign debt.

It is plain to see domestic politicians and technocrats are choosing not to inform the German public of the relative costs of the possible outcomes and the risks these outcomes pose to the global economy. Furthermore, rather than advise their population of the ultimate costs they would bear from a failure and the necessary bailouts that would be required for of their largest financial institutions, German politicians and technocrats continue to support the Euro skeptics' false narrative placing the burden of bailing out the periphery on the German people. Once again, as evidenced by Wolfgang Schaeuble's recent comments,[liii] the German government is risking the economic future of Germany by failing to embrace a realistic solution, which will limit the ultimate costs to the German people. The longer this crisis goes unresolved the greater the risk the German people will bear the brunt of a Eurozone collapse.

Conclusion

As detailed in this paper, the problems underlying the current crisis in the Eurozone reflect a series of structural imbalances built into the European Monetary Union at its inception. These imbalances are the direct result of the costs associated with the German reunification at the time of entry into the EMU, unfair labor practices which resulted from social dislocations resulting from the reunification, structural changes in the German guarantees of the formerly state owned Landesbanks and incentives to arbitrage the weaker access to markets that borrowers in the periphery faced.

Germany's dominance in the past several years stemmed not from fundamental increases in productivity, but rather from wage concessions forced upon its workers and a desire to replace weaker domestic demand with exports.

Regardless of how the crisis is managed, German taxpayers will again be called to provide significant amounts of taxpayer support for its resolution. The unwillingness of German politicians and business leaders, as well as of Eurozone leaders, to support a full detailing of these costs are resulting in increasing levels of political tension and are becoming an obstacle to the least costly solution for German taxpayers. When German taxpayers understand the crisis is one caused by German lenders and exporters they will likely accept the less-burdensome hardships of taking least costly path – specifically, the creation of a complete fiscal, financial and economic union.

In order to avoid the most costly scenario, German politicians must detail and take the necessary steps to mitigate the cost to German taxpayers. Unfortunately, if Germany continues to see weaker demand for its bank debt and government bonds, there may be no possible outcome other than the most costly one for taxpayers.

Endnotes

[i] Delors Jacques, Report on Economic and monetary union in the European Community, Committee for the Study of Economic and Monetary Union, Presented April, 17, 1989 (Hereafter "Delors")

[ii] Verdun Amy, The Role of the Delors Committee in the Creation of the EMU: An Epistemic Community?, April 1997, Prepared for Presentation at the 5th Biennial International Conference of the European Community Studies Association, Seattle, Washington USA, May 29- June 1, 1997, http://aei.pitt.edu/2747/1/002721_1.pdf (July 17, 2012)

[iii] Delors, p. 10

[iv] IBID.

[v] Hunt Jennifer, The Economics of German Reunification, McGill University and National Bureau of Economic Research, February 2006, http://www.cireq.umontreal.ca/personnel/hunt_german_unification.pdf (July 17, 2012)

[vi] Zimmerman, Klaus F., Lessons from German Labor Market Policy, Institute for the Study of Labor, IZA, DIW Berlin, Bonn University and Chinese University of Hong Kong, September 25, 2009, http://www.econ.cuhk.edu.hk/dept/seminar/09-10/1st-term/sem3.html (July 17, 2012)

[vii] Abad José, Löffler Axel, Schnabl Gunther, Zemanek Holger, Fiscal Divergence, Current Account and TARGET2 Imbalances in the EMU, March 2012, http://www.wifa.uni-leipzig.de/fileadmin/user_upload/AP/UL-WiFa_AP105_Abad-Loeffler-Schnabl-Zemanek.pdf (July 17, 2012)

[viii] Reiermann Christian and Wiegrefe Klaus, "Germany's Leading Role in Weakening the Euro," Der Spiegel Online, July 16, 2012, http://www.spiegel.de/international/germany/chancellor-gerhard-schroeder-key-in-weakening-the-euro-stability-pact-a-844458.html (July 17, 2012)

[ix] Solari Stephano, Thomasberger Claus, Reforms and the continuity in the Italian economy: EMU at risk?, 2006, http://people.f3.htw-berlin.de/Professoren/Thomasberger/pdf/Paper_WP2.pdf (July 17, 2012)

[x] Abad José, Löffler Axel, Schnabl Gunther, Zemanek Holger, Fiscal Divergence, Current Account and TARGET2 Imbalances in the EMU, March 2012, http://www.wifa.uni-leipzig.de/fileadmin/user_upload/AP/UL-WiFa_AP105_Abad-Loeffler-Schnabl-Zemanek.pdf (July 17, 2012)

[xi] Favaro Edgardo, Li Ying, Pradelli Juan, Van Doorn Ralph, Europe's Crisis: Origins and Policy Challenges, p. 226, http://siteresources.worldbank.org/INTDEBTDEPT/Resources/468980-1238442914363/5969985-1295539401520/9780821384831_ch09.pdf (July 17, 2012)

[xii] Bibow Jörg, The Euro and It's Guardian of Stability: The Fiction and Reality of the 10th Anniversary Blast, November 2009, http://www.levyinstitute.org/pubs/wp_583.pdf (July 17, 2012)

[xiii] Kaie Martin, "Time is running out for the Landesbanken," Euromoney, Mar 2004, Vol. 35, Issue 419, p. 97-102

[xiv] Yang, Jin and Tsatsaronis, Kostas: "Bank stock returns, leverage and the business cycle," Bank for International Settlements: Quarterly Review, March 2012, p. 55 http://www.bis.org/publ/qtrpdf/r_qt1203g.pdf (July 17, 2012) (See: "What factors account for the cross-country differences in the cost of equity? It is tempting to attribute these differences to country-specific characteristics, but we do not find evidence to support this hypothesis. Controlling for country effects, we do not find them to be statistically significant. This suggests that differences in the factors account for most of the variations. For example, the elevated cost of equity for German banks can be mainly attributed to an average ratio of assets to equity of around 40, twice the sample average. Similarly, below-average earnings also contributed to high required returns for these banks. In the case of the United Kingdom, low costs of equity are linked to very low values of the market factor (below 1%) and the value factor… The presence of the financial safety net can affect the behavior of bank stock prices. Explicit provisions such as deposit insurance and the access to liquidity facilities by the central bank, as well as the perceived availability of state support in times of distress, can affect market discipline by numbing creditors' sensitivity to risk-taking by banks. Besides lowering the cost of debt financing, this also means that shareholders of banks that are more likely to receive support may require a lower return on their investment, in line with the reduced risk of the bank failing.")

[xv] Brunner A., Decressin J., Hardy D., and Kudela B.," Germany's Three-Pillar Banking System: Cross-Country Perspectives in Europe," 2004, IMF Occassional Paper No.233

[xvi] The Economist, "Sold down the river Rhine: a German lender succumbs to perverse incentives. Who's next?," August 9th 2007, http://www.economist.com/node/9622245 (July 17, 2012) (See: Many German banks, particularly the wholesale Landesbanks, have been tempted to diversify into CDOs, though they deny much subprime exposure. WestLB owns around half of the $35 billion assets invested in Brightwater Capital, a "conduit" like Rhineland, and has been parrying rumors that it may have more than $300m in mark-to-market losses. SachsenLB, the smallest Landesbank, has $16.75 billion invested in another conduit. One incentive has been the higher yield on top-rated CDOs, compared with similarly rated bonds or loans. Another has been the pressure on banks from regulators and rating agencies to comply with new capital rules known as Basel 2.)

[xvii] "Landesbanks' subprime exposure 80 bln eur – report," Reuters, January 26, 2008, http://www.reuters.com/article/2008/01/26/germany-banks-writedowns-idUSL2651648120080126 (July 17, 2012)

[xviii] "UPDATE 1 – German bank rescue fund posts $17 bln loss for 2011," Reuters, April 27, 2012, http://www.reuters.com/article/2012/04/27/soffin-earnings-idUSL6E8FR9S620120427 (July 17, 2012)

[xix] "German bad bank FMS 2011 loss nearly 10 bln eur," Reuters, July 3, 2012, http://in.reuters.com/article/2012/07/03/germany-badbank-idINF9E8EN00720120703 (July 17, 2012)

[xx] Nousios Petros, Overbeek Henk, Tsolakis Andreas (Editors) (2012) Globalization and European Integration: Critical Approaches to Regional Order and International Relations. Oxford, UK: Routledge. P.43, http://books.google.com/books?hl=en&lr=&id=QxLDhRQMjK0C&oi=fnd&pg=PA32&dq=%22german+bank%22+yield+ireland+greece&ots=yK8_gvyr83&sig=z7Ilv9195GzoJlj0Qknpl9gEzG8#v=onepage&q=%22german%20bank%22&f=false (July 17, 2012) (See: "Membership in the EMU had insulated debtor countries from currency crises even as it kept their borrowing costs artificially low. At the same time, of course, it precluded devaluation as a means of regaining competitiveness. As a result of a 'one size fits all' interest rate structure, household debt in Greece, Spain and Portugal skyrocketed to offset the structural current account deficit arising from German export success while German and other core-nation banks became massively over-exposed. At the end of 2009, French and German bank exposure to Greece, Ireland, Portugal and Spain was, in total, 16 per cent and 15 per cent of their GDP respectively.")

[xxi] Wehinger Gert, "Sovereign Debt Challenges for Banking Systems and Bond Markets," OECD Journal: Financial Market Trends Volume 2010 – Issue 2, Pre-publication version, December 2010 (See: ""In the euro area, difficulties may arise from a joint monetary policy underpinned by national fiscal policies that lack a proper framework for co- ordination. Consolidation efforts by some fiscally stronger centre countries could make adjustments in the periphery, where they are more urgently needed, more difficult. However, it was pointed out that in the end, a very aggressive fiscal policy would lead to adjustments in monetary policy (be it exogenous or endogenous) via exchange rates. With monetary policy a given, and nominal exchange rates fixed, the adjustment would be put into effect through real (inflation-adjusted) exchange rates. In this context, the ECB's rather easy monetary policy stance (as opposed to its rather strict Taylor rule-based stance 1999-2007) was welcomed, as it supports German economic growth, which tends to support growth in the euro area as a whole.")

[xxii] Buiter W., Sibert A., "How the Eurosystem's Treatment of Collateral in its Open Market Operations Weakens Fiscal Discipline in the Eurozone (and what to do about it)," December 2005, http://www.willembuiter.com/sov.pdf (July 17, 2012) (See: "The guilty operational practices are, first, the assignment of all eligible euro-denominated sovereign debt instruments issued by the 12 Eurozone central governments to the same (highest) liquidity category as the euro-denominated debt instruments of the Eurosystem itself. This assignment also means that these financial instruments will be subject to the lowest valuation haircut (discount on market value) imposed by the Eurosystem.")

[xxiii] Kennedy Simon, "French, German exposure to risky countries nearly $1 trillion Euro-zone banks hold almost two-thirds of exposure to riskiest regions," MarketWatch, June 14, 2010, http://articles.marketwatch.com/2010-06-14/industries/30747179_1_bank-stocks-german-banks-bank-for-international-settlements (July 17, 2012)

[xxiv] Vause Nick, von Peter Goetz, Drehmann Mathias, Sushko Vladyslav: "European bank funding and deleveraging," Bank for International Settlements: Quarterly Review, March 2012, p. 2 http://www.bis.org/publ/qtrpdf/r_qt1203g.pdf (July 17, 2012)

[xxv] Steinhauser Gabriele, Blackstone Brian, "ECB shifts view on losses for Spanish bank senior bondholders," The Wall Street Journal, July 16, 2012, http://online.wsj.com/article/SB10001424052702303612804577528663115746788.html?KEYWORDS=ecb+shifts+view+on+losses+for+spanish (July 17, 2012) (See: "Mr Draghi argued in favour of including senior bank creditors in burden-sharing between taxpayers and investors in the case of Spain, three people familiar with the discussions said. Two said Mr Draghi favoured forcing losses on senior bondholders only when a bank was pushed into liquidation.")

[xxvi] IMF Country Report No. 11/370, "Germany: Technical Note on Banking Sector Structure," December 2011, p .14, http://www.imf.org/external/pubs/ft/scr/2011/cr11370.pdf (July 17, 2012)

[xxvii] Deutsche Bank, Annual Report 2011 on Form 20-F, p.232, https://www.db.com/ir/en/download/SEC_Form_20-F_2011.pdf (July 17,2012)

[xxviii] IMF Country Report No. 11/370, Germany: Technical Note on Banking Sector Structure, December 2011, p. 29, http://www.imf.org/external/pubs/ft/scr/2011/cr11370.pdf (July 17, 2012)

[xxix] Former Central Bank Head Otto Pohl, Speigelonline, May 18, 2010 (no link available)

[xxx] Lapavitsas C, Kaltenbrunner A, Lambrinidis G, Lindo D, Meadway J, Michell J, Painceira J.P., Pires E, Powell J, Stenfors A, Teles N, "The Eurozone between Austerity and Default," September 2010, p. 8, http://www.researchonmoneyandfinance.org/media/reports/RMF-Eurozone-Austerity-and-Default.pdf (July 17, 2012)

[xxxi] van Rixtel Adrian, Vause Nicholas, "Highlights of the BIS international statistics," Band for International Settlements: Quarterly Review, June 2012, p.13, http://www.bis.org/publ/qtrpdf/r_qt1206.pdf (July 17, 2012) (See: "It was the largest contraction in cross-border claims on euro area banks, in both absolute and relative terms, since the fourth quarter of 2008. Cross-border lending to banks located on the euro area periphery continued to fall significantly. Lending to banks in Italy and Spain shrank, by $57 billion (9.8%) and $46 billion (8.7%), respectively, while claims on banks in Greece, Ireland and Portugal also contracted sharply. Nonetheless, exposures to these five countries accounted for only 39% of the reduction in cross-border interbank lending to the euro area. BIS reporters also reduced their cross-border claims on banks in Germany ($104 billion or 8.7%) and France ($55 billion or 4.2%).")

[xxxii] Cotterill Joseph, "Negativity at the door, euro money market fund edition," FT.com/alphaville, July 6, 2012, http://ftalphaville.ft.com/blog/2012/07/06/1074391/negativity-at-the-door-euro-money-market-fund-edition/ (July 17, 2012)

[xxxiii] Chernenko Sergey, Sunderam Adi, "The Quiet Run of 2011: Money Market Funds and the European Debt Crisis," Fisher College of Business Working Paper No. 2012-4, January 23, 2012, http://ssrn.com/abstract=1991171 (July 17, 2012)

[xxxiv] Phillios Matt, "Bunds Lose Some Standing as Haven," Wall Street Journal, June 25, 2012, http://online.wsj.com/article/SB10001424052702304458604577486370373043062.html (July 17, 2012)

[xxxv] "Swiss National Bank, Foreign exchange reserves and Swiss franc securities (Investment structure at the end of the Q1 2012)," http://www.snb.ch/en/iabout/assets/id/assets_reserves (July 17, 2012)

[xxxvi] Mackintosh James, Ross Alice, "Where are all the euros going?," Financial Times, June 15 2012 http://www.ft.com/intl/cms/s/0/e4a60e6e-b708-11e1-8a95-00144feabdc0.html#axzz20tyUnt2M (July 17, 2012)

[xxxvii] IBID (See: "Money parked in cash at Rabobank would probably end up in Dutch short-term paper. Sure enough, Dutch two-year bond yields actually fell, even as other core eurozone bond yields were rising. Diversification of Switzerland's euro investments might also explain why the extra yield on offer from French bonds compared to Germany compressed during the week.")

[xxxviii] "Monthly Financial Statement of the Deutsche Bundesbank," May 2012, http://www.bundesbank.de/Redaktion/EN/Downloads/Statistics/IWF/stat_monaus_0512_en.pdf (July 17, 2012)

[xxxix] Higgins Thomas, "Bond Market Observations," Standish, a BNY Mellon Company, June 2012, http://standish.com/assets/pdf/Standish_BMO_June2012.pdf (July 17, 2012)

[xl] Vijlder William De, "A Binary World," BNP Paribas Investment Partners, Perspectives, June 2012

[xli] Delors, p. 20

[xlii] Walker Marcus, "Book Attacking Euro Riles German Politicians," Wall Street Journal, May 22, 2012 http://online.wsj.com/article/SB10001424052702304791704577420271011268282.html (July 17, 2012)

[xliii] Various Authors, "The Disastrous Consequences of a Euro Crash," Der Spiegel Online, June 25, 2012, http://www.spiegel.de/international/europe/fears-grow-of-consequences-of-potential-euro-collapse-a-840634-2.html (July 17, 2012)

[xliv] IBID.

[xlv] Dor Eric, "The cost of a Greek Euro Exit for Spain," ISEG School of Management, June 2012, http://ideas.repec.org/p/ies/wpaper/e201209.html (July 17,2012)

[xlvi] Evans-Pritchard Ambrose, "Appetiser cost of Greek exit is €155bn for Germany, France: trillions for meat course," The Telegraph, May 15, 2012, http://blogs.telegraph.co.uk/finance/ambroseevans-pritchard/100017148/appetiser-cost-of-greek-exit-is-e155bn-for-germany-france-trillions-for-meat-course/ (July 17, 2012)

[xlvii] Belke Ansgar, "Political-Economic Options and Constraints for the EU Summit - ECB, EFSF and Austerity Programmes," p. 62, http://www.europarl.europa.eu/committees/fr/studiesdownload.html?languageDocument=EN&file=67775 (July 17, 2012) (Hereafter Belke)

[xlviii] Collignon Stefan, Esposito Piero, Lierse Hanna, "European Sovereign Bailouts, Political Risk and the Economic Consequences of Mrs. Merkel," RECON Working Paper, p. 6, http://www.stefancollignon.de/PDF/Political_Risk_Merkel.pdf (July 17, 2012)

[xlix] Belke

[l] Belke, p. 12 (See: "There are three ways (at least) why the EFSF has worsened the situation. The first one is that it implies that one country's indebtedness problem is a collective problem. This is of course what the no-bailout clause (Art.123 and 125 TFEU) intended to rule out. The EFSF has been created to provide substitute collective funding to countries that loose market access, or equivalently face borrowing cost that are unsustainable… The second channel of contagion is that the EFSF is a de facto Eurobond. The euro area collectively borrows to relend to a country that may default… The EFSF therefore functions as follows. When Greece was bailed out, all other 16 countries borrowed in its stance. When Ireland was bailed out, all the remaining 15 countries borrowed. The remaining 14 countries borrowed to help out Portugal. As we move down Table 1, the number of countries that have to borrow dwindles, meaning that ever larger amounts of collective debt are being assumed by an ever smaller number of countries. Large Spanish and Italian debts are a direct threat on the ability to borrow of the largest contributors to the EFSF, France and Germany. Like dominos, the euro area countries are lined up and destined to "fall" one on top of the next one. This is not bad luck, it is an entirely predictable process… The third channel of contagion involves the banks. Once markets conclude that a country will have to default, they naturally ask which investors will face haircuts. It turns out that banks hold large amounts of public debts, because sovereign bonds were traditionally seen as safe. The implication is that a country's default will shake banks, both at home and abroad. The result is a lethal vicious circle. For instance, the French government is borrowing to help out Greece, but some French banks own significant amounts of Greek bonds – and are apparently "asked" by their authorities not to sell them. To the markets this means that, when (not if) Greece defaults, France stands to suffer losses from its EFSF guarantee and to have to recapitalize some of its banks."

[li] Melvin Don, Lekic Slobodan, "EU extends Spain's deficit timeline by 1 year," HuffPost World, July 10, 2012, http://www.huffingtonpost.com/huff-wires/20120710/eu-europe-financial-crisis/ (July 17, 2012) (See: "Juncker added that the Spanish deal will mean that each bank that receives a bailout will be forced to adopt specific conditions, and the supervision of the financial sector overall will be strengthened… "Rehn said the European Commission would put forward legislative proposals for the creation of a "Single Supervisory Mechanism" for banks in the euro area, involving the European Central Bank, in early September. The creation of the central bank supervision will allow the EU's firewall fund to recapitalize banks directly rather than lending the money to a country's government – something that increases the country's debt load…- "It was the crisis in Spain that eventually convinced the European authorities to do what Ireland has been arguing should be done for a long time – separate the sovereign debt from banking debt," Noonan said.")

[lii] Dubel Hans-Joachim, "Europe's Second Pillar," The International Economy, Fall 2008, http://www.finpolconsult.de/mediapool/16/169624/data/TIE_F08_Duebel.pdf (July 17, 2012)

[liii] Roman David, Walter Matthew, "As Germany Balks, Spain Defends Direct Aid for Banks," Dow Jones & Company, July 10, 2012, http://www.nasdaq.com/article/as-germany-balks-spain-defends-direct-aid-for-banks-20120710-01040/ (July 17, 2012) (See: "Wolfgang Schaeuble said that Spain should retain final liability for any losses incurred by its banks receiving aid--even after the EU bailout fund is allowed to inject capital directly into them, which in any case may not happen before late 2013, when a planned EU banking union is effective.")

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