20. How to Avoid Contagion and Spillover Effects in the Euro Zone?

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1. INTRODUCTION

As a rule, issues of contagion arise more frequently in epidemiology and linguistics than in economics and finance, but this has changed dramatically in recent years. While the inherent instability of the banking sector due to liquidity and maturity mismatch has been well-understood for centuries, we never cease to be blindsided after believing that "this time it really is different" (Reinhart and Rogoff 2011). The globalisation of financial markets has created a new era of frictionless finance – a hyper-lubricated environment for the transmission of all kinds of disturbances, real or imagined, fundamental or self-fulfilling. The dramatic increase in levels of global leveraging and risk-shifting using old-fashioned debt and newfangled financial derivatives is unexplored terrain with unimaginable new risks. Yet the fundamental mechanism of financial contagion is the same that existed in the days of carrier pigeons, couriers on horseback, and the telegraph. The current age of heightened trade, frictionless communication, and increased ease of deal-making and execution makes it all the more imperative to examine critically the phenomenon of contagion in light of the anachronistic structure of European banking, as we move forward into the second decade of the new millennium.

In this chapter I outline the positive and normative aspects of financial spillovers in the European context. I do so from the perspective of a *macroeconomist* – i.e. neither that of a private nor a central banker. For all its romantic attractiveness, national heritages and cultural identities – Europe remains a banking backwater and a bank regulator's nightmare. Its mosaic of national dependencies, rivalries and preferences makes banking the Achilles heel in the economic race with North America and Asia. The regulatory vacuum which accompanied monetary union has rendered Europe even more vulnerable to the vagaries of rumour mills that drive international finance. As the

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cases of Iceland, Ireland and Spain have made evident, the average financial market in Europe can be swamped by a day's adverse financial trading flow or a moderate counterparty incident.

2. WHAT IS CONTAGION?

In the same way we care when colleagues show up to work with the flu, any bank crisis in a globalised financial system is everyone's business. A crisis in one region or nation of the world can have spillover effects on banks and payment systems in others. The great secular increase in global leverage in traditional banking in the 20th century (Schularick and Taylor 2012) has magnified this characteristic feature of banks as going concerns. Often for reasons which are not immediately evident, a failure of a small financial institution operating on the edge of a great financial network can inflict just as much damage as one at the hub.

Contagion arises among banks because they are interconnected. To a great extent this is inherent to the nature of financial institutions, which originate, hold or are liable for investments by others – either nonfinancial entities, or other banks. Banks thrive on trade – trade in financial claims. They intermediate between savers and lenders, large and small – "selling" (collecting) sight and savings deposits and "buying" loans and securities. Bank intermediation means operating very large balances sheets on thin levels of equity or net worth. Many of their assets are liabilities of other financial institutions. Obviously, the aggregate volume of money and credit which an economy and its banking system collectively choose to create is a function of underlying real activity, but also affects that level of activity. The failure of one financial institution can affect all the creditors of that institution, as well as creditors of such creditors. For this reason, bank regulators actively monitor and verify the capitalisation of financial institutions, even if banks were restricted to investments of the highest quality. *This is why contagion and spillovers, across banks and across national boundaries, is such a central problem facing Europe today.*

Yet by their very nature, financial institutions touch large volumes of money in their day-to-day activities and there is an ever-present temptation to "do something with it" – flowing not only from the greed of imperfectly monitored bankers, but also of shareholders, depositors, bank customers, and even employees. It is inevitable that banks take risks – the asset side of a typical balance sheet contains not only short-term debt of governments and high grade borrowers, but also long-term loans to households, nonfinancial and financial entities, as well as to long-term domestic and foreign governments. It is widely accepted that increasing sophistication in financial management has led both to increased risk-taking and lower capital margins in the competition for investors. More expansive deposit insurance has tempted banks to adopt riskier funding models or rely more heavily on the judgment of third parties such as

rating agencies. This is why bank regulators monitor the quality of the balance sheets of banks, since very few individuals – depositors, bank owners, or even the bank managers themselves – are completely informed about the quality of those balance sheets.

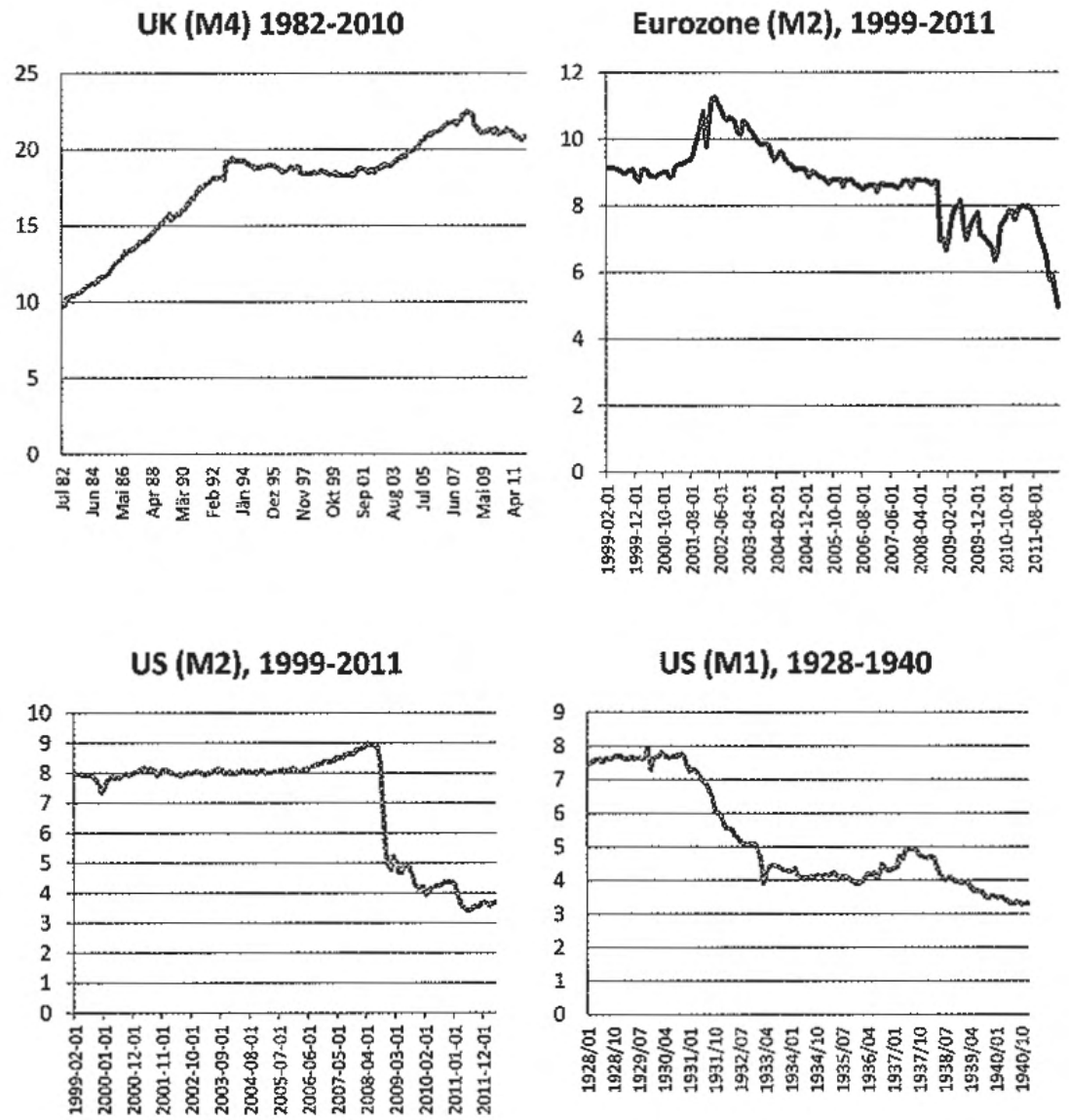

Figure 20.1: Money market multipliers for the UK, Euro zone and US

Money supply (M1, M2 or M4) divided by the monetary base (currency in circulation plus bank vault cash and deposits with the central bank).

Sources: Bank of England, European Central Bank, US Federal Reserve, Friedman and Schwartz (1963).

An efficient secondary or interbank market guides financial resources of the banking system to their most productive uses. The ratio of demand and savings deposits to the volume of central bank reserves plus currency in the hands

of the nonfinancial public – the so-called *money market multiplier* – is thus a particularly good indicator of the faith and confidence in the financial system in itself. Contagion strikes at the heart of the fractional reserve banking system and the money and credit creation process. When banks stop lending to each other and suddenly prefer to hold their liquidity with the central bank, the volume of money and credit contracts. Figure 20.1 shows this contraction during the recent financial crisis, but also its resemblance to that of the US financial

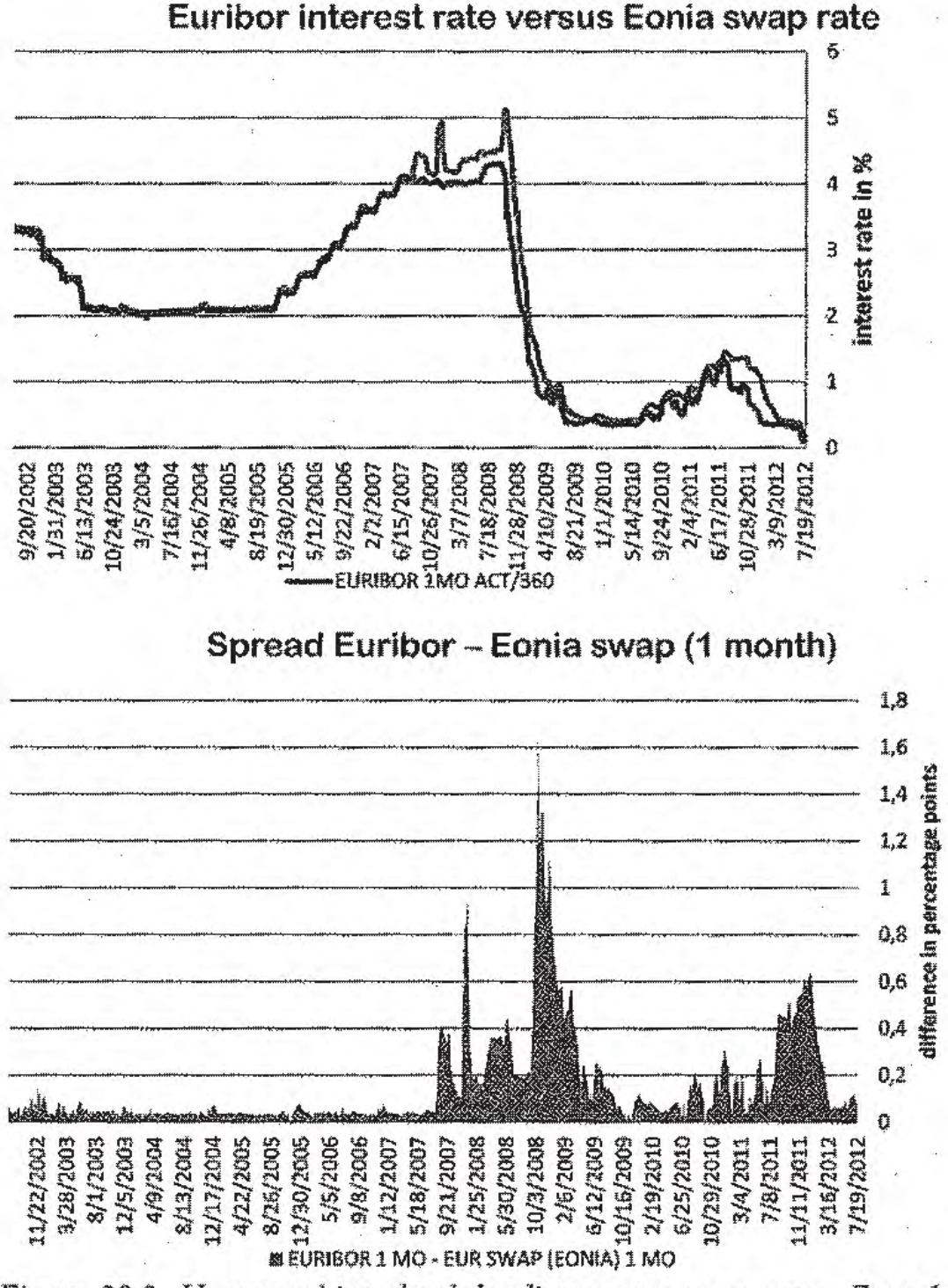

Figure 20.2: Unsecured interbank lending versus swap rates, Euro 1 month, 2002-2012

Source: Bloomberg

system at the outset of the Great Depression. It is also striking to see that the latter collapse had already begun in 1930 and not in the years 1932-3, a period of widespread public banking panics.

Contagion works through the erosion of trust. A bank failure in region or country A can affect the system of payments and thus the real or perceived quality of the transactions medium in region or country B, even though the latter may not even be guilty of any particular banking sin. The affected banks may simply have counterparty relationships with each other, or might be suspected of such, or might both have relations with a third, vulnerable financial institution. The collapse of the money market multiplier displayed in figure 20.1 is a rough indicator in the trust that banks place in each other as compared with the central bank. While more money was held in the form of cash (banknotes) and the technology of payments was quite different, the dynamics of bank runs observed today are hardly different from those in the 1930s. The stereotypical lines of private bank customers lined up to withdraw their deposits are only a small part of the problem. The problem lies with the *reserve-holding behaviour of banks.* Then as now, banks simply withhold their funds from interbank markets and deposit them with the central bank in the form of low or no-yield bank reserves. The unwinding of interbank commitments in favour of the central bank deposits is a reflection of shrinking trust. This erosion of trust can be recognised in the behaviour of the spread between interest rates for unsecured interbank lending and the swap rate, which involves no transfer of principal between trading banks. Figure 20.2 plots these two rates for the euro and the spread between them, and highlights how the latter tracks closely periods of bank stress in the past decades, especially the exacerbation of the sovereign debt crisis in 2011.

3. MONEY IS A PUBLIC GOOD

By borrowing and lending, banks collectively – and largely unintentionally – create the means of payment in an economy. For decades now, the money supply in modern economies has not been driven by cash – relevant mostly for those with something to hide – as it is by bank liabilities – bank deposits. Because these liabilities are the essential life-blood of the economy, contagion and spillovers are everyone's problem. Economists say that this form of money possesses characteristics of a *public good.* That a country's money or a particular bank's deposits are sound and widely accepted in payment is its central non-rivalling feature: We – and by "we" I mean private households and firms that comprise the economy – all enjoy the benefit from the fact that deposits at the Deutsche Bank or Commerzbank are recognised by other banks all around the world as a means of payment, even if we as individuals own no deposits with those banks. Nor is this benefit excludable: Deutsche Bank or Commerzbank

couldn't prevent me from enjoying those benefits, even if they wanted to. The quality of the transactions medium is intimately related to the financial soundness of the issuing financial institutions, more plainly, the quality of the balance sheet. And this quality depends on all its activities, which are sundry and, while profitable, do not possess the public good aspect of the deposit issuing and payments system function. *Solving the contagion problem means guaranteeing the fundamental quality of deposit-issuing institutions.* This is easier said than done, and will generally require some form of government intervention.

We teach students that banks represent financial conduits between savers – those who forgo consumption – and those who spend beyond their immediate means on the other. Obviously, banks do not restrict their activities to their intermediary and payment functions. Besides essential checking, lending and clearing services, banks provide a spectrum of other services, ranging from cash management, wealth management and family office services. Some engage in significant wholesale refunding activities. Others provide short-term inventory finance and factoring services. Some sell insurance to their retail clients. Many offer trading platforms and brokerage services, while some even engage in aggressive proprietary trading. All these activities contain elements of risk, some greater than others, which can threaten the bank's own equity and solvency in times of financial stress. Management of this risk rises as the capital ratio with which banks work decreases. Competition among banks tends to lower this ratio, because the lower the capital ratio, for a given level of asset quality (performing loans) the higher the rate of return on equity.[1] Only a rigorous and incorruptible level of bank supervision will convince investors to reward those banks with high-quality balance sheets with their money.

Even if banks were forbidden to engage in these other activities, the intermediation function of banks involves maturity transformation – mismatch on the balance sheet, usually borrowing short and lending long. Borrowing short in the form of deposits is even more perilous, as these loans are instantly callable, making them to put options at par value. Risk, liquidity and maturity transformation is usually an invitation for trouble, yet represents the inherent characteristic of modern fractional banking (Diamond and Dybvig 1983). Add to this shadow banks, investment banks and nonbank financial institutions and one has a potentially explosive cocktail for crises. *Spillover effects are no longer bank-to-bank, but also region-to-region, and nation-to-nation.* In past crises in Iceland and Ireland and the current mess in Spain, volatile spillovers immediately involve government finance, with European banks operating in a nationally fragmented banking system. As bizarre and anachronistic as it may seem many Euro zone countries hardly qualify as US states – Finland,

[1] The effect of increased bank concentration and decreased competition on risk-taking is theoretically unclear. See Boyd and DiNicoló (2005) and Pedauge (2012) for empirical investigations of the effect of competition on aggregate risk-taking.

Luxemburg, or even Cyprus – and yet have their own central banks. Europe finds itself in the situation of the US states in the 1930s, when a fractionalised Federal Reserve Board exhibited remarkably little national leadership, driven by local interests.

A free-market position on financial market regulation is that banks should do as they please, within the realm of legal activity, and it is up to shareholders and depositors to monitor the riskiness of deposits and investment stakes (Kaufman 1988). Such a libertarian approach ignores the *externality* arising from the public good aspect of money, or assumes that the market will solve the problem. This would require both 1) depositors and investors can readily access information about bank activities and can "vote with their feet" if dissatisfied and 2) that they actually bother to do so, which cannot be taken for granted. When they do not, either due to laziness, turpitude or moral hazard, contagion can easily arise. Free banking regimes, as practiced in 18th century Scotland, 19th century US West or 20th century Hong Kong – presume a high degree of transparency as well as sophistication on the part of the banking public – as well as a commitment by the government not to bail out those who did not exercise due diligence. Yet such commitments are not time-consistent, and governments – especially European ones – inevitably bail out banks. Nor is it time-consistent for "systemically important financial institutions" (SIFIs) to exercise due diligence, if the government will always pick up the bill.

This is why free banking never took off. We face a situation typical of an externality – the lack of due diligence by one party has a negative effect on the viability of the entire financial system.[2] Thus when externalities are involved, there is no excuse for the government to stick its head in the sand; it must actively prevent contagious situations from arising. Every economist must face up to this fact, or face the accusation of being a shill for the financial industry. Naturally, government regulation brings its own difficulties to the table, yet this is no excuse to accept another, more glaring imperfection in the way our economy is managed.

To summarise, some but not all elements of banking involve an externality – the behaviour of each bank affects the integrity of the whole in ways which cannot be mediated by market processes. A certain class of liabilities issued by banks (bank deposits) serves as the means of payment, involving the real economy. In a fractional reserve banking system, the means of payment is backed by the soundness of credit, and in a world in which monetary quantity targets are no longer used by central banks means that the volume of credit is indeterminate and demand-determined. The problem arises when banks, managing such large accumulations of financial resources, conduct activities which are only tangentially related to the means of payment function, and thereby

[2] Note that I avoid use of terms "solvency" or "liquidity" as they are notoriously fuzzy, even among the most competent of financial authorities.

threaten its overall stability. In the process, they become "systemically relevant" and are able to take the economy as its hostage. For without a payments system, both real and financial spheres of the economy cannot function.

4. A POSITIVE ANALYSIS: WHO'S TO BLAME FOR THE CURRENT CRISIS?

The pathology of contagion in the European banking and sovereign debt crisis merits particular discussion. The small size of each individual country means that portfolio decisions of large international investors can induce or reinforce a negative assessment by the market, leading to dramatic reassessments of debt quality, higher refinancing rates and, potentially, to self-fulfilling prophecies.[3] Since national banks were less than fully diversified, they are overexposed to national economic problems – which in an age of financial globalisation are increasingly difficult to conceal. The emergence of shadow finance (hedge funds, private equity) has exacerbated idiosyncratic national risk while providing no additional insurance against such risk. Thus a failure of one or more banks in a small country can not only cause a financial crisis, but also a fiscal crisis as governments are forced to move in and save systems of payments and fundamental financial transactions, which are themselves drawn into the maelstrom (Eichengreen 2011). *The dramatic deterioration of the quality of the banking system in a matter of months in Europe is what contagion is all about.* Whether the emperor had no clothes to start with, whether he was in fact clothed in tatters, or whether the garments were torn off in the aftermath of the first global crisis is immaterial.

Who failed? The European financial crisis offers a wonderful exercise in consistent yet circular reasoning, offering every guilty party the obvious way out – by blaming another, equally guilty participant. If we play the "*blame game*" for a moment, we can identify a number of parties, without any particular respect to ordering: 1) the banks themselves, both public and private; 2) bank regulation, regulators and politicians; 3) sovereign borrower governments; 4) the financial rating agencies; 5) academic economists, especially specialists in finance.

[3] The example of Greece's interaction with the leading sovereign bond fund manager Pimco – with USD 1.3 trillion in bonds under management – is now legendary. After Greece's public admission in November 2009 that its fiscal deficit had reached 13% – double the original figure – Pimco liquidated its entire Greek sovereign portfolio, coinciding with an almost 100 basis point jump in the yield of the then A-rated 10 year government bond over the month of December. Pimco also dumped its holdings of Portuguese and Spanish sovereign debt, initiating a rapid unravelling of the tight cross-country bond yield structure that had prevailed for more than seven years. For a vivid description of this fateful chain of events, see http://www.thisamericanlife.org/radio-archives/episode/455/continental-breakup?act=3.

4.1. Banks Themselves

European private and public banks have traditionally operated on thinner capitalisation than their US counterparts and have done so for a long time (see, e.g., Bair 2011). Partially this might be due to the fact that, under national regulation with national currency, systemic, macroeconomic risk could always be obviated by an aggressive depreciation of the exchange rate. In the run-up to the 2008 episode, European banks participated enthusiastically in the US financial binge, loading up on highly rated mortgage-backed securities and collateralised debt obligations derived from them. Many of these banks in Germany were *Landesbanken*, publicly backed financial institutions which had come under fire from the European Commission for public guarantees. When these guarantees were removed in 2005, they were expected to earn high rates of returns for their owners (mostly, the German federal states) despite higher cost of funds. For this reason, they were easy prey to aggressive sales pitches of US investment banks for exotic financial products promising high yields and low risk.

4.2. Bank Regulation, Bank Regulators and Politicians

The state has an overriding interest in the stability of the payments system. This is why central banks and bank regulators are almost always associated with national governments. Yet the integrity of the payments system does not merely presume a seamless supply of banknotes to those who want to hold them, or perhaps an acceptably low rate of inflation. As noted above, money in modern economies consists chiefly of negotiable bank liabilities held by nonbanks rather than banknotes (about 80-85% in the Euro zone) which are fungible with cash or central bank deposits at any time. Attenuation of the quality of bank balance sheets has immediate macroeconomic implications. In the US deregulation of the financial sector – starting with the elimination of the Glass-Steagall Act in 1999 and continuing through explicit light touch of derivatives regulation and reduction of margin requirements for broker banks – led to a degradation of the quality of the banking system there, leading to a freeze-up of the interbank market in the aftermath of the Lehman bankruptcy in October 2008.

In Europe, weak or attenuated regulatory authorities have traditionally worked in an already decentralised setting governed primarily by national interests and perspectives. In the past decade, national banking authorities presided over a creeping deterioration of loan portfolios increasingly influenced by inter-European exposure, all against a backdrop of low bank capitalisation. The failure of the Belgian Dexia, with operations in Belgium, France, and the Netherlands, among other places, is a case in point. The failure of this bank was dealt with at a national, rather than international level, an uncoordinated

response to an obvious spillover effect. Governments failed to realise that, without clear distinctions between essential and non-essential financial functions, all bank liabilities had become contingent government liabilities, with the relevant contingency becoming increasingly likely.

4.3. Sovereign Borrower Governments

Borrowing by sovereigns in a foreign currency is known as "original sin" (see Eichengreen et al. 2005). Uncontrolled borrowing in the context of a monetary union is a macroeconomic recipe for disaster. This can be seen from many historical episodes involving monetary unions, including the US states in the 1830s and the Argentine provinces in the 1990s. In several ways, the Euro zone situation resembles that of Bretton Woods in the 1960s, with the southern periphery playing the role of the United States and Germany the role of Europe and Japan. In particular, the difference was the lack of an IMF "policeman" which could have intervened at the hint of chronic balance of payments disequilibria (current account deficits not financed by long-term private capital flows). Instead, the Hume mechanism which would otherwise have generated a slowdown in uncompetitive countries was neutralised by passive ECB-refunding of banks in crisis regions (Burda 2012).

4.4. Rating Agencies

The agencies responsible for assessing creditworthiness of borrowers failed massively to anticipate problems arising in the aftermath of the financial crisis in 2008. Banks trusted blindly the quality of government debt and the quality of the rating agencies, so overly optimistic ratings, such as those given to Greek sovereign debt in 2001 or to Irish banks until 2007, led to excessive bank holdings of these securities and rising vulnerability to contagion.[4]

Particularly disturbing was the lack of understanding by rating agencies of macroeconomic implications of monetary union, in particular, on the impact and propagation of fiscal and financial shocks. It is well-known in macroeconomics that fixed exchange rate regimes magnify the short-run effect of real shocks, including unanticipated fiscal austerity programmes. Standard feedback mechanisms which dampen real fluctuations – a change in the exchange rate and domestic interest rate – are ruled out by the fixed parity. A construction boom in a small open economy under flexible exchange rates leads to an exchange rate appreciation and an increase in domestic interest rates, both of

[4] Moody's clung to its A rating for Greece government debt until 2010, well after yields had started climbing in December 2009. See "Ratings Firms Misread Signs of Greek Woes", *New York Times* November 29, 2011. Similarly, only after the December 2009 sell-off did Fitch reduce its own rating of Greek sovereign debt from A- to BBB+ and downgrade Greece below investment grade for the first time in a decade.

which would ultimately arrest the boom. When exchange rates are fixed as they are in a monetary union, capital inflows keep interest rates low and the party continues.[5] Furthermore, the effect is symmetric: the negative demand effects of fiscal consolidation are larger for the southern Euro zone; with slower growth and falling tax revenues, it is all the more difficult to meet austerity targets. These basic wisdoms, which have been around for fifty years, were not incorporated in the rating agencies' assessment of sovereign borrowers. For this and a number of other reasons, a critical evaluation of their role in the crisis seems long overdue.

4.5. Academic Economists

To the extent that my profession advised banks, rating agencies and governments – as was the case – it was guilty of either naiveté, hubris, ingenuousness, or some combination thereof. No matter how one cuts it, this is not a great moment for our profession. At the same time, many of our colleagues who did protest were drowned out or driven out of town by the mob with their conviction that "this time was different".

But enough of the blame game: How do we move forward?

5. POLICY OPTIONS: NORMATIVE RECOMMENDATIONS

Economics students are taught that an externality arises whenever some agent fails to bear the social costs of privately chosen actions. Public policy is needed to solve the problem, either because no market exists, or coordination costs are too high to solve the problem in a decentralised way. For the externality to be internalised, the originator of the harm must pay the full social costs of his actions. This principle is enshrined in German environmental law as the *Verursacherprinzip* and justifies the imposition of effluent charges on polluters who dump industrial waste in public waterways. In terms of finance, the poor investment decision of a single bank can pollute the quality of the entire financial system. While obvious to most, few policy-makers in Europe appear ready to take the next logical step: *imposition of a tax on agents responsible for the externality*, which is the degradation of the integrity of the payments system and the overall quality of the banks. Whether this tax is specific (e.g., a progressive tax on the size of a financial institution's balance sheet) or blunt (a stamp or transactions tax) is a matter to be decided in a democratic process. In any case, this discussion must be preceded by a careful analysis of the externality itself.

[5] See Mundell (1962), Fleming (1962). For one modern undergraduate exposition of the "Mundell-Fleming model", see Burda and Wyplosz (2009).

Like the blame game, identifying the source of the externality more often than not involves frustrating chains of circular reasoning. First, imperfect supervision of banks with deposit-taking and interbank-systemic functions can lead to (and did lead to) inordinate risk-taking, which in turn threatened the financial systems of not only individual European countries (Ireland, Spain, Germany), but also the trans-European interbank funding market and the international credibility of European financial institutions. Second, imperfect information – fragmented national banking supervision and poorly incentivised rating agencies – distorted investor perceptions of risk, interconnectedness and covariance, thus worsening the original externality. Third, a long-standing moral hazard situation has been fuelled by the nonexistence of cross-border bank and sovereign bankruptcy resolution regimes, making it easier for institutional or individual investors in bank or sovereign liabilities to throw due diligence to the wind, relegating responsibility to rating agencies. Undoubtedly, the favourable risk characteristics attributed to public debt worsened matters.

In its great banking crisis of 1932-3, the United States faced comparable but not entirely identical dilemmas. Bank failures in individual states gave rise to highly uncoordinated, inadequate (and sometimes counterproductive) policy reactions. Only after President Franklin D. Roosevelt applied the tourniquet of a nationwide bank holiday in March 1933 did the bleeding stop. This gave breathing room for banks to be resolved (merged or closed) without being dogged by short-run liquidity problems, justified or unjustified. By closing all banks, the government was able to perform this service without prejudice. Not accidentally, the same shotgun approach was taken by Treasury Secretary Hank Paulson in October 2008, when the US government took a stake in all banks regardless of whether they were affected by the interbank run of the fall associated with the bankruptcy of Lehman Brothers.

Beside the bank holiday and subsequent bank restructuring and resolution, the Roosevelt Administration took comprehensive legislative action in response to the banking crisis. The Banking Act of 1933 (the so-called Glass-Steagall Act) created the Federal Deposit Insurance Corporation, which provides deposit insurance to almost all banks in a manner unprejudiced by state of charter. Banks were also forced more or less to become members of and subject to the rules of the Federal Reserve System. The most well-known and controversial provision of the Glass-Steagall Act of 1933 was the stripping out of risky and highly profitable investment banking from the bland "main-street" provision of commercial and retail banking services, a separation which would last for more than six decades. Moreover, to prevent banks from becoming too-big-to-fail, Glass-Steagall simply prohibited interstate banking! Commercial banks were made too small to matter – some states even prohibited banking across county lines. To solve the problem of adverse selection of credit projects (Stiglitz and Weiss 1981) – "Regulation Q" ceilings were imposed on interest rates payable on bank deposits.

While Glass-Steagall can be likened to cracking a peanut with a sledge hammer, it certainly addressed the externality that investment banking imposed on essential commercial banking functions – in probability, if not with certainty. Its impact was to insulate core social functions of banks in a fractional reserve system from risky proprietary trading, excessive leverage and waves of unbridled malfeasance which have befallen the industry over the past five centuries. If it was impossible for regulators to keep banks away from the candy, Glass-Steagall's approach was simply to take the candy out of the candy store.

For some of my colleagues, the age of Glass-Steagall is seen as a regulatory regime which redirected the best talent to more productive uses and was responsible for the steady growth of the US economy in the second half of the 20th century.[6] While the validity of this claim is difficult to establish, it is equally difficult for economists to justify the present size of the financial sector in some Anglo-Saxon countries on normal welfare measures alone.

With six decades of hindsight and technological progress, more intelligently designed regulatory alternatives should be available to solve the fundamental banking externality described above. Several measures designed to improve financial market stability have been discussed – and after clever lobby work by the financial industry – apparently removed from the table. A "Volker Rule" preventing banks from trading for their own account would attack the problem that obviously plagued US banking in the 1920s and 2000s, but loopholes may doom it to failure before it is even implemented. Higher capital requirements for riskier investments will fail as long as the rating agencies are unable to provide an unbiased and if necessary, contrarian opinion.

Given the experience of the US in the 1930s, a convincing case can be made for *intelligent European-wide financial regulation*. The normative criteria for an international (trans-European) approach – a failure of national governments to achieve the financial stability individually – appear to have been met. Moreover, the positive theory of regulation predicts that the likelihood of trans-European regulation increases with the congruence of interests between the regulated and the regulator (Frieden 2012). In principle, the interests of large banks should guide if not force the hand of European regulation, yet those interests do not appear sufficiently powerful in cross-national banking for that step. Moreover, politically connected local banks (*Sparkassen* in Germany, *cajas* in Spain, *Caisses d'Epargne* in France, for example) are likely to block a truly unified approach to bank regulation. Europe missed a golden opportunity to promote cross-border bank mergers as part of its internal market project starting in 1988. A dozen or so Europe-wide banks emerging from the single market initiative would certainly have lobbied national interests to yield to economic reality, as important US Federal legislation did at the turn of the

[6] For a particularly forceful expression of this view see Reich (2012). A similar, but less extreme view can be found in Friedman (2010).

20th century did (Frieden 2012). As it stands, national interests still largely coincide with nationally based financial structures (and national central banks), so the chances of ceding significant national sovereignty to a European banking union or Europe-wide bank regulator still seems remote.

In the macroeconomic policy sphere, contagion can be contained by preventing systemic *national* risks from arising, which quickly can mutate to banking crises (e.g., Greece). The most direct approach is robust and enforceable fiscal rules – to prevent governmental sub-units (national European governments, localities) from losing control of their fiscal integrity, becoming too-big-to-fail and spilling over to the union as a whole (Beetsma and Uhlig 1999). This was the central objective of the *Stability Pact* in its original and unadulterated form. While it is clear that the Stability Pact was not time-consistent over the business cycle, more work is needed to ensure that countries run surpluses in good times so that deficits are tolerable in bad times, and that they commit to pro-growth policies for the medium run.

Yet the discussion does not stop here. *Contrary to popular opinion, central banking and monetary policy can also contribute towards the containment of contagion.* We now know that the failure of the central credit allocation mechanisms to penalise excessive private sector borrowing is a political problem for which the Euro zone was completely unprepared. The inability of the European Central Bank (ECB) to suppress the political influence of national central banks has become increasingly evident as the crisis progressed. ECB policy is likely to have worsened matters; President Trichet's celebration of rapid interest rate convergence in the early 2000s was not just premature; it was fundamentally misplaced. The regions of Europe need differentiated and responsive structures of interest rates to reflect the different default risks of households, firms and governments, and thus to reward prudent behaviour. Thus, the ECB needs to change the rules of the game and introduce explicit haircuts for the securities it accepts as collateral (Buiter and Sibert 2005). In doing so, it can help prevent *banking* risks from becoming *national and systemic* risks (e.g., Ireland and Spain). If the ECB applied this standard to the credit allocation process in a neutral way, the Target 2 problem (excessive balance of payments imbalances within the Euro zone) would resolve itself through the normal operation of the credit allocation mechanism. This may require more wide-reaching steps, including the abolition of national central banks and the introduction of country-cutting ECB banking districts such as those of the Federal Reserve System.[7]

Finally, robust regulation at the microeconomic level complements macroeconomic measures described above. Bank runs and speculative attacks are fed by a lack of transparency to the average market participant; that is, when a

[7] Automatic mechanisms – like the Hume mechanism of the gold standard – could improve credit allocation if scarcity of pledgeable collateral at a bank or in a region leads to higher refinancing rates for that bank or region. For a descriptive discussion of the Hume mechanism in the modern context and how national interests can interfere with it, see Burda (2012).

lack of reliable publicly available information renders liquidation and market exit the most rational response to an increase in market uncertainty. In environments like these, agents naturally suspect that sellers know more than the market, so guaranteeing "skin in the game" for originators of securitised assets is likely to contribute positively to stability. New mechanisms of contagion have arisen in the meantime which truly dwarf anything we could have imagined in the past half-century years. The pervasive use of financial derivatives – current estimates of gross volumes outstanding range anywhere up to USD 700 trillion – (USD 700,000,000,000,000) – a shocking number in a world in which many counterparties are unknown and the counterparty risk is difficult if not impossible to assess (Rajan 2005). In the light of such "weapons of mass destruction", *stopping contagion should receive first priority*. Ultimately, it requires a *realignment of incentives* in the banking business to work towards and not against more stability – trading and risky securities origination versus deposit issuance and payment systems. It may even require taxing those aspects of the former which, in regular intervals, tend to bring hardship on the latter, and lead to additional burdens on the real economy and the taxpayer. One way of dealing with this is the so-called Tobin tax, another might be the institution of a derivative bailout fund or imposition of trading clearinghouse platforms like the Chicago Board of Trade.[8]

6. CONCLUSION

To solve the contagion problem and to deal with the externality, Europe will need to go much farther down the path of financial integration than she has to date. She will need to abandon her traditional national banking identities in favour of a European playing field dominated by cross-border institutions. This will be difficult, as preferences for special arrangements with local and regional lending commitments will always be strong – and to the extent such institutions are exempted, the risk of mischief and contagion will continue to arise. In any case, the nations of Europe will need to surrender most of its sovereignty in the area of bank regulation, deposit insurance, and insolvency rules. Because such a bold step seems unlikely to come from the political realm, it will be necessary for private sector banks themselves to demand it.

In addition to a banking regulatory authority with real teeth, Europe will need an intelligently managed deposit insurance system, which would also contribute to containing contagion. Naturally, such institutions should have been created 10-15 years ago, at the outset of the monetary union experiment, and not in midstream and under duress. As often is the case, a crisis may be

[8] EMIR, the new European Market Infrastructure Regulation on trading and clearing of standardised OTC derivatives, is the right step in the right direction.

necessary to fix attention and generate momentum for such deep reforms; at the same time it will be difficult if not impossible to implement them without significant transfers between countries and financial institutions of differing fiscal and financial stress.

The practical implementation of these measures – especially a pan-European banking resolution authority – will be no mean task. It will require delicate respect for the political economy of bank resolution, which requires both democratic legitimacy as well as hard-nosed business decisions on when to rescue or close financial institutions.[9] While this is certainly a task of Herculean dimensions, the alternative – dissolution of the Euro area and the disintegration of European trading relations – is not an option.

My analysis is based on the here and now, and banking will be around for centuries to come – but almost certainly not in the form we observe today. This means that any form of regulation will be outdated in a decade (or even a few years). Glass-Steagall's greatest weakness was its prohibition of cross-state-banking, which threw out the baby (of reasonable geographic asset diversification) with the bathwater (eliminating financial institutions which are too-big-to-fail). While few are calling for a re-institution of Glass-Steagall Act, the railings of Senator Glass and Representative Steagall in the 1930s against unbridled speculation are just as relevant today as they were seven decades ago. The demand for light-touch regulation should not be confused with current realities of no-touch response. We need to think hard about the extent to which banking and finance have become a self-justifying, low-productivity activity except for those individuals at the top who are in charge of the casino and the games that are played there.[10] To the extent that this is true, they will continue to pose a serious risk to financial market stability.

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[9] See Rocholl (2012) for a careful analysis of practical problems associated with a European banking union.

[10] For a clear and concise statement of this challenge, see Friedman (2010).

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