Finance Watch

Making finance serve society

Europe's banking trilemma

Why banking reform is essential for a successful Banking Union

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A successful Banking Union requires simultaneous reform of the structure of the banking sector

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Abstract

As Europe prepares to negotiate the detailed components of Banking Union, policymakers must insist on a proper reform of the structure of the banking sector to ensure that Banking Union is effective and credible.

This paper explores the policy trade-offs between these three outcomes:

- effective deposit guarantees,
- an end to taxpayer-funded bank bail-outs,
- a banking sector containing systemically important firms that have little or no restriction on their activities.

It concludes that, without measures to restrict the activities carried out by banks, Banking Union will not deliver the depositor and taxpayer protection that policymakers seek. It could even make things worse by encouraging moral hazard and creating a false sense of security.

As Banking Union progresses, the EU must act decisively to separate banks' credit activities from their financial trading and market activities, and to increase the capacity of systemically important banks to absorb their own losses.

Without these measures, the EU will be setting up Banking Union to fail as a public safeguard in the event of a systemic banking crisis, undermining the credibility of Banking Union and the Eurozone.

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Executive summary

At first sight Europe appears to face a banking dilemma – how to achieve riskless deposits and avoid taxpayer bail-out of failing banks. In response the EU is proposing improved and harmonised recovery and resolution laws, both at the national and supra-national level. This paper argues that this will not be enough. In fact Europe faces a trilemma, if it wants both riskless deposits and to avoid taxpayer bail-outs it cannot leave banks as they are. It must take steps to reform banks and to constrain their activities.

First it must separate commercial and investment banks: separation makes resolution credible and credibility is essential to cutting the funding subsidy that makes too-big-to-fail (TBTF) banks grow always bigger. Resolution allows the benefits of separation to be realised.

Second it must improve banks' loss absorption capacity, to avoid failure in the first place and to make bail-in feasible even for the largest banks.

Over the last 25 years Europe's largest banks have been transformed by a massive increase in financial market activities. Their balance sheets reflect this change, with around 50% of their assets typically being trading assets (including derivatives). The nature of these activities creates a problem for crisis management, which aims for riskless deposits of bank credit money and the avoidance of taxpayer bail-out of failing banks using recovery and resolution mechanisms.

Put simply, the activities that make these banks too-big, too-complex, too-connected-to-fail make them too-big, too-complex, too-connected-to-resolve.

Unless these activities are changed, bail-outs cannot be avoided. Attempts to circumvent the problem by moving resolution to the European level, a goal of Banking Union, miss the point. A bigger resolution authority or one that can rise above national interests will not be enough unless banks' activities are changed. Moreover, unless such moves towards Banking Union are accompanied or preceded by fiscal and political union, Europe faces the prospect of creating a paper tiger: a mechanism that increases danger by further delaying meaningful bank reform but which lacks sufficient teeth when the next crisis strikes.

In light of these challenges, policy must make bold moves in the areas already under consideration: giving the recovery and resolution planning process real teeth to let authorities act on realistic recovery and resolution plans; taking structural measures to separate commercial from investment banking activities; and increasing banks' loss absorption capacity, for example through meaningful leverage caps.

In more detail:

- Recovery and resolution rules are an important step towards fixing Europe's banking sector but they are not enough. They must be accompanied by rules which begin to **limit banks' activities and forms**, above all to begin with the separation of commercial and investment banking, and the increase of banks' ability to absorb losses.

- **Resolution mechanisms** have twin aims for a bank in crisis: to move deposits and payment systems to safety, via tools such as the asset separation tool, and to impose

losses on creditors and not on taxpayers, via the bail-in tool. Achieving these aims is critical for society. First because bank credit money, in the form of deposits and payment systems, is the lifeblood of our economies; without it economic systems will quickly break down with social disruption likely to follow quickly. Second, bail-out means that banks receive a funding subsidy via government guarantee, for trading activities there is no reason to maintain such a subsidy. In fact subsidising these activities makes them more prevalent which renders the banks that undertake them more difficult to resolve.

- The last 25 years have seen changes in the activities of banks. These changes have transformed the largest banks into **"flow monsters"**, whose balance sheets are now dominated by trading assets, including derivatives. Resolution mechanisms might work for small and medium sized banks, the largest banks however have become too-big, too-connected and too-complex to resolve. In particular, if banks are too-big and too-connected regulators will not feel able to bail-in the banks' creditors for fear of passing on systemic risk to other banks and institutions.

- The largest banks are so complex that their resolution in a short period of time is unrealistic, with the result that **state support** will be required until resolution can be achieved. This support will most likely include different forms of bail-out and liquidity provision. Such support is likely to reduce the availability of assets available for sale and of liabilities available for bail-in.

- **The result is that Europe faces a trilemma**: if it does not begin to reform and constrain the forms and actions of the largest banks it will not be able to meet the twin objectives of risk free deposits and no taxpayer bail-out. The two most important reforms to accompany recovery and resolution are
  i) separation of commercial and investment banking and
  ii) increased loss absorption capacity at other banks and therefore in the entire banking system.

  Separation renders resolution credible, and credible resolution realises the benefits of separation. Credibility of resolution mechanisms is critical because if investors believe they will not be liable for losses they will charge a lower risk premium, encouraging the very activities and forms which render resolution impossible and reinforcing the lower risk premium. This circle can be turned virtuous with credible resolution, and separation is critical to establishing this credibility. Increased loss absorption will lower the incidence and the severity of bank failure and resolution authorities will feel more able to bail-in creditors if other banks in the system can better absorb the losses. Therefore the "loss absorption capacity" of banks must be boosted. Equity is the simplest way to achieve this (simple leverage caps would help enormously) but debt which can be bailed in also has an important role to play.

Introduction

Europe's banks need more reform *and* better resolution mechanisms

Banks and the banking crisis are at the heart of the current financial and economic crisis, a crisis that has cost Europe dear. The public interest has been damaged in this crisis through direct and indirect channels. The stated aim of much current banking reform is to both clear up the current problems in Europe's banks and to try to avoid the same situation occurring again. **New crisis management tools** have come to the forefront of European bank reforms in the shape of the Bank Recovery and Resolution (BRR) Directive and the Single Resolution Mechanism (SRM), a critical stage in Banking Union to create a supranational Recovery and Resolution Mechanism to accompany the Single Supervisory Mechanism (SSM) already agreed upon for the largest European Banks. Recovery and Resolution mechanisms are a very important step but this report will argue however that such a mechanism will not be sufficient to prevent future problems unless further actions are taken to curb bank activities. Changes in bank activities are at the heart of the change in the form of banks that makes them too-big, too-complex and too-connected to both fail, and crucially for the proposed resolution mechanisms, to resolve.

Changing bank activities over the last 25 years

The specialist nature of banks and the long term development of money and credit mean that banks have long been critical to the economy and therefore the public interest. More recently, beginning in earnest around 1990 and increasingly since 2000, banks have taken on additional activities. These **new activities** have greatly increased the scale of banks' operations; in absolute terms and relative to the rest of the economy. They have proved profitable to banks in most years, indeed finance's share of total profits has risen in Europe and the United States (Federal Reserve Bank of St Louis, 2013). This report will limit itself to examining these activities from the perspective of crisis management and their role in impeding bank resolution.

Bank credit money must be saved

It is the very centrality of banking functions to the economy that has allowed banks to largely escape paying for the crisis that they caused. Sovereigns and central banks were obliged to rescue banks, both their deposit taking and trading activities, and so the taxpayer was made to pay. The single most important banking function which ensures that sovereigns are obliged to rescue banks is the provision of bank credit money. The challenge we are facing in managing our private banking system is quite clear. How to avoid that the taxpayer is called upon to bail out banks but at the same time how to ensure the safety of our money, over 95% (European Central Bank, 2013) of which is provided by the private banking system, or, put another way, how to protect depositors.

A dilemma…

The diagram below illustrates the problem Europe appears to face. From the experience of the crisis so far **it seems impossible to have both zero taxpayer bail-outs of banks and risk free deposits**. Europe appears to be presented with a trade-off between the two.

Current policy focusses on the trade-off between two outcomes: protecting taxpayers and safeguarding depositors

Several mechanisms are currently being proposed to eliminate the trade-off. Most importantly deposit guarantee schemes and clearly established Recovery and Resolution laws. The European Union appears to believe that these two mechanisms will be sufficient to allow us to achieve both goals.

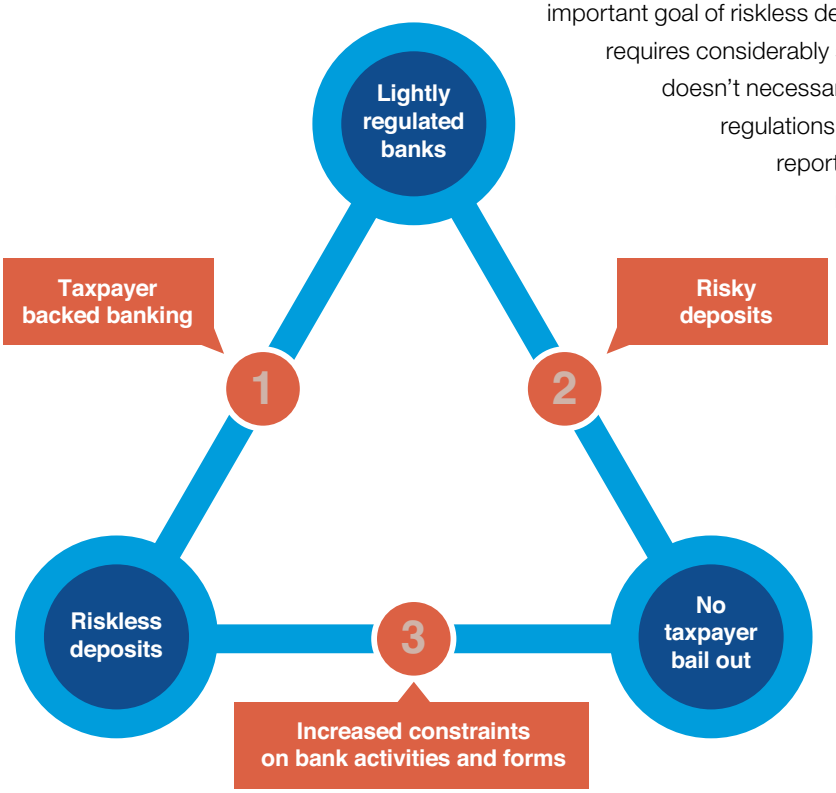
This report argues differently. It argues that simply improving the mechanisms on the side of the regulators and supervisors is not enough (e.g. DGS, BRR and SRM). Recovery and Resolution is vitally important but it must be credible and to do that the activities of banks must also be tackled. Focusing only on crisis management is not enough: **if banks are not reformed such that they pose less of a systemic risk they will simply block the mechanisms designed to resolve them.** In this case in order to safeguard depositors, governments will, once again, be obliged to turn to their citizens as taxpayers.

… that is really a trilemma

In fact the dilemma is a trilemma – a choice among three options, only two of which are possible at the same time.[1] It is impossible to satisfy three goals of complete depositor safety, no taxpayer bail-out and lightly or un-regulated private banks. To achieve any two of the goals fully requires failing on the third goal. The diagram below helps illustrate the situation. In position 1, which typifies much of the current response to the crisis, lightly regulated banks can be combined with riskless deposits only with huge taxpayer backing. The crisis has shown clearly that position 2, where bank activities are not subject to any meaningful change of regulation but are also cut off from taxpayer backing, is untenable. Throughout the crisis governments have not been able to let banks fail without some form of bail-out. In the recent crisis in Cyprus the EU positioned itself somewhere near the top of the triangle, trying to choose the balance between bail-out and losses to deposits. A brief analysis of EU's banks shows why, first the vast majority of our money is bank credit money, second banks' activities have made them too-big, too-connected and too-complex to fail.

Constrain bank form and activities to achieve risk-free deposits and avoid taxpayer bail-out

Finance Watch argues therefore that the only sustainable position for Europe's banking industry is to move towards position 3. That is, in order to achieve the overwhelmingly important goal of riskless deposits with little or no taxpayer backing requires considerably stronger regulation of bank activities. This doesn't necessarily mean more regulation, but rather means regulations that have more impact. In the rest of this report we argue that the **recovery and resolution mechanisms being proposed to deal with bank failure will simply not cope if banks are not reformed** and come the next crisis or large bank failure Europe will find itself stuck in position 1. A position it can even less afford now that it could in 2008. Preeminent among the reforms that can support resolution is the separation of commercial and investment bank activities, and increased loss absorption capacity at banks ahead of deposits.



In fact, there are three outcomes in the trade-off: protecting taxpayers, safeguarding depositors and leaving banks as they are. Only two are possible at the same time.

[1] Obstfeld and Taylor (1997) used the idea of a trilemma to analyse the difficulty of having free capital flows, fixed exchange rates and sovereign monetary policy. Claessens et al (2010) used it to describe 'a trilemma of national authority, financial integration and global stability'. Pisani-Ferry (2012) uses the device to investigate the problems of the Euro.

1 Banking activities and how they changed with financialisation

This section examines the nature of banks, it explores three categories of banks: deposit-taking banks, characterised by the smallest European banks; banks as makers of securities markets that provide large scale finance to the "real"[2] economy; and finally the new, overwhelmingly financial market based activities that banks have taken on in the last 25 years. These new activities are associated above all with the very largest banks. These banks tend to combine deposit-taking and securities issuance for the "real economy" with trading very large volumes of highly financial instruments with other financial counterparts.

Three categories of banks and the implications of their failure

This section also briefly highlights the implications of the failure of these types of banks. Governments must protect the bank credit money that arises in the functioning of commercial banking but securities dealers should not require government rescue as other market makers should be able to take their place. The largest banks however are so large, so connected and so complex as a result of the financial markets activities that have developed in the last 25 years that in the event of their failure governments are obliged to rescue them in order to avoid unsustainable damage to the rest of the economy.

Deposit-taking banking

In theory…

Over 95% of money in our economies is bank credit money

Banks emerge from the economy as specialists in allocating credit, and, bound up with that, with the ability that their own credit serves as money. Banks achieve this largely through establishing a reputation for being credit-worthy themselves, through deposits payable on demand and through reliable payments systems. Like any specialist that establishes a role in the economy the specialist and the non-specialist become reliant upon each other. Banks rely on other actors in the economy in order to make a profit, and importantly they rely on the wider economy to hold their liabilities, most especially deposits. The wider economy relies on banks for credit which takes the form of bank credit money. **This provision of bank credit money is critical** – typically over 95% of money in our economies is not central bank notes and coins but is bank credit money (European Central Bank, 2013). It acts as a store of value and it allows the continual buying and selling that is at the heart of our economies – and without which they would quickly break down.

This reliance on bank credit money goes to the heart of explaining why failing commercial banks must be bailed out. Their failure would pose a **"systemic risk"**. First, Europe's economies cannot afford the loss of value of deposits disappearing. Deposits under EUR 100k are insured, but Deposit Guarantee Schemes (DGS) are not infallible and are designed mainly as a deterrent (Diamond & Dybvig, 1986). Uninsured deposits are also important to the economy: working capital must be held as money in order to have instant access to make payments; even for small and medium sized companies 100kEUR is not a large amount of cash to have on hand at various times. Loss of deposits larger than this could be critical for these enterprises and therefore for the economy.

[2] "Real" economy is taken here to mean "non-financial firms", and should not imply that the vast financial economy is not "real". In addition it should be noted how financialised the world has become when it is normal to refer to firms that make things and deliver services as "non-financial".

Why failing commercial banks must be bailed out

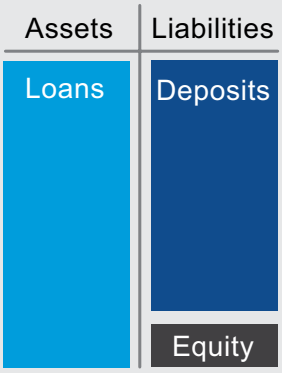
Second, bank credit money must be maintained continuously in order to make payments. Even a 1-day interruption can lead to chaos. **Economies quickly start to malfunction if payments cannot be made**, e.g. salaries cannot be paid, suppliers cannot be paid, cash cannot be withdrawn from ATMs. A recent example of this was given by the nationalisation of SNS Real in the Netherland where a part of the argument against the use of the Deposit Guarantee Scheme (DGS) was that "*recourse to the DGS would imply that over 1 million account holders would temporarily be prevented from using their payment accounts, which might put them in financial difficulty, possibly causing social unrest*" (Minister of Finance, The Netherlands, 2013).

A simplified balance sheet is presented below, with loans dominating the assets and deposits dominating the liabilities.

Typical balance sheet for Europe's many smaller banks

Note on Bank Balance Sheets

In accounting terms, loans are counted as assets because they represent a claim that the bank has on other parties, or money owed to the bank. Deposits are counted as liabilities because they represent a claim that the bank's depositors have on the bank, or money the bank owes. The bank's equity represents the money put in by shareholders when the bank started up or raised capital, plus any undistributed profits or losses since then, it represents a claim on the bank by its shareholders.



In Europe today…

The bank analysed so far is a deposit-taking bank, also known as a retail or commercial bank. A very large number of European banks fit this description: Europe's smallest banks for example are of this sort. **There are around 4000 small banks in Europe out of a total of around 8000**; they typically have only around 1% of their balance sheet accounted for by trading assets (HLEG, 2012, pp. 34-8). In addition, bank lending remains important for Europe. "*According to ECB figures, the share of banks in credit intermediation for enterprises in Europe lies around 75-80%. … This is especially the case for small and medium sized enterprises (SMEs) that do not have the same access to capital markets to fund themselves as larger corporates have*" (European Banking Federation, 2013). Note that SMEs form the "backbone" of the European economy[3]; these companies typically have limited need for financial market activities.

[3] The European Commission (2013) states: "more than 99% of all European businesses are, in fact, SMEs … . They provide two out of three of the private sector jobs and contribute to more than half of the total value-added created by businesses in the EU. Moreover, SMEs are the true back-bone of the European economy, being primarily responsible for wealth and economic growth, next to their key role in innovation and R&D".

Securities issuance for the "real-economy"

In theory…

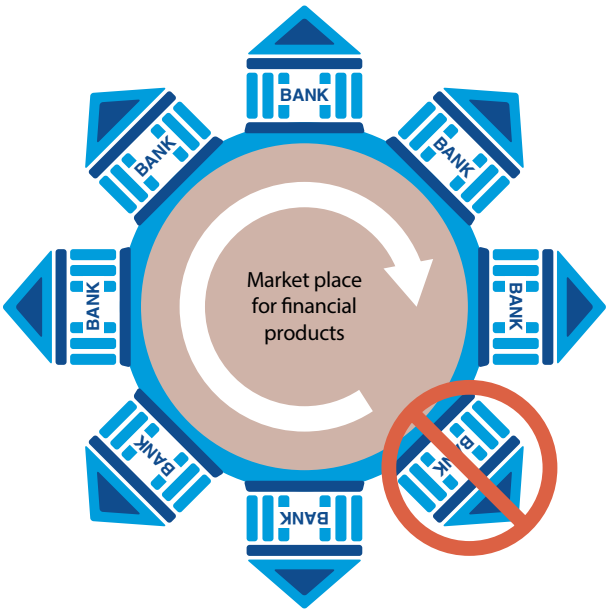
Securities markets can provide an alternative to bank lending

Historically larger projects, such as building railways and canals, demanded larger scale finance than commercial banks could deliver. Banks developed alternative ways to provide credit. The basic mechanism of **securities markets** is to provide a loan to the company, then a dealer bank (usually in a temporary consortium with other dealer banks) arranges that this loan shall be broken into small pieces and sold directly to investors – this process is called securities issuance or underwriting (underwriting is a common way of arranging issuance). In this way the bank does not take concentrated credit risks in its own balance sheet and protects its ability to provide bank credit money (its credit-worthy reputation is not soiled with a large concentration of lending to any one project).

But selling the loan is not the end of the story. Investors require the ability to have access to money. As securities cannot be used to buy things (they are not money) they must be sold so that lenders can regain **access to money**.[4] The dealer bank undertakes to buy and sell the securities from investors and provides the market infrastructure to do so. It should be noted that banks are also expert money handlers, including foreign monies (Lapavitsas, 2003). Hence importers and exporters typically turn to banks to help them deal with foreign exchange transactions.

Securities dealers *should* be able to fail like any other business

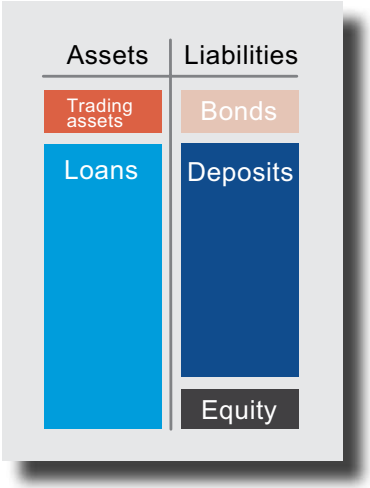
Individual securities dealers are not alone when they make financial markets – securities markets are typically made up of competing "**market makers**", such that should one fail then holders of securities can turn to another one. Note that this is not the case for deposits where bank failure means the deposit is at risk. The failure of a market maker does not put repayment of the security at risk. Even without a bank failure holders of securities typically seek out the best price from a number of market makers before liquidating a securities investment. Therefore securities dealers *should* not pose the same level of systemic risk as the failure of commercial banks. Securities dealers that are not too-big, too-connected or too-complex to fail *should* simply be able to fail like any other business. As will be seen below however financial markets in the last 25 years have changed dramatically meaning that this is not the case for the very largest banks.



The adjacent diagram, taken from our webinar "What do large universal banks do" (http://www.finance-watch.org/hot-topics/webinars), illustrates how banks make the securities market place between them and that the failure of a single market maker does not disrupt the provision of the market by other banks.

[4] Note that a commercial bank provides liquidity to lenders because its liabilities come to act as money (via demand-deposits and payment systems). A dealer bank provides liquidity to lenders because it offers to buy and sell. The difference is theoretically very important in explaining why deposit banks must be rescued and investment banks not.

Simplified balance sheet for bank with reasonable securities dealing capability



A **simplified balance sheet** of such a bank might look like this, with commercial bank operations dominating but supplemented by a relatively small inventory of securities held in the course of market making. In this balance sheet, the bank has borrowed money from the market by issuing its own bonds and used the proceeds to fund its trading operations.

In Europe today…

Limited need of securities issuance for SMEs

As noted above Europe's small and medium sized firms have only a limited need of this sort of banking. Securities issuance tends to be the sort of banking that the largest "non-financial firms" require. Even for these firms new securities issuance, e.g. to fund new investments, is not typically a frequent activity.

When we look at Europe's middle-sized banks, they tend to have a balance sheet that suggests they could serve such a role in the economy. **Europe's medium sized banks have just less than 5% of their balance sheet dedicated to trading activities** (HLEG, 2012). The composition of these trading assets is not known but a model of around 5% of assets held as trading assets would seem to provide an "order of magnitude" approximation of the amount of trading assets required to finance and service non-financial firms.

Around 5% of bank balance sheets dedicated to trading activities would seem about right

To illustrate: "Total Assets" of Eurozone banks amount to approximately EUR33tn; if 5% of these assets were trading assets in the form of securities that would amount approximately EUR1.6tn of securities on bank balance sheets (European Central Bank, 2013).[5] Securities issued by non-financial firms in the Eurozone amount to around EUR5tn (European Central Bank, 2013). If banks only made markets in the securities of non-financial firms this would imply an inventory for market makers of around 1/3rd – high but of a reasonable order of magnitude. Including in addition approximately EUR7tn of securities issued by Governments, and still assuming 5% of assets as trading asset, brings the ratio of market makers inventory to securities outstanding to EUR1.6tn:13tn or approximately 1/8th – which would appear to be a reasonable share for market makers' inventory. **In short, if banks held 5% of their balance sheet as trading assets this would appear at first sight to be sufficient to make markets in the outstanding securities of Government and non-financial firms.**

As will be seen in the next section however the largest banks hold much more than this as trading assets and there is a very large amount of securities issued by financial firms. These form part of a pattern of *finance by finance for finance* which has developed in the last 25 years. It is also a major factor of the ever increasing **interconnectedness** of the banking system.

[5] Note that total assets of EU banks are around EUR45tn (HLEG, 2012), Eurozone banks are used as the dominant subset here in order to be consistent with the securities issuance statistics provided by the ECB.

Financialisation and "flow monsters"

In theory…

Securities markets facilitate speculation

As was seen above, there is a risk when holding securities that at the time an investor needs access to cash the price at which they can sell the security may have moved against them (or better still in their favour). Investors are simultaneously tempted by "*the carrot of speculative profit*" and scared by "*the stick of financial risk*" (Eatwell and Taylor, 2000, p. 3). Securities markets therefore contain the possibility that investors start to hold securities mainly to try and gain from changes in their prices by buying and selling repeatedly. This potential for **betting not investing** (see out report "Investing not Betting", http://www.finance-watch.org/our-work/publications/475) has been massively unleashed, particularly in the last 20-30 years, by a variety of regulatory and other changes. Banks as market makers stand to gain directly from increased financial market activity because they earn a bid-ask spread for every trade.

Asset managers have incentives to 'play the market'

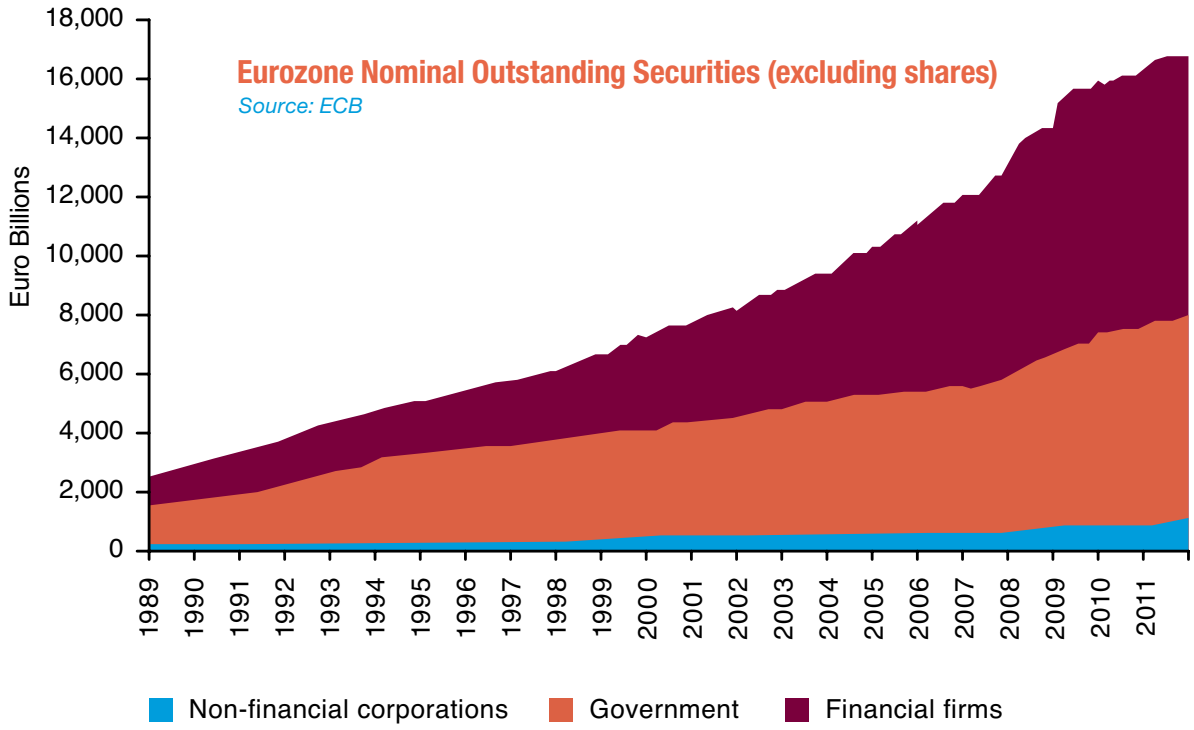
Financial market inflation has also partly occurred because of changes in patterns of saving and borrowing in the economy. Increasingly institutional investors such as pension funds, insurance funds, hedge funds and so on have invested in these markets on behalf of large pools of individuals. These institutional investors face smaller liquidity demands than individual investors because as one individual pays in another withdraws, funds can in normal circumstances net to a large extent these inflows and outflows without having to buy and sell securities to meet liquidity requirements. As a result the asset managers of these funds are free to concentrate on trading their portfolios of securities purely to capture price movements. The incentives for them to do this are strong and this leads funds to draw ever more of the money they manage into these markets, e.g. savings through pensions, insurance premiums and so on. At the same time the growth of securitisation has accompanied ever more borrowing by individuals: mortgages, credit card debts, student loans etc. Instead of holding these loans on their balance sheets, banks have packaged these credits into securities which they have sold into the financial markets. **In this way both the savings and the borrowing of individuals have fed financial markets where banks and other financial institutions trade financial assets repeatedly seeking profits from price changes.** This process has been a critical part of a general increase in financial activities in the last 25-30 years which has been labelled financialisation.[6]

In Europe today…

The result of these new activities in Europe today has been the extra-ordinary growth of financial markets that we have seen in the last 30 years and the emergence of a handful of mega banks which dominate financial markets; these banks have been labelled '**flow monsters**' (Alloway, 2012).

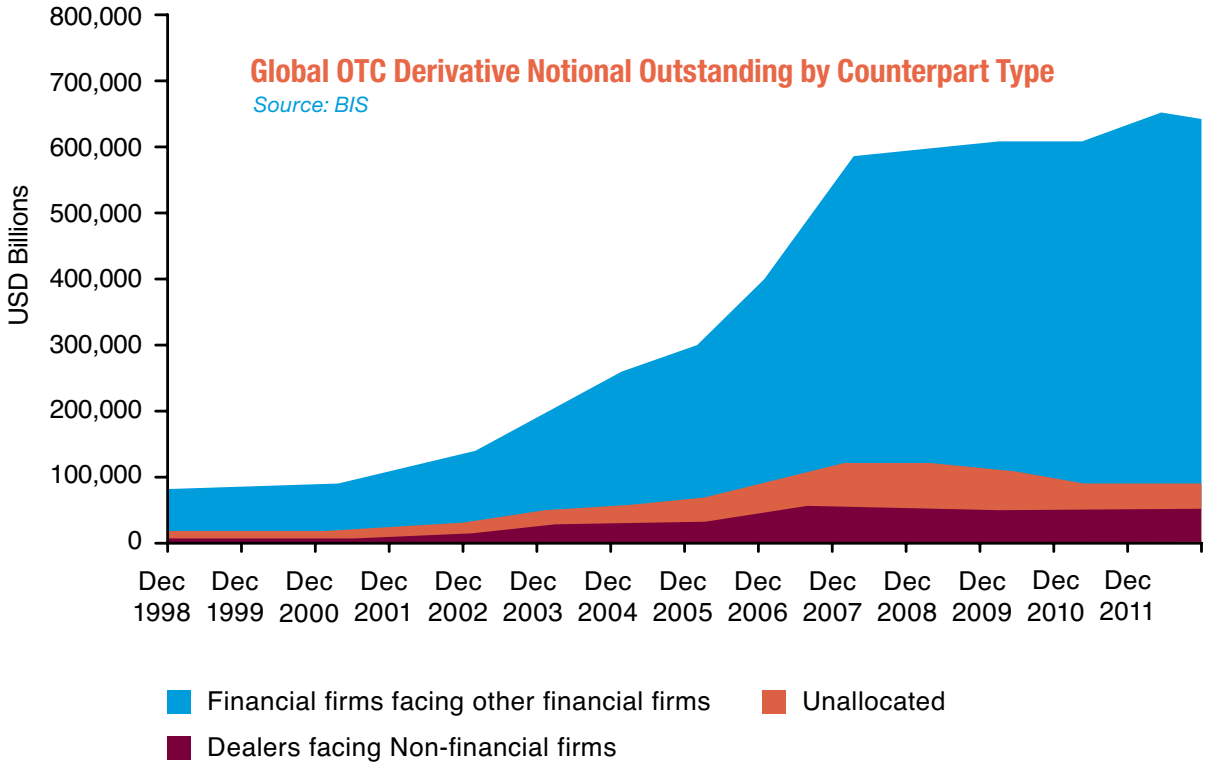
Take securities markets discussed above. Securities issued to raise finance for "non-financial firms" is a small part of these markets. For example, data from the ECB, presented in the graph below, shows that issues by non-financial firms account for less than 10% of non-equity securities issued.

[6] An often quoted definition of financialisation is that of Epstein: 'financialization means the increasing role of financial motives, financial markets, financial actors and financial institutions in the operation of the domestic and international economies.' (Epstein, 2005) This process has also been called financial market inflation (Toporowski, 2000).



Finance by finance for finance

The story is similar in derivatives markets, as can be illustrated with notional outstanding amounts published by the Bank for International Settlements (BIS). Deals with financial counterparts account for over 90% of all notional outstanding – as is shown in the graphs below.



These financial markets are not "free markets" with many buyers and sellers all interacting. Such markets exist only in textbooks and highly abstract mathematical models. In real financial markets banks provide the market place, the infrastructure of the markets

such as payment systems and custody arrangements, the financial instruments themselves, and the liquidity (as they stand ready to buy and sell). In OTC markets for example, a dealer bank stands on one side of every single derivative, providing liquidity in OTC derivatives banking instruments.

OTC derivatives markets are oligopolistic

These markets are also extremely concentrated. Fifteen to twenty very large banks dominate. In OTC derivatives markets a recent study calculated that the "G14" (14 of the largest global banks) accounted for 82% of notional outstanding (ISDA, 2010). The high costs of setting up dealing rooms lead banks to have the profit incentive to increase the "flow" of financial instruments they trade. The result is two-fold. First, the business is dominated by the largest banks with high barriers to entry for others. Second, banks' incentives are to do more and more financial trading as they seek to maximise returns on their investments in trading floors.

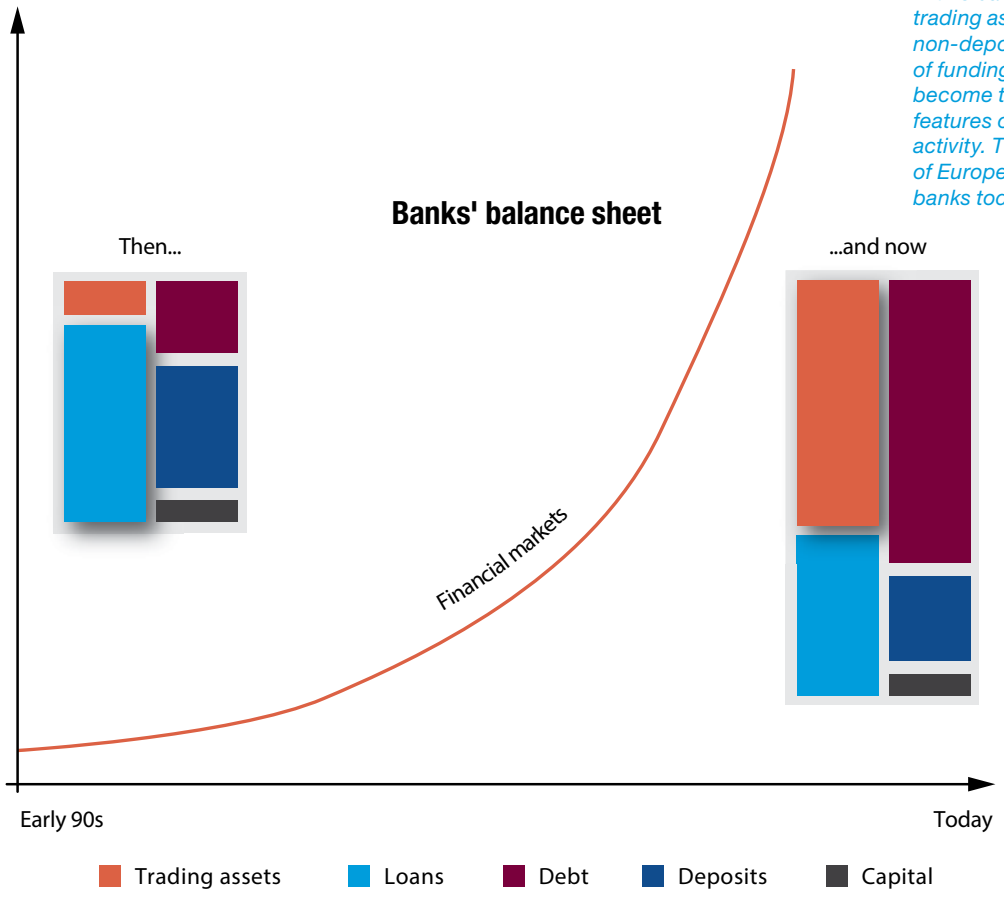
Around half of big banks' balance sheets are dedicated to trading activities

The result is a dramatic change of size and form of the largest banks over the last 25 years based on the business model of making financial markets. The largest banks typically have 25% of their assets as trading assets compared to less than 5% for other banks. In addition the largest European banks typically have in the region of 25% or more of their balance sheet used by derivatives assets for trading.[7] In general then we can typify these banks as having around half of their balance sheet dedicated to trading activities. Loans form less than a half with the rest of their assets made up by fixed assets, derivatives used for hedging and so on. The picture below illustrates how the largest banks have changed in the last 25 years.

[7] Derivatives for the bank's own hedging purposes are held in a separate line in the Balance Sheet.

Over the last 25 years, the European Universal banking model has changed dramatically for the largest banks

In this balance sheet, trading assets and non-deposit sources of funding have become the dominant features of the bank's activity. This is typical of Europe's largest banks today.

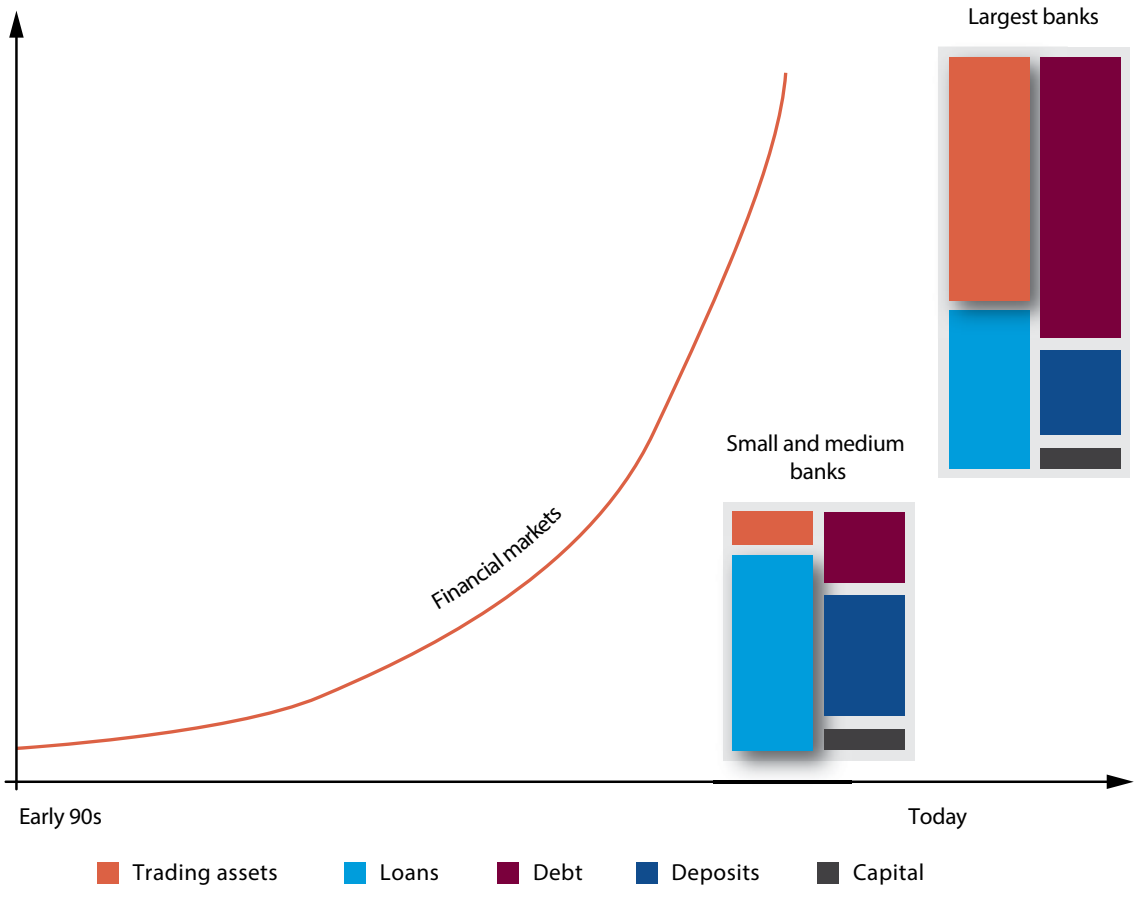


In short, the systemic implications

In short, Europe's small and medium sized banks remain primarily commercial banks.Trading assets account for less than 5% of their balance sheet. But financial markets have grown enormously over the last 25 years. They are dominated by the largest banks which have every incentive to trade ever more and ever faster. The appearance of these banks has changed with their change in activities. The diagram below captures some of this story.

These changes have critically important implications for crisis management. Governments must always take steps to protect depositors and payment systems because without bank credit money our economies and societies cease to function – it is a source of systemic risk. The largest banks today however also pose a systemic risk because of their size, connections to the rest of the economy and their complexity. These features arise from the new activities that they have taken on in the last 25 years and are typically captured under the catch-all title of too-big-to-fail. In other words the failure of these banks would spread such havoc throughout economies that governments could not tolerate their failure.

The question for crisis management is what steps can be taken to protect the rest of the economy from these two sources of danger. It is to this subject that the next section turns.



2 The trilemma explored

Jamming the recovery and resolution mechanism. How too-big-to-fail is also too-big-to resolve

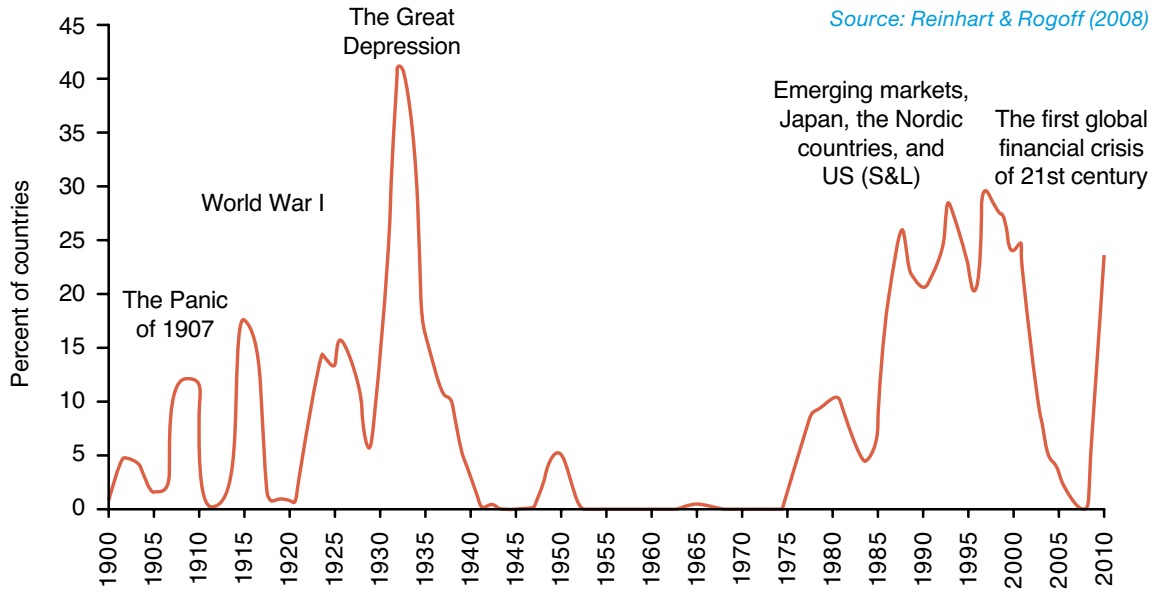
Bank failures continue regularly

This section asks if Europe really faces the banking trilemma presented in the introduction. The answer it gives is: yes, because **today's largest banks, if not seriously changed, will not pass through a recovery and resolution mechanism**. It is worth noting at the outset that there should be no doubt that bank failures, including among the largest banks, are still possible. Indeed bank failures continue regularly and this section draws on some recent experiences to illustrate its points.

History has shown us that private banking systems are subject to bank failure and to occasional bank crises. Reinhard and Rogoff's 2008 analysis illustrates this over a long period. Governments are faced with a choice. They can try to reduce the incidence of banking crisis through controls on the activities of banks, as they largely managed to do with the regulation of the 1930s that lasted until the 1970s-80s. Or they can try to absorb the effects of crises as they have attempted to do so since then.

Proportion of Countries with Banking Crises, 1900-2008
Weighted by Their Share of World Income

Source: Reinhart & Rogoff (2008)



Policymakers hope that recovery and resolution plans will protect society from bank failures

The hope of European governments and regulators is that a robust recovery and resolution process would protect society from bank failure. **The principal aim is to absorb the impact of bank failure.** Absorbing the impact of failure is achieved in two main ways: a) avoiding systemic risk by safeguarding deposits and payments systems, for example by transferring those activities to a healthy banking entity, b) allocating losses to creditors (and therefore not to taxpayers). In the main the first objective is achieved by resolution tools such as Bridge Institution Tool, Asset Separation Tool, Sale of Business Tool and the second via tools such as the bail-in tool.

TBTF banks will jam the resolution mechanism

The problem for this plan is that while this might work for small commercial banks it appears very unlikely that it will work for the largest, most complex and connected banks, as will be seen in this and the next section. How things "appear", in particular to investors in banks, is a critical element of making resolution work. These tools or mechanisms can only handle so much, however robust they appear before a crisis. **It will not be possible to pass a very-large, very-complex, very-connected, undercapitalised, over-leveraged bank (or worse still, several of them) through a resolution mechanism in a short time frame in the midst of a crisis.** The resolution mechanism will get jammed and break. In particular it will do so in two ways: first because of the complexity of the largest banks; second, perhaps more fundamentally, because of the fear that passing large concentrated losses elsewhere in the financial system, via resolution and bail-in, will jeopardise the first aim i.e. of avoiding systemic risk.

Resolution laws will not be enough – the economics of bank crises need to change

Put another way, **new laws on resolution do not directly address the activities of banks** which make them hard or impossible to resolve quickly. At the same time, even without such laws European authorities have felt able to impose losses on creditors, albeit less than is foreseen under a full bail-in regime, for example in the SNS Reaal case. However the SNS Reaal case also illustrated that while there might not be "legal" obstacles, there are still "economic" obstacles to imposing all losses on creditors – taxpayers still bore losses. Simply putting in place a new resolution law will not be enough: avoid bailouts in the future requires changing the economics of bank crises. Thus to make resolution work requires, to some degree, controlling the actions and the form of banks.[8]

Resolution tools – absorbing systemic risk, allocating losses

Resolution aims to protect depositors and allocate losses away from taxpayers

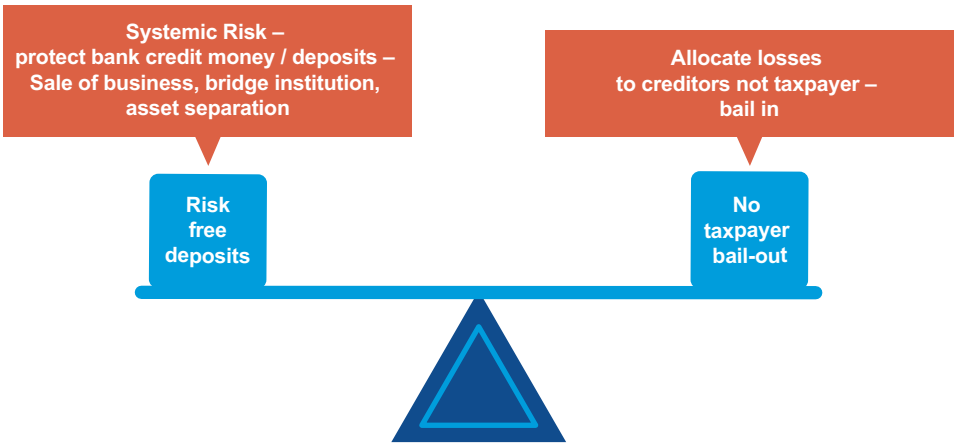
Resolution tools are the mechanisms by which legislation aims to resolve failed banks without triggering problems for the wider financial and economic system – i.e. in a way that minimises or absorbs bank failure to prevent "systemic risk". Resolution is intended to be activated a moment before insolvency would be – it is intended as a bank specific regime that allows authorities to step in without triggering insolvency. Insolvency should be avoided because, in addition to and despite national differences, insolvency typically halts all payments in to and out of the failed business; for a deposit-taking bank such a cessation of payments would entail considerable systemic risks. As has been seen this is first and foremost because of the importance of bank credit money.

The **Bank Recovery and Resolution (BRR) Directive** aims to roll out a harmonised tool kit for resolution authorities across Europe. The twin aims of the resolution tools are first, to protect the economic system, principally by safeguarding deposits for example by moving them elsewhere, and second to allocate losses to creditors and not to taxpayers. **A set of resolution tools is available to the resolution authority**; they can broadly be divided into two categories (although there is some interaction).

The first set includes tools such as the asset separation tool, the bridge institution tool and the sale of business tool. Depositor preference also falls into this category. They aim broadly to move the deposits to safety, typically in some form of "good bank". Second, the resolution tool kit includes bail-in. The aim here is to allow authorities, even in the absence of official insolvency, to allocate losses to creditors and not to taxpayers. It can be seen

[8] Legislation has so far only made tentative beginnings in reforming Europe's banks. Initiatives that might have gone further include efforts to: grant authorities wide powers to act on the recovery and resolution planning process; separate deposit-taking banks from investment banks; increase and simplify capital requirements and; impose meaningful leverage caps. Furthermore we are still waiting for additional measures to end too-big-to-fail, too-complex-to-fail (or manage or supervise or regulate), and too-connected-to-fail banks.

that the resolution toolkit therefore is a critical piece of the regulatory jigsaw in attempting to move towards achieving both of the twin goals of risk-free deposits and no taxpayer bail-out. The diagram below illustrates **how the resolution tools in this way correspond to the twin aims of risk-free deposits and no taxpayer bail-out**.



Too-big, too-connected banks bring these two aims into conflict

Why, then, does this paper argue that Europe faces a trilemma and not a dilemma? The problem for resolution tools stems principally from too-big-to-fail banks and is two-fold. First, too-big, too-connected banks bring the twin aims into conflict. Second, in a crisis, things must be achieved quickly and the complexity of the largest and most connected banks inhibits fast resolution: too-complex banks will be unmanageable in the heat of a crisis.

Our report on the Bank Recovery and Resolution proposal of the European Commission[9] highlights three, interconnected, ways in which the R&R mechanism can become jammed: if resolution would be attempted for a bank that was too-big-to-fail, too-connected-to-fail, too-complex-to-fail. Working through these three categories shows how too-big-to-fail banks (taken as a catch-all) actually bring the twin aims of resolution (creditor pays and no systemic risk) into conflict.

Too-connected-to-fail is too-connected-to-bail-in

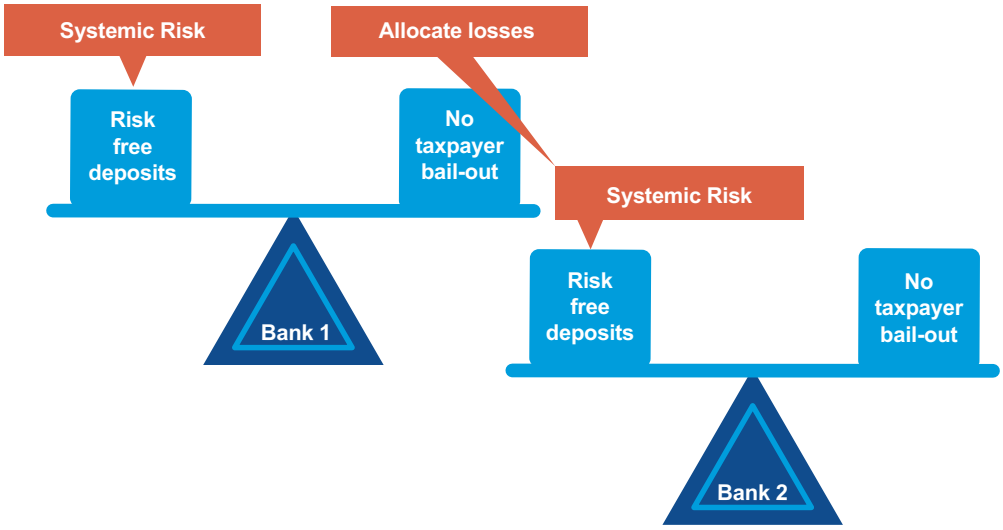
Safeguarding deposits is the first way to insulate the rest of the financial system and the economy from systemic risk, the aim of the first set of resolution tools. But allocating losses to creditors to avoid taxpayer bail-outs, the aim of the second set of tools, can also be a source of systemic risk for other too big, too-connected banks – particularly if they do not have the capacity to absorb large losses.

Bank failure can be contagious

Banks are necessarily connected to other financial firms and to the rest of the economy but these connections can be a channel for contagion – where the rest of the economy becomes infected by a failing bank. Bail-in ordinarily aims to impose losses on the creditors of failing banks. **But it matters to whom and how large these losses are.** If they are felt to be too large, or to be being passed to the wrong place, then systemic risk might actually be larger, or at least perceived to be larger, if such losses are imposed. Too-big, too-connected banks threaten to pass unsupportable losses to many other places in the financial system. The crisis so far has shown that if imposing losses on creditors involves passing losses to potentially fragile banks elsewhere in the financial system then authorities often feel unable to make that step.

[9] Publication date: 18 March 2013. Available online: http://www.finance-watch.org/publications/537-brr-report

In the presence of too-big-to-fail banks the second aim of resolution, namely allocating losses to creditors and not taxpayers, is likely to jeopardise the first aim, protecting the financial system. Put another way, absent a reform of banking structures, bail-in may threaten the strategy of absorbing bank failure. The problem is two-fold: if the losses are too big, and if the loss absorption capacity of creditors is too small then banking authorities will not feel able to safely bail in creditors of a failed bank.



In this diagram when Bank 1 fails resolution tools attempt first, to protect depositors at bank 1, and then to allocate losses. But if bank 2 cannot absorb those losses then bail-in simply causes systemic risk elsewhere, this systemic risk might even be greater if there is a more generalised lack of confidence. Authorities will justifiably balk before such a situation and will bail out, not bail in bank creditors. Bail-in must be credible, which means tackling the form and activities of the largest banks.

In the US, FDIC experience shows that the larger the bank, the more difficult it is to resolve

The **US** experience illustrates that small banks can be fairly easily resolved: the FDIC has resolved over 400 since 2008 (FDIC, 2013). It has used various resolution tools to preserve deposit money and avoid taxpayer bail-out. However even the FDIC has limits when it comes to larger banks. In 2008 it was forced to intervene to avoid a bank run on Washington Mutual. It arranged a quick sale of the bank, with JPMorgan buying the majority of the bank. '[A] takeover by the F.D.I.C. would have dealt a crushing blow to the federal government's deposit insurance fund. The fund, which stood at $45.2 billion at the end of June, [had] been severely depleted after suffering a loss from the sudden collapse of IndyMac Bank. Analysts say that a failure of Washington Mutual would have cost the fund as much as $30 billion or more.' (Dash & Ross Sorkin, 2008). Indeed it seems likely that transferring deposits of small failing banks to other (generally larger) banks is feeding the too-big-to-fail problem as it is the largest banks which can absorb the deposits of failing banks. Increasingly lawmakers and regulators are demanding that action be taken about the too-big-to-fail banks (Nasiripour & Braithwaite, 2013).

During the crisis so far it was not only, or even principally, the lack of a BRR directive that prevented governments imposing losses on creditors. It was the perception of increased systemic risk if losses were spread to the rest of the financial system. As little has fundamentally changed economically in banks activities and form, it is unlikely that the advent of the BRR directive will solve this problem alone. As will be explored below, the credibility of a resolution regime is critical to its success. In short, if investors believe they will be bailed-in, and not out, they will charge a higher interest rate to fund the very activities that make banks hard to resolve. Without

changing the economics of too-big-to-fail banks it is unlikely that a resolution toolkit alone can be credible. Several recent examples help to illustrate the point.

Cyprus banks had little systemic connection to other banks, which made it easier to apply bail-in

The recent banking crisis in **Cyprus** highlighted several features of bank failure which are instructive. Laiki bank had been insolvent for a while. ECB liquidity had kept it alive, so much so that this Emergency Liquidity Assistance (ELA) provided the EU with a critical bargaining chip at the peak of the crisis (Pollack, 2013). The second proposed arrangement in Cyprus might be thought to illustrate how a recovery and resolution process could work. Such a process involves more than simply bail-in, a variety of resolution tools allow sale of assets, bridge institutions and so on. In Cyprus deposits were transferred from Laiki Bank to Bank of Cyprus. Some losses were imposed upon creditors, including equity, subordinated and senior debt holders, controversially including uninsured depositors. These measures were accompanied by a bail-out from the ESM of EUR10bn (European Stability Mechanism, 2013a) – an amount that would presumably have been larger if losses had not been allocated to bank creditors.[10]

But in Spain, failing banks had concentrated connections to other parts of the financial system. Bail-in there was felt to increase and not decrease systemic risks

The first thing to note is that recovery and resolution steps did not manage to square the circle of riskless deposits and no bail-out: there were both losses for uninsured depositors and a bail-out. Second, even without the BRR directive or a SRM moves were made to put Cyprus' banks into a special insolvency regime.

Third, to a large degree what made even this degree of resolution possible in Cyprus was that there was little connection to the rest of Europe's financial system. The amount of senior unsecured creditors (apart from depositors) was particularly small: debt securities issued amounted to EUR 1.746bn compared to EUR 73.5bn of deposits in December 2012 (ECB, 2013). Thus the damage to be inflicted on the rest of the European financial system was small. The banks were too-big-to-fail for the Cypriot economy; but from the perspective of most European banks they were not too big-to-fail. As the Financial Times put it: '*The systemic danger is absent.*'[11] (Cotterill, 2013b). Losses from their default could be absorbed. For the politicians of Europe therefore it was safe to proceed.

The apparent success of bail-in prompted the Dutch finance minister and Eurogroup President, Jeroen Dijsselbloem, to argue that more bail-in was the way forward when asked if the Cyprus rescue was a 'template for bank resolution' (Spiegel, 2013). However the dangers and difficulties of applying such a template to all of Europe's banks in the case of their failure helps to explain why only a few hours later he made a clarifying statement: "*Cyprus is a specific case with exceptional challenges which required the bail-in measures we have agreed upon yesterday*" (Eurogroup President, 2013).[12] And for the President of the ECB Mario Draghi to state: "*let me stress that Cyprus is not a template! I have not had chance to talk to the President of the Eurogroup, but I am absolutely sure that he has been misunderstood*" (Draghi, 2013).

The ECB argued the problem with general application of bail-in at the moment was simply a matter of unknown ex-ante rules. Yet crises and the response to them are always unknown before the storm breaks. The ECB conceded that "*one peculiarity was the fact that these assets were actually quite limited by comparison with the size of the banks' assets*" and that the size of assets in **Spain**, in contrast, was different and that the situation in Spain and Ireland took place at completely different times. In other words in the critical moments during the recent crisis, bail-in was apparently felt to increase and not decrease systemic risks. This systemic risk arose because failing banks were relatively large (the losses were large, and the ability of creditors to absorb them was small) and had concentrated connections to other parts of the financial system. In the white heat of the crisis losses could not be passed to those creditors as bail-in envisages.[13]

[10] Note that it appears that the amount to find from bank creditors increased between the first proposed solution (including a "depositor tax") and the second proposal. As the FT reports: "The amount Cyprus has to find from depositors went up by EUR5bn in the nine or so days between the initial stupid idea and the deal they all eventually reached. Cyprus is a (roughly) EUR18bn economy." (Cotterill, 2013a).

[11] This was in the context of the first bail-out plan but is applicable generally given the relative size and characteristics of the Cypriot banking system.

[12] Whether this statement refers to bail-in, macro-adjustment programmes or both is not clear form the statement but especially in light of the controversy surrounding bail-in of unsecured creditors and especially of depositors it was generally taken to refer to bail-in.

[13] Cyprus itself might be used to illustrate the problems of imposing large concentrated losses on other parts of the financial system. Laiki Bank's problems came largely from its exposure to Greece: 'it had been fatally weakened by exposure to Greek sovereign bonds, which lost 70 per cent of their value in a partial default, and a high percentage of bad loans in its Greece branch network.' (Hope, 2013).

In Ireland, creditor bail-in was avoided altogether

Ireland provides a telling example. Bail-in was effectively avoided by delaying or avoiding default, through direct bail-out and through the replacement of the failing bank's private liabilities with public ones, above all from central banks. The direct EU-IMF bail-out was EUR67.5bn, (Peston, 2011). Senior unsecured bonds of the 4 large Irish banks repaid between 2008 and 2012 amount to EUR 70.6bn, with a further EUR 20.8bn outstanding at that point. In the same period EUR 33.1bn of senior bonds were repaid with EUR 19.8bn remaining outstanding (Department of Finance, 2012). In addition central bank emergency liquidity from both the ECB and the Central Bank of Ireland in various forms/instruments has amounted to over EUR180bn (Peston, 2011). This liquidity allowed Ireland's banks to stay alive, rather than enter resolution. In this way the amount of money owed to the financial system was greatly reduced (repaid at par), and that owed to central banks greatly increased. In addition, and as explored in our previous report on bank recovery and resolution, if a bank does finally enter resolution after significant provision of emergency liquidity by central banks resolution tools tend to be much less effective.[14] On the asset side many assets are encumbered because they are used as collateral with the central bank and therefore not available for sale or transfer. On the liability side lending from central banks ranks senior and is collateralised, making it unavailable for bail-in. In this way the resolution tools of the BRR directive are unlikely to be enough to achieve the twin aims of risk free deposits without recourse to taxpayer bail-in. Creditor banks took full advantage of the liquidity mechanisms of the Eurozone to reduce their exposure to Ireland's banks. Yet at the same time this amounts to a policy decision not to pass losses to other banks in the midst of a crisis.

Emergency central bank liquidity leaves banks more encumbered. This makes resolution less effective

Open derivatives exposures are a major source of connectedness between large banks

Once again it should be stressed that it is the largest banks that are the most connected as they engage in financial market activity with other banks. In particular OTC derivatives increase connectedness. Over ninety per cent of OTC derivatives are between a derivatives dealer and another financial firm. By definition while OTC derivative positions are open there is a connection between the counterparts involved – unlike securities dealers when once the exchange is complete the buyer and seller have no more connection and the buyer is exposed only to the credit risk of the security itself.[15]

In short, resolution tools are a necessary first step in protecting depositors and allocating losses to (other) creditor and not taxpayers. Clear ex-ante rules can begin to eliminate moral hazard because creditors will begin to fear losses and, principally via higher funding costs, take steps to control bank activities. But for that to work, the threat of bail-in must be credible. Investors must believe that in the heat of a major crisis bail-in will be applied. The crisis so far has shown that, when the crisis was at its hottest, authorities did not feel able to pass losses throughout the financial system. Little action has been taken to change the activities and therefore the form of too-connected banks. **To make resolution credible further steps must be taken so that it becomes credible in the heat of a crisis for authorities to pass losses to creditors, including other banks.** Those further steps must tackle more directly the activities and form of the largest banks. They must address problems at both ends of the interconnections, the losses must be smaller and ability to absorb them must be larger.

[14] Note that emergency liquidity provision here includes many central bank instruments, including but not limited to officially designated Emergency Liquidity Assistance (ELA) granted by the national Central Bank.

[15] It should be noted that Central clearing aims to reduce this inter-connectedness but risks doing so at an increased rate of trading of OTC derivatives. A further measure that might be considered would be to (re-) introduce bankruptcy remote derivative entities within banks, separating derivatives trading from all other banking activities. Central clearing as it is being implemented has also been argued by IMF staff to be simply transforming the too-big-to-fail problem to include competing derivatives clearing houses. (Singh, 2011)

Too-big-to-fail

As was discussed above in the event of a bank failure **BRR mechanisms seek to impose losses on the holders of the failing bank's liabilities**. Simply put the larger the failing bank relative to the rest of the economy the larger the losses to be imposed, the larger the risk of systemic problems, the less likely a BRR mechanism will succeed avoiding those systemic problems and the more likely that taxpayers will be called upon to avoid the losses. The smaller the failing bank relative to the rest of the economy the smaller the losses that must be absorbed.

Reforms should aim to reduce the size of banks and the overall size of the financial system, and increase diversity

The basic point is not more complicated than the principles of diversity which have governed finance since the 1950s (Markovitz, 1952). For a given size of the banking sector as a whole, and assuming default correlations less than 1, then more, smaller banks impose a lower systemic risk than fewer, larger banks do (especially as noted above if those fewer smaller banks are becoming more alike i.e. default correlations are rising). The policy implication is clear: reforms to improve the effectiveness of BRR mechanisms should aim to reduce the size of banks (and to make them less alike).

In addition the banking sector as a whole has also become too-big-to-fail. Holding the number of institutions constant and varying the size of the financial sector relative to the rest of the economy: a single bank failure in a larger financial system imposes more losses on the rest of the economy and increases systemic risk. And vice versa. **Reforms that reduce the overall size of the financial system reduce the systemic risk that it poses and increase the likelihood of BRR mechanisms working successfully.**

The table below shows the total assets of Europe's Global Strategically Important Banks (G-SIB) according to Basel Committee / FSB methodology. It can be seen that the total Assets of these banks represent a significant proportion of each nations annual output and indeed of the EU's. **For the economies of Europe to absorb losses equivalent to even 5% of these banks' assets would make for a major economic disturbance.**

Total assets of Europe's largest banks in relation to national and EU GDP

Source: (HLEG, 2012)

Bank	Total assets (€ million)	Total Assets / national GDP (%)	Total Assets / EU GDP (%)
Deutsche Bank	2,164,103	84.8%	17.4%
HSBC	1,967,796	119.8%	15.8%
BNP Paribas	1,965,283	99.8%	15.8%
Barclays	1,871,469	113.9%	15.0%
Royal Bank of Scotland	1,803,649	109.8%	14.5%
Crédit Agricole SA	1,723,608	87.5%	13.8%
Santander	1,251,525	118.2%	10.1%
Société Générale	1,181,372	60.0%	9.5%
Lloyds Banking Group	1,161,698	70.7%	9.3%
ING	961,165	161.5%	7.7%
Unicredit	926,769	59.4%	7.4%
BPCE SA	795,728	40.4%	6.4%
Rabobank Group	731,665	122.9%	5.9%
Nordea	716,204	197.4%	5.8%
Commerzbank	661,763	25.9%	5.3%

Too-complex-to-resolve

Complexity is the third dimension to discuss. As has been seen throughout this report a clear set of ex-ante rules on recovery and resolution can be an advantage in dealing with complexity. **However beyond a certain point the largest most complex banks are likely to actually prevent the resolution mechanism from working – there is only so much that a resolution mechanism can do alone.**

Bail-outs of complex banks are difficult and lack transparency

So far during the crisis, as was seen above bail-outs have been ad-hoc, and for today's complex banks this can lead to difficulties in transparency and accountability. Portugal's citizen's debt audit campaign (Iniciativa para uma Auditoria Cidada (IAC)) point out that Banco Portugues Negocios (BPN) was nationalised and bailed out, yet with only 1.5% of Portugal's total bank assets and only around 2% of its deposits it is hard to see how BPN ranked as systemic. IAC argue that a lack of transparency and accountability in the resolution process means it is hard to understand which of BPN's liabilities were met, which assets written off – a state of affairs that is not in the public interest. Clear ex-ante rules implemented by an accountable and transparent resolution authority would help in this situation.

Beyond a certain point complexity becomes an obstacle to resolution. Simply put more complex banks are more difficult to resolve. For a given set of resolution tools, reduced complexity increases the probability of successfully avoiding systemic risk. Once again, thanks to the change in their activities, the largest and most connected banks are also the most complex banks.

The largest banks in Europe and the US are similarly complex

As we highlighted in our previous report, 'Lehman Brothers, for example, had more than 3000 legal entities (Moya, 2009); even two years after the collapse several thousand employees of administrators were still working 'trying to unwind the complicated affairs of a one-time titan of high finance' (Treanor, 2010). **In the US Lehman Brothers took 3½ years to exit from Chapter 11 status** (Alvarez & Marsal, 2012).

In Europe it would seem that the largest banks operate at a similar level of complexity. Anecdotal evidence suggests, for example, that a recent "living will" exercise at Deutsche Bank revealed over 2000 legal entities with insufficient centralised knowledge about them; a situation which apparently led to Deutsche Bank deciding for themselves to simplify their legal structure. Efforts to resolve the Dexia group have also proved complex, costly and time-consuming. There are at least 3 dimensions to this complexity (The Lawyer, 2013). First, it involved several member states – as early as 2008 Dexia benefited from its first state re-capitalisation from France, Belgium and Luxembourg (Brierley, 2013). Second, it was time consuming – just the investigation to unlock state aid took 16 months (The Lawyer, 2013). Meanwhile the first bail-out was in 2008 and the second in Jan 2013 (Brierley, 2013). 'Third, the resolution involved a uniquely complex mix of remedies including nationalisation (of Belfius), divestments (of Dexia Asset Management, Crediop, Denizbank), the establishment of a development bank (through DMA in France), the orderly resolution of the residual group and a set of behavioural commitments.' (The Lawyer, 2013). Moreover the case is not yet resolved. The decision to unlock state aid relied on the approval of a new resolution plan including EUR85bn of state guarantees (European Commission, 2012).

It might be noted that those banks that are too complex to resolve are also increasingly revealing themselves as too-complex to manage, as attested to by the glut of rogue trader incidents including the London Whale losses;[16] and too-complex to regulate and supervise.[17]

[16] A continuing litany of rogue traders and mis-selling suggests higher management of such institutions simply cannot understand let alone control such sprawling entities. This has started to be reflected in bank analysts and activist shareholders calling for banks to break themselves up. (Migone, 2013) The implications of such calls are that even the private benefits of such complexity are being questioned, let-alone the public benefits. Haldane points out that price to book ratios are falling below one, as they also did in the 1930s. (Haldane, 2012)

[17] As Andrew Haldane argues, regulators are currently fighting complexity with complexity, perhaps best shown with the approach of Basel III/CRD4, with which some have argued it is impossible to be fully compliant due to inconsistencies and complexity. Haldane argues: 'As you do not fight fire with fire, you do not fight complexity with complexity.' (Haldane, 2012)

It is scarcely credible that resolution of such banks could be achieved over a weekend

A resolution mechanism that attempts, in the midst of a banking crisis, to resolve one of these incredibly large and complex institutions will most certainly become blocked and then break. It is scarcely credible that resolution could be achieved, for example, over a weekend, such that ATMs and payment systems could open on a Monday morning with all remaining causes for bank runs resolved. The credibility of resolution mechanisms is critical: if the resolution mechanism is not credible before a crisis begins then resolution will not address moral hazard and the funding subsidy that feeds the trading activities that makes too-big, too-connected and too-complex banks so difficult to resolve.

In short

Part 1 of this report showed that the activities of the largest banks have changed over the last 25 years. The change in activities of these banks has led to them becoming too-big, too-connected, too-complex to fail. But these very factors are also likely to leave them **too-big, too-connected and too-complex to resolve**. Resolution tools aim to transfer deposits to safety and then apply losses to creditors. But bail-in mechanisms that force large concentrated losses on the rest of the financial system are likely to be every bit as dangerous and unpalatable as they were from 2008-2013. Fear of systemic risk is likely to jeopardise the aim of making creditors pay and as a result resolving large banks is likely to require considerable public resource.

A robust recovery and resolution mechanism is a very important step in moving towards a situation where taxpayers don't pay and bank creditors do. But it is not enough. In fact Europe faces a trilemma: it cannot have riskless deposits, no bail-out and bank regulation that does not change the current forms and activities of banks. **Analysis in parts 1 & 2 has shown that unless regulation starts to tackle the largest, most complex and most connected banks a recovery and resolution mechanism will not be credible.** Credibility is critical to the resolution mechanism if it is to eliminate the funding subsidy to trading activities that prevent the resolution mechanism working. The next section discusses complementary reforms which will help to render the largest banks resolvable and so make resolution, and in particular bail-in, credible.

3 Policy Recommendations

Several steps can be taken to make resolution mechanisms better able to cope and therefore to achieve their twin aims. First, **recovery and resolution laws** should be passed, but they must give authorities the ability and the imperative to act: above all prior to a crisis through recovery and resolution plans which allow authorities to re-shape the largest banks and their activities. Second, **structural measures which separate various parts of the bank** will render resolution mechanisms credible, while at the same time resolution is required to realise the benefits of separation. Third, authorities would be emboldened to pass losses to creditors (and not to taxpayers) if there were **higher loss absorption capacity** in the rest of the financial system, above all if there were relatively more equity. Finally, although not considered in great detail here, there are various other possible measures that, although mostly not currently on the legislative agenda in Europe, tackle bank form and activities in ways that could render them more resolvable.

Giving Recovery and Resolution plans teeth

Attention so far has focussed on the resolution tools proposed in the BRR directive and those that it is assumed will be used by a Single Resolution Mechanism (SRM). Just as important in light of the analysis above, however, is the **Recovery and Resolution planning process** carried out by banks and authorities prior to a crisis.

If authorities do not find resolution plans credible, they should be able to demand changes to address a bank's size, complexity and connectedness

In this process banks prepare recovery plans to be activated in the case that they find themselves in trouble (but prior to bank failure) and resolution authorities prepare resolution plans should the bank have to be put into resolution, i.e. failure becomes unavoidable. This planning process should be critical as it should allow authorities to make a judgement about whether banks are digestible by a resolution mechanism. If the resolution authorities do not find their resolution plans credible they should have the authority to demand changes to banks, for example changes to their activities, structure and so on. In theory at least, scope exists within BRR legislation to address the problems of banks which are too-connected, too-big and too-complex-to-resolve.

Separation laws are also essential, they would turn a vicious circle into a virtuous one

Several problems remain with this process, of which the most important revolves around the credibility of the resolution mechanism. Making resolution authorities solely responsible for constraining the activities of banks asks a lot of them. In addition, whether authorities have done enough can only be known in a crisis - at which point it is too late to change anything. In addition, if it is felt beforehand that the resolution authorities' plans are not credible then a vicious circle can develop: the belief that authorities will not pass on losses to creditors but rather to taxpayers will provide a funding subsidy to the very activities which make resolution impossible and bail-out inevitable. It is exactly for this reason that laws which separate commercial and investment banking are so critical. Removing responsibility from the discretion of resolution authorities and enshrining it in law helps to render resolution credible and turns the vicious circle virtuous as is now explored.

The importance of being separated

If exchange stops, society can quickly plunge into chaos

Bank credit money is crucial to the working of the economy: more than 95% of money at use in the economy is private bank credit money. Bank failure removes that money from the economy. This not only entails a loss of wealth but greatly disturbs the economy's ability to exchange things for money – without bank accounts to pay to and from, payments become impossible and exchange paralysed. If exchange stops, society can quickly plunge into chaos. The primary aim of separation should be to **separate those bank functions tied up with bank credit money (deposits, payments systems and lending) from other banking activities**, which in the main means trading activities.[18]

By co-mingling commercial and investment banking, governments are effectively obliged to rescue both

As was seen in section 1, the reason for separation is that governments must rescue commercial banking activities but investment banks should be able to fail in the normal way. By co-mingling these activities, governments are effectively obliged to rescue both commercial and investment banking activities. In good times this means that trading activities effectively receive a subsidy because in bad times it is believed that losses will be taken by the taxpayer (while gains were taken by employees and lenders[19]). This subsidy inflates the amount of trading activities reinforcing the too-big, too-complex, too-connected to fail nature of these businesses. Separation would cut this subsidy.

Second, separation tackles the problem of complexity and the impact it has on resolution in the midst of a crisis. Simply put, separation makes resolution much simpler and therefore more credible. In the event of separation within a banking group, e.g. with the non-operational holding company (NOHC) model, healthy parts of the business are easier to separate from the rest (Blundell Wignall et al, 2009). It is simple for governments to separate and rescue those parts which must be rescued and cut loose those which must not.

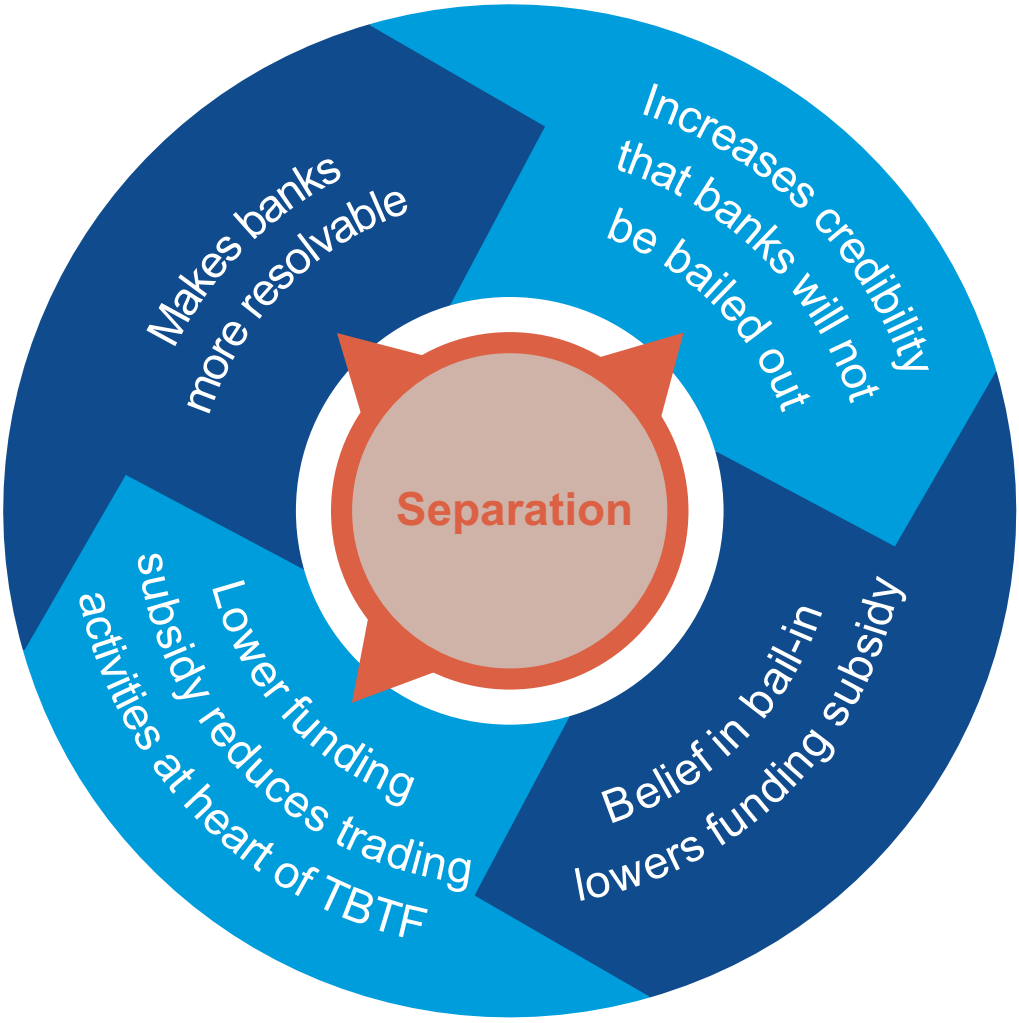
The link between separation and resolution lies in the credibility of resolution. Legally enforced separation would render more credible the belief that a resolution mechanism would be able to achieve the twin aims of protecting deposits and allocating losses to creditors without recourse to bail-out. This credibility is essential to tackling the too-big-to-fail problem which will otherwise jam resolution. A virtuous circle can be established whereby separation makes resolution credible, which acts on the actions of banks to make resolution easier. Separation can both make resolution easier and spread the belief that resolution without taxpayer bail-out is possible. This belief reduces the funding subsidy that too-big-to-fail banks receive, reduces the amount of the activities that make them too big-to-fail and thereby further renders those banks easier to resolve. **In short separation makes resolution credible and resolution realises the benefits of separation.** Separation represents an extremely important first step towards making resolution mechanisms work, but it is not a silver bullet for all the problems with Europe's banks, or even to put an end to too-big-to-fail banks. The rest of this section briefly explores some further policy steps that should be taken.

Many of the arguments for the separation of commercial banking from investment banking were outlined in our recent paper "The Importance of Being Separated", where the arguments were also based on an analysis of bank activity. A complete list of **Finance Watch's publications on bank structure**, including EU and national measures in France, Germany and the UK is available at http://www.finance-watch.org/our-work/publications?dossier-cb%5B%5D=136.

[18] Some argue that separation should be determined by riskiness or whether activities are client facing. This separation however has little analytical or practical content – pretty much all bank activities are risky and client facing. Separation along these lines would achieve next to nothing. For further arguments along these lines, see our 7 May 2013 blog "A misleading argument on bank separation – the "client facing" criterion" (http://www.finance-watch. org/hot-topics/blog/609-bank-separation-client-facing-criterion), as well as our responses to the French and German legislative proposals.

[19] Equity holders tend to face a more symmetrical payoff as they typically take larger losses in the event of government bail-out which explicitly bails out lenders to the bank.

The virtuous circle of credible resolution and the role of separation



Loss Absorption

For bail-in to be effective, the financial system must be able to absorb losses

Resolution mechanisms will be credible if it is felt that the losses to be allocated to creditors can be absorbed by the financial system and the economy more generally. Conversely they will not be if it is felt that bail-in would simply spread systemic risk. Making losses absorbable can be achieved in a number of ways. So far this paper has focussed largely on reducing the losses to be passed to the rest of the system. Attention must also turn to improving the ability of the rest of the financial system to absorb those losses. **Greater loss absorption capacity for banks has a double benefit: it reduces the incidence of failure in the first place and it increases the likelihood of successful bail-in if banks do fail.**

A simple leverage ratio is the best way to increase loss absorption

The best way this can be achieved is through financial institutions, and banks in particular, increasing the amount of equity they issue relative to the size of their assets. The most straightforward way to achieve this with regulation is through simple leverage ratios. Scope to take such measures exists within Basel III, although Europe's implementation of Basel III (CRD4) has backed away from imposing leverage ratios which affect bank's activities.

The first place in the balance sheet of a failing bank where losses will be absorbed is by retained earnings. In terms of liquidity the missing cash flows must be made up for by other assets in order to meet fixed liabilities and demand liabilities – above all deposits. The danger for banks is that if depositors feel that the bank cannot generate enough cash flow to meet demand deposits then a self-fulfilling bank run will occur (Diamond & Dybvig, 1983). In this case the systemic risk that arises from risky deposits will be realised and the aim of absorbing the systemic risk of the first failing bank will not have been met.

Debt vs equity – how do they compare as loss absorbers?

Increasing the amount of other liabilities can therefore increase the loss absorption capacity of creditors of the failing bank. In the main this presents the choice of increasing debt or equity instruments. Both can be effective, and effectiveness changes in different circumstance and for different types of banks, in particular for deposits-taking banks and for investment banks. Nevertheless equity has certain advantages. From the perspective of cash-flows equity can be distinguished from most debt in two ways: it has no repayment of face value and dividend payments are at the discretion of the issuer. Default cannot be triggered via equity, in extremis dividends can be set to zero and as a result equity will require no cash from the assets of the bank. On the other hand with debt instruments a bank has no choice but to generate enough cash to meet interest payments and repayment of notional at maturity. Failure to do so will trigger default. If this situation is approaching it is more likely that the failing bank will turn to the central bank as lender of last resort. **In short equity, most especially for commercial banks, forms a better loss absorbing liability than debt:** its flexible cash flow requirements enable the bank to improve / avoid worsening their solvency position. Above all it avoids default on face value of the liability and is therefore better suited to absorbing losses rather than passing them around the financial system; and absorbing bank failure is the very object of crisis management.[20]

Debt which can be bailed in, both senior and sub-ordinated, can also act as means of absorbing losses. In this case there are of course clear links to the dangers of passing losses, and therefore systemic risk, around the financial system and rather than absorbing it. Nevertheless, particularly in a context of smaller, less connected, less complex banks debt will clearly have a role to play: separated investment banks will naturally issue various classes of debt which must be bailed in in the case of failure, and separated deposit banks can use debt which can be bailed in as a buffer to protect deposits.

[20] A number of other measures would be possible which would help banks achieve risk free deposits without recourse to taxpayer bail-outs. This report will not discuss these options however some that are being mentioned by policy analysts and policy makers include the following. Financial transactions tax (FTT): an FTT can act as "sand in the wheels" of the finance by finance for finance trading activities which are at the heart of the too-big-to-resolve problem. Central Couterparties (CCP) for OTC derivatives: CCPs can reduce interconnectedness from OTC markets, in addition, as with FTT, CCPs through increased margin requirements might increase derivative transaction costs and reduce trading volumes. Size caps: in the US and elsewhere simple caps on size have been proposed. This could be a cap on total size or perhaps more likely a cap on certain aspects of the bank, for example on the insured amount of deposits per institution. Diversity of ownership and governance structures: Europe's banking is dominated by the largest banks which have become more like each other; as a result there is little diversity in Europe's financial sector. This lack of diversity increases fragility. Not least because it increases the likely correlation between severe problems at Europe's banks: in good times they all gain, in bad times they all struggle together. Regulation could encourage a more diverse range of ownership and governance models.

4 The Single Resolution Mechanism

This section discusses the **Single Resolution Mechanism (SRM) and the Single Supervisory Mechanism (SSM)** in the context of the analysis of recovery and resolution presented above.

The Banking Union proposals

The European Commission published its proposal for the SRM on July 10, 2013. The SRM is an important step in completing a Banking Union as it aims, by allowing the orderly resolution of banks in participating member states, to weaken the interdependencies between financial institutions and their sovereigns.

The proposed **SRM** would cover all of the Eurozone banks and would include a Resolution Board and a Single Bank Resolution Fund (SBRF). The powers of the Brussels-based Resolution Board would be limited to making recommendations to the Commission in the event of a bank failure and to coordinating the subsequent resolution plans. The ex-ante resolution fund would be funded by the banks themselves and would assist in the restructuring or resolution of a troubled bank. The fund would amount to 1% of covered deposits in the participating member states.

The earlier adopted Single Supervisory Mechanism (**SSM**) moved supervision of Europe's largest banks to a central supervisor housed within the ECB on the grounds that it makes sense for resolution of the banks that they are not only supervised by one authority (ECB) but that their resolution is also centrally managed.

Resolution difficulties come from a changed pattern of activities rather than cross border expansion

A part of the logic of the **Banking Union** seems to be geographical: banks have grown too large for their sovereigns because of international operations; therefore the solution is to move resolution to the European level. This logic might hold if the primary cause of changes to banks over the last 25 years was cross border expansion within the European Union. But as analysis above shows, the change in the scale / complexity / connectedness of banks rests primarily on changed activities. It is these changed activities, particularly of the largest banks which lie behind the problems of resolution.[21]

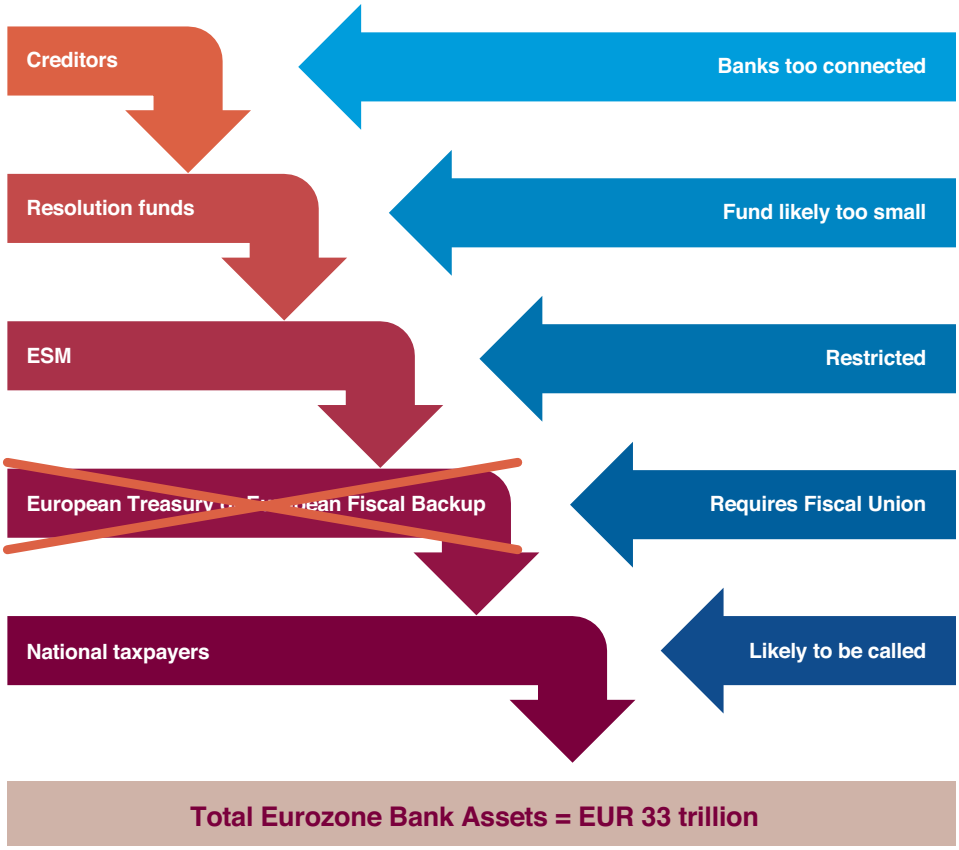
First and foremost, the analysis of the previous section still applies: without reforms to the activities of the largest banks, recovery mechanisms will struggle to work and struggle to be credible. The result will be a resort to bail-out so the first question to be asked of the SRM is: will it have access to sufficient resources to back up resolution?

As we explain below, there are several possible sources of such funds but closer inspection suggests that they cannot exist in sufficient amounts at European level without greater loss absorption capacity of banks and / or without further fiscal union. **The danger of this situation is that Europe creates a paper tiger – an SRM that delays reform of the banks because it appears capable of handling bank failure, but which in a crisis cannot.**

[21] While there was an increase in intra-EU cross border lending in the run up to the crisis there was also an increase in cross border banking more generally i.e. global cross border banking rose as well (The Economist, 2012). Moreover, large banks are more likely to be cross border lenders than small banks.

Does the Single Resolution Mechanism contemplated have the money to tackle a large/complex/connected bank failure?

To what extent could a European Single Resolution Mechanism cope with the demands of a bank resolution? The diagram below illustrates what the "waterfall" of losses looks like for dealing with a failing / insolvent bank, after own funds are exhausted. It serves as a guide to analysis to ask if a SRM can avoid calling taxpayers to pay for bank losses.



The first option is of course to apply losses to **creditors**. But reading the position on bank resolution of the European Council released on 27 June 2013, two major issues arise that can make one doubt that a sufficient amount of losses would be imposed on creditors when needed to make the resolution mechanism effective.

Exemptions and discretions weaken the bail-in mechanism

The first issue lies with the list of bank liabilities permanently exempted from bail-in and in particular with inter-bank liabilities with an original maturity of less than seven days. Exempting very short term liabilities can be expected to have the consequence of developing massively the issuance of those liabilities by banks, which will shorten mechanically the average funding maturity of banks, will send a signal opposite to the signal sent by the CRD IV liquidity ratios (in particular the LCR) and, in the end, will reduce dramatically the amount of bail-in-able debt on which resolution authorities can impose losses.

The second issue lies with the possibility given to national resolution authorities to "*exclude, or partially exclude, liabilities on a discretionary basis if they cannot be bailed in within a reasonable time; to ensure continuity of critical functions; to avoid contagion or to avoid value destruction that would raise losses borne by other creditors*."

Given the wording of the possible exemptions to bail-in contemplated, it can be expected that resolution authorities would not impose enough losses on creditors to protect

taxpayers if a major banking institution were to fail; hence the trilemma described in this paper.

However, the principle of a minimum loss absorbing capacity to be imposed on banking institutions proposed by the Council goes in the right direction but it still needs to be implemented and its planning (from 2016 onwards) leaves open the question of how potential bank failures will be dealt with in the meantime.

Next, the SRM will require financing to operate interim **resolution tools** such as bridge banks, temporary nationalisations and so on. The SRM proposal provides for a Single Bank Resolution Fund (SBRF) to be established at a level equal to 1% of insured deposits in the Banking Union, or around €55bn. This would be built up by bank contributions over the course of 10 years. How much and how each bank would contribute is yet to be defined and may be set out in Commission delegated acts.

The Resolution Fund may be too small for the largest banks

One problem with a resolution fund is that it will take years to build and may in any case be too small to tackle the failure of the largest banks, especially if nothing is done before then to tackle excessive bank size, complexity and connectedness. To put things in perspective, a fund of €55 bn will represent about 0.15% of the total size of the Eurozone banking system and the largest banks covered each have total assets about 50 times bigger. This situation makes the contemplated fund a credible tool only for the resolution of a limited number of small or medium size banks.

The resolution fund is intended primarily for resolution but transforms into a loss absorption fund if needed, such as to preserve financial stability once 8% of the failing bank's liabilities and own funds have been exhausted under the BRR. This provides an additional line of loss absorption before taxpayers are called in but will be of limited effect given the size issue discussed in the previous paragraph.

After creditors and resolution comes the **European Stability Mechanism (ESM**). As some analysts have noted, "there is general agreement that a resolution fund should be financed in the first instance by levies from the industry, but will need a fiscal back up in case a system wide crisis develops. That back up for the SRM will probably have to be the European Stability Mechanism." (Beck, et al., 2013, p. 33).

The European Stability Mechanism (ESM) can give financial assistance for the recapitalisation of financial institutions (European Stability Mechanism, 2013b). Where a financial institution threatens the stability of the Eurozone or of a member state the ESM can provide loans. These loans are provided in the form of bonds issued by the ESM passed to the troubled institution. These bonds can then be used as collateral in repurchase agreements (repos) most likely with the ECB or with the national Euro System Central Bank, but in theory with a private bank as well – although the latter seems unlikely to be possible for a failing bank. The latest agreement also provides for the possibility of direct bank recapitalisation by the ESM up to a limit of EUR 60bn, provided there is continued state involvement and subject to various other conditions and limits. Given its limited means of intervention and its structure, the ESM can hardly be seen as a very strong line of defence to protect taxpayers in case of a significant banking crisis.

It is difficult to see how the SRM can back-stop the process without member state taxpayers' involvement

The next layer of back up, after a resolution fund and the ESM would theoretically be the **European Union** itself but, in the absence of fiscal union, this possibility has to be excluded. In summary, it is difficult to see how the SRM can back-stop the process without member state taxpayers' involvement. The additional risk that an SRM might pose however is to create the impression that a credible solution to bank failure has been found: this is likely to delay vital reforms of banks' activities and form but, without those reforms, recovery and resolution (national or supranational) will fail in its objectives.

Conclusion

The emergence of too-big-to-fail banks, encompassing too big, too connected and too complex to fail, can be traced to long term growth of bank's activities in particular in financial markets and is related to a dynamic of de-regulation. A necessary complement to the growth of market activities is a credible mechanism to manage banking crises. Resolution of failing banks is at the forefront of crisis management. It has been embodied in Europe in the Bank Recovery and Resolution (BRR) directive, and the Single Resolution Mechanism (SRM). Resolution has the twin aim of securing the safety of bank credit money in the form of deposits and payment systems, and of allocating losses to creditors and not to taxpayers.

However, resolution mechanisms alone will not be sufficient to achieve this. First and foremost attempts to pass the losses of too-big and too-connected to fail banks elsewhere in the system are likely to increase rather than absorb systemic risk. This will force authorities to choose between depositors and bail-out which is an impossible choice to make. To bolster resolution in order to achieve its twin aims requires applying some constraints on banks. **Two critical first steps can be identified. First, separate commercial and investment banking – separation renders resolutions credible, credible resolution realises the benefits of separation. Second, increase the loss absorption capacity of banks (both equity and debt to be bailed in)**. Not only will this reduce the incidence of failure in the first place but it will also allow the losses of failed banks to be allocated to its creditors and not to taxpayers. This can be achieved in a number of ways, of which simple leverage caps and a significant enough amount of bail-in-able debt are the most straightforward.

In summary, Europe needs robust recovery and resolution mechanisms, it needs a strong separation of deposit banks and trading activities and it needs to reduce the fragility of the system by increasing banks' capacity to absorb losses. And it needs it sooner rather than later.

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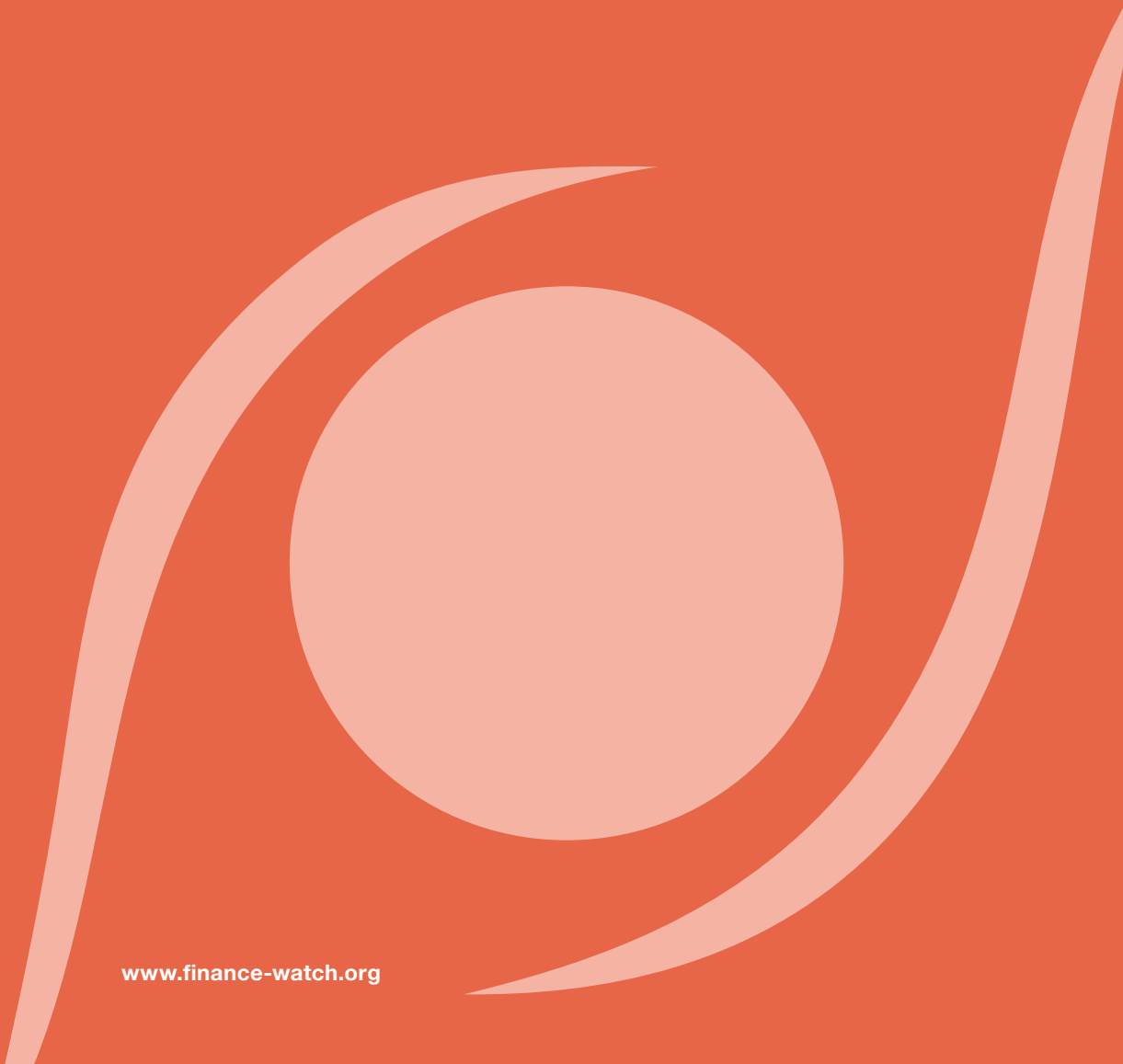

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Finance Watch was founded on the following principles: finance is essential for society and should serve the economy, capital should be brought to productive use, the transfer of credit risk to society is unacceptable, and markets should be fair and transparent.

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