European Banking Recovery and Resolution Directive: Potential Impacts on European Systemic Important Financial Institutions

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Abstract
The great recession heralded in by the subprime mortgage crisis, took a dramatic turn for worse as a result of collapse of the Lehman Brothers bank in September 2008. The crisis deemed to be the most devastating after the Great Depression of 1929, had a debilitating effect on world economies, developing and advanced alike. The extent of its devastation which is still being felt in Europe and many parts of the globe reminds us the interconnectedness of financial institutions, particularly those tagged TBTF or SIFIs. Policy makers scrambled to curtail the ugly effect of the crisis by rescuing the SIFIs within their jurisdiction largely through bailout mechanism and provision of implicit guarantee for the debts of failing/failed institutions. As soon as the tide is stemmed, they cast their gaze on new crisis resolution and recovery measures that could rein in systemic risks associated with SIFIs, prevent future crises and reduce the concomitant moral hazards in the current resolution measures. The objective of this paper is to assess ex ante the potential impacts of implementing the new Banking recovery and resolution directives on Europe’s TBTF banks.

Key Words: bailouts, implicit guarantee, systemic risk, bail-in, asset-separation, too-big-to-fail, bridge bank, financial crisis, bank recovery, resolution

JEL classification: G18, G28

Introduction
“We have a very strange situation in which it’s the worst of capitalism and socialism, a situation in which profits were privatised and losses were socialised.” Nassim Taleb (2009)
Among other factors, one of the major causes of the great depression in 1930 was massive bank failures, many banks failed during this period. In less than ten decades after the great catastrophe, the world had witnessed many more financial or banking related crises of different magnitude and devastating impact. During and after each major financial crisis, government, central bankers, regulators and policy makers would come up with policy responses to combat its effects on both the real economy and the financial system. Many of these recovery and resolution actions were inadequate and fire fighting in nature. Studies have shown that these responses were not well conceived, inconsistent, in-effective and poorly implemented (Thornton L. Daniel 2012; Bech, M. et al 2012; Mishkin S. Frederic 2009). The sheer number of financial crises that had occurred since the great depression gives credence to the fact that
the shoddy responses were neither ineffective in resolving existing crisis nor potent enough to prevent another one from occurring. The outbreak and the handling of the 2007 -2008 global financial crises further confirmed the inadequacies and inconsistencies in financial crisis resolution and prevention policies.

The collapse of Lehman Brothers a systemic important financial institution (SIFI)\(^1\) almost brought the World economy to its knees. The domino effect of the collapse of Lehman still casts an ugly shadow on the global financial systems (Hal S. Scott 2011; Dumontaux, N. and Pop A. 2009). The effect from the collapse is both devastating and far reaching, it left no stone unturned, no economy, developed or emerging is spared. Five years on, the largest economy in the world is still gasping for breath and Europe is not out of the woods yet. Worst hit countries in Europe: Spain, Ireland, Greece, Italy, Cyprus and Portugal to mention but a few, are still wriggling under the crushing weight of the great recession.

Like many financial crises preceding it, the resolution of the current global financial crisis came with its attendant flaws and issues. Resolution was largely done through a variety of bailout policies, where governments use tax payer’s money to provide direct loans\(^2\) to ailing banks or implicit guarantee for bank debt (Schich, S. and Lindh, S. 2012). While bailouts assure the “going concern” of the rescued institutions, it also encourages moral- hazard\(^3\) behaviour by the failed bank to engage in excessive risk taking (Kevin, D. 2009; Samwick, M. 2009). In order to address the systemic risks and moral-hazard associated with the disorderly failure of systemic important financial institutions (SIFIs), the European Union adopted and align its Bank Recovery and Resolution Directives (BRRD) to the Financial Stability Board (FSB) Key Attributes of Effective Resolution Regimes for Financial Institutions which is the new international standard for resolution regimes (FSB 2013).

The intent of this paper is to provide ex ante assessment of possible implications of the new banking recovery and resolution directives on the systemic important financial institutions (SIFIs) in the European Union. The remainder of the paper is organised as follows. Section 3 reviews the available literature addressing the impacts of the recent global financial crisis on systemic important financial institutions. Section 4 summarises the policy responses to the recent financial crisis in different countries and in the European Union and highlights the key requirements of the new European bank recovery and resolution directives. In Section 5, we assess the potential impacts of the implementation of the resolution tools of the new directives on systemic important financial institutions in the EU. Section 6 concludes with a summary discussion of potential impact of the implementation of the EU RRD on SIFIs in the European Union

**Impact of Financial Crises on SIFIs**

The recent financial crisis has a huge impact on systemic Important Financial Institutions; it’s distressing effect can be felt in almost every business area and process of a bank. A fairly large literature investigates the impact of financial crisis on large, complex and interconnected banks. The great recession did affect banks in different ways, depending on the funding capability of each bank. Kapan and Minoui (2013) find that banks that were ex ante more dependent on market funding and had lower structural liquidity reduced supply of credit more than other banks during crisis. The ability of banks to generate interest income during the financial crisis was hampered because there was a vast reduction in bank lending to individuals and businesses. Ivashina and Scharfstein (2008) document that new loans to large borrowers fell by 37% during the peak of the 2007 -2008 financial crisis, and also, banks with more revolving lines outstanding relatives to deposits reduced their lending more than those with less revolving line exposure.

The ensuing credit squeeze that marked the great recession was accentuated by in ability of banks to grant credits to the private sector of the economy, an empirical study conducted by Barajas etal (2010) concluded that private sector

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\(^1\) FSB(2010) defines SIFIs as institutions of such size, market importance, and global interconnectedness that their distress or failure would cause significant dislocation in the global financial system and adverse economic consequences across a range of countries. The criteria for designating a bank as a SIFI or a TBTF include Size, Complexity of its operations and its interconnectedness.

\(^2\) In 2008/2009 the following SIFIs received the U.S government Bailout loan: Bear Stearns $30billion, Citigroup $280billion, Bank of America $142.2billion.

\(^3\) In the U.K: Royal Bank of Scotland £37billion, Lloyds TSB and HBOS £17billion. In addition the U.K treasury planned a £200billion guarantee to banks. – The Telegraph, 19 Jan 2009

\(^3\) Ennis and Malik (2005) develop a theoretical model of the effect of TBTF policy on bank decision-making. The result is consistent with moral hazard; a known TBTF policy increases the probability of failure of the bank.
credit from commercial banks slowed from annual rates of 8 per cent or greater from 2003 through the first quarter of 2008, to just over 2 per cent by the last quarter of 2008, and afterward recorded negative growth for the first time in the decade. During the financial crisis, banks had difficulties managing their liquidity as short term funding market came to a halt. The efforts to manage liquidity crisis by many banks contributed to short supply of credit to the private sector (Cornett et al 2011). As a result of tight liquidity and decline in credit supply during the financial crisis, banks became selective in their lending; many large European and American banks withdrew credits from emerging economies. Hass and Horen (2011) find that during the crisis banks continued to lend more to countries that have geographic affinity, where they have built close relationship with other lenders and borrowers.

Recent studies have investigated the impact of the 2007-2009 financial crises on banks’ capital. Berger and Bouwman (2011) emphasised the importance of capital during financial crisis. Their empirical study concludes that banks with solid capital base have some benefits during the crisis than those that are poorly capitalised. Well capitalised banks are more able to withstand the shocks due to liquidity squeeze, and therefore had higher chances of surviving the crisis period. Other benefits accrued to well capitalised banks include increase in their market share and profitability, as customers withdrew their funds from less capitalised to a well-capitalised banks. This conclusion was also reinforced by a recent empirical study conducted Olivier de Bandt et al (2014) on a sample of large French banks over a period of 1993 – 2012. Similarly, Gambacorta and Marques-Ibanez (2011) demonstrate the existence of structural changes during the period of financial crisis; they conclude that banks with weaker core capital, with greater reliance on short term market- funding and on non-interest sources of income restricted the loan supply more strongly during the crisis. Using a multi-country panel of banks, Demirgüç-Kunt, Detragiache and Merrouche (2010) find among others results, that during financial crisis, higher capital resulted in better stock performance. The argument that higher capital leads to a better performance has been rejected by many bank managers, they argue that regulators usually required banks to hold more capital during crisis and that capital held for regulatory capital requirements are not generally available for banks normal businesses such as lending during crisis. This argument has been strengthened by some academic literatures (Baker and Wurgler 2013; Kashyap, Stein, and Hanson 2010; Manela and Kisin 2014).

In their paper titled “The Impact of the Recent Financial Crisis on the Capital Positions of Large U.S. Financial Institutions” Strah, Hynes and Shaffer (2013) make use of data obtained during the Great Financial Crisis to analyse and measure the potential risk to capital positions at a number of U.S. systemic important financial institutions during a period of severe stress. Analysing data from 26 banks, they perform a historically based analysis of the extent to which losses from financial institutions’ risk exposures would have eroded their capital ratios under certain assumed constraints. Their analysis shows that the capital depletion by the Great Financial Crisis at large U.S. financial institutions was extensive and often rapid.

The impact of financial crisis on SIFIs is not limited to funding, capital, liquidity and growth; a number of studies have shown that the crisis also has a significant effect on bank operational losses (see, Cope and Carrvick 2013; Akinsoyinu, 2015). Others include Belas (2013) who finds that the low level of satisfaction and loyalty of bank employees during financial crisis is transferred to the low acceptance rate of customer need to sell bank’s products particularly in Slovakia, which has led to a decline in the overall customer satisfaction.

The European Union’s Policy Responses to the 2007-2009 Financial Crisis

Policy Response - Global Perspective

The sheer scale of the effect of the great recession on world economies was a rude awakening to both governments and policy makers. The fear that the crisis could spin out of control if not decisively managed was palpable in every part of the globe. As Obama, then a president-elect so succinctly put it to the American congress “the most important message today is that situation is getting worse, we’ve got to act boldly, and we’ve got to act swiftly. We cannot delay”...”it is clear that we have to act and we have to act now to address this crisis and break the momentum of the recession, or the next few years could be dramatic worse”.

The actions taken by various governments and policy makers triggered unprecedented fiscal and monetary policy intervention, chiefly in the United States and Western Europe. Many countries, particularly in North America and
Europe have provided significant amount of tax payers’ money to support their failing financial institutions, particularly the so called Too-Big-to-Fail banks. In their study, Anderson, Cavanagh and Redman (2008) finds that as at November 2008, the United States had committed a whopping $1.3 trillion, while the European Financial sector bailouts had climbed to $2.8 trillion (see Table 1 and Table 2 respectively). This brought the total U.S and Some E.U spending on financial bailouts to $4.1 trillion.

Table 1: US Commitment to Financial Sector Bailout as of November 19, 2008) ($ Billions Unless Otherwise Stated)

| Program                             | Amount | Description                                                                                                                                 |
|-------------------------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Troubled Asset Relief Program (TARP)| 700    | Original plan was to use the funds primarily to purchase troubled mortgage-related assets. The Treasury Secretary has since decided to use the funds for cash injections for banks. |
| Commercial paper funding facility   | 243    | Through this facility, the Fed buys commercial paper (short-term debts) from banks to help finance day-to-day business operations.             |
| Fannie Mae/Freddie Mac              | 200    | Federal officials assumed control of the mortgage firms and are providing cash injections to keep them afloat.                               |
| AIG                                 | 112.5  | Does not include $40 billion drawn from the $700 billion bailout fund. After an initial bailout in October, AIG negotiated a larger rescue package with easier terms. |
| Bear Stearns                        | 29     | Special lending facility to guarantee losses on the investment bank’s portfolio; facilitated buyout by JPMorgan.                             |
| FDIC bank takeovers                 | 13.2   | The Federal Deposit Insurance Corporation has put up to cover deposits on failed banks.                                                  |
| Total U.S.                          | $1.3 trillion. |                                                                                                                                 |

Source: Anderson, Cavanagh and Redman (Instituted for Policy Studies, November 2008)

Table 2: Western European Commitment to Financial Sector Bailout as of November 19, 2008

($ Billions Unless Otherwise Stated)

| Country            | Amount | Description                                                                 |
|--------------------|--------|----------------------------------------------------------------------------|
| United Kingdom     | 743    | The UK bailout was the first announced and largely served as the model for other European rescues. Half of the package is for guaranteeing inter-bank lending, 40% for short-term loans and 10% for recapitalization |
| Germany            | 636.5  | The bulk is to guarantee medium-term bank lending, with 20% for recapitalization. |
| France             | 458.3  | The bulk is to guarantee bank debt, with about $50 billion for recapitalization. |
| Netherlands        | 346    | To guarantee inter-bank loans                                               |
| Sweden             | 200    | For credit guarantees                                                       |
| Austria            | 127.3  | For bank buyouts, interbank lending, and bank bond issuance guarantees       |
| Spain              | 127.3  | For bank buyouts, interbank lending, and bank bond issuance guarantees       |
| Italy              | 51     | To purchase bank debts                                                     |
| Other European     | 110.6  |                                                                           |
| Total European     | $2.8 trillion. |                                                                 |

4 Support measures provided by governments are not limited to cash, it comes in various forms.
Besides the measures directed towards the financial sectors, many countries have implemented wide-ranging fiscal (see Table 2 and Figure 1) and stimulus (see Figure 2) programmes to jump start their respective economies.

**Table 3**: The absolute size of fiscal packages (revenue and spending measures) 2008-2010, (in absolute USD millions)

| Country        | Amount (USD millions) |
|----------------|-----------------------|
| United States  | 804,070               |
| Germany        | 107,789               |
| Japan          | 99,992                |
| Canada         | 61,551                |
| Spain          | 56,754                |
| Australia      | 42,673                |
| Korea          | 42,667                |
| United Kingdom | 38,003                |
| France         | 18,568                |
| Netherlands    | 13,367                |
| Sweden         | 13,109                |
| Denmark        | 8,668                 |
| Finland        | 8,575                 |
| Belgium        | 8,016                 |
| Czech Republic | 6,500                 |
| New Zealand    | 5,404                 |
| Poland         | 5,145                 |
| Austria        | 4,600                 |
| Switzerland    | 2,486                 |
| Luxembourg     | 1,968                 |
| Portugal       | 1,963                 |
| Slovak Republic| 35                    |

**Source**: OECD

Our focus in this section however, is to provide a brief analysis of the various policy measures employed to combat the financial crisis by selected countries in the European Union. We will make references to the United States and other countries for comparison purposes only.

**European Union Policy Responses**

By mid-September in 2008, the financial crisis has developed into a full-blown, global economic crisis. The EU is in recession, the IMF predicts an economic contraction of 0.3% for the advanced countries and the global economy is in downward spiral. The depth of the crisis is underscored by the extreme measures taken by the governments of Member States. These measures were among the most aggressive economic crises management tools in history. Huge amount of tax payers’ money\(^5\) was injected into the financial sector to wrestle the systemic important financial institutions from total collapse and the economy from descending into abyss. Koopman, G. (2011) documented that before the outbreak of the financial crisis, total State Aid in the European Union was about 0.5 percent of Gross Domestic (“GDP”). By October 1, 2011, the Commission had approved €4506.5 billion (36.7 percent of EU GDP) in aid. The aid provided was mainly in the form of injection of capital to ailing banks, bank deposit guarantees, relief of impaired assets and liquidity and support for bank funding. Table 5 shows the amount committed to the banking sector in the EU zone as a percentage of GDP.

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\(^5\) See Table 2. Before the financial crisis.
The EU Recovery and Resolution Directive (RRD)

The bank recovery and resolution directive is a three-staged framework: the preparation and prevention stage, the early intervention stage and the resolution stage. The resolution stage comprises the four main resolution tools proposed by the Commission. To resolve a bank in crisis, policy makers can either administer each of the resolution tools individually or in combination. The choice and mode of resolution tool to be applied when a financial institution is in crisis will be determined by responsible authority on a case-by-case basis.

Why is the new banking resolution directive needed?

The financial crisis has put to test the effectiveness of the policy measures at the disposal of the policy makers – both at the global and the EU level. A report initiated by the Centre for European Policy Studies (CEPS) documented that, 20 bank debt guarantee, 15 bank recapitalization schemes and 44 cases of individual bank aid cases were dealt with by the European Commission under the state aid rules during the crisis. There were evidences to support the claim that the policy measures initiated by EU policy makers during the crisis have positive effects and largely contributed to the successful management of the crisis. Baldacci et al., (2009), finds that timely countercyclical fiscal measures contribute to shortening the length of crisis episodes by stimulating aggregate demand. Coenen, Straub and Trabandt (2012) and Carvalho et al. (2012) find a positive link between the policies and measures of inflation and real GDP growth expectations.

If the measures employed to manage the crisis are largely successful as claimed by some policy makers around the world and evidenced by some studies, then the question remain, why is the need for a new directive to deal with failing credit institutions? According to Bernanke, “Government policy responses around the world will be critical determinants of the speed and vigour of the recovery” Not everyone agrees. Taylor (2008) provided empirical evidence that government actions and interventions have contributed to the causes, protraction and deterioration of the crisis. Aiccia, G. and Ratnovski, L (2012), Kim (2013), Hett, F and Schmidt, A (2012) concluded that the bailout programme which forms the core of the policy measures initiated to avert a financial system collapse has not only increased moral hazard but also encouraged aggressive risk-taking by failed/failing financial institutions. The results of a model study conducted by Dam, L. and Koetter, M (2011) reveal that an increase in the expected bailout probability by 1% increases the probability of being in distress by 7.2 basis points, and that the marginal effect of moral hazard on risk taking is large compared to other bank-specific risk determinants. Studies have also shown that bailing out banks which are deemed too big to fail with rationed public finances is becoming increasingly unsustainable Hucek, J. et al (2009).

To reduce the moral hazard embedded in the current bailout policy measures, among others, the FSB came up with the Key Attributes of Effective Resolution Regimes for Financial Institutions. The “Key Attributes” will form the basis for a new standard for resolution regimes. The EU framework for the recovery and resolution directive is aligned with the “Key Attributes” and is designed with the aim of reducing the risk of further bank failures, and minimising the impact of a bank’s failure on the financial system in future. There is also a need to harmonise the different regimes in

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6 Those figures do not include the Long Term Refinancing Operations (LTRO) amounts—including LTRO, the amount of money committed to banks stand at 23 percent of EU GDP.

7 Ben S. Bernanke was the formal chairman of the United State Federal Reserve. He delivered a lecture titled “The crisis and the policy response” at the Stamp lecture, London School of Economics, January 13, 2009.
the EU (see Table 5). Lack of coordination means that each Member State pursues different resolution agenda. Table 5 highlights key elements in some selected resolution frameworks in the EU versus those of the new EU directive.

| Table 5: Main Elements of Selected Resolution Framework in the EU and the New EU Directive |
|---------------------------------------------------------------|
| **Scope** | Germany | Denmark | Netherlands | United Kingdom | New EU Directive |
| --- | --- | --- | --- | --- | --- |
| **Scope** | Credit Institutions | Credit Institutions | Credit Institutions Insurers | Credit Institutions Others | (1) Credit institutions and larger investment firms which are subject to Capital Requirement Directives. |
| **Resolution Tools** | Restructuring plan (potentially including haircuts on creditors). Transfer of assets/liabilities to another institution including a bridge bank. | Transfer of assets/liabilities to another institution including a bridge bank. | Transfer of shares, assets/liabilities to another institution including a bridge bank. Temporary public sector ownership | Transfer of assets/liabilities to another institution including a bridge bank. Temporary public sector ownership | (2) EU intermediate financial holding companies |
| **Financing** | Resolution fund (ex ante funded) | State-owned financial stability company with a guarantee from the DGS | DGS can finance deposit it transfer | DGS (currently ex post) | (3) Subsidiary financial institutions headquartered in the EU. |
| **Financing** | | | | | (4) A bail-in tool |

**Source:** ECB

**What are the resolution tools and powers of the new Directives?**

In the light of the flaws and inadequacies in the existing resolution tools available for tackling bank failures, the EU Commission proposes that resolution authorities be given a number of resolution tools. According to the Commission, the choice of tools to be deployed will depend on the specific circumstances of each case and build on options laid out in the resolution plan prepared by the affected bank. They should include powers to:

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8 Note that the new EU framework covers deposit-taking banks and some investment firms (e.g. institutions like Lehman Brothers). Investment firms such as Lehman Brothers were not covered in the existing framework and therefore could not receive bail out money to stay up.
Sale of business tool: the power to initiate private sector acquisitions of failed/failing bank. This involves the sale of the bank or the whole or part of its business on commercial terms without shareholders’ consent or other procedural requirements.

Asset separation tool: the power to separate “good” and “bad” bank. This tool will enable resolution authority to transfer high-risk assets and liabilities on the bank balance sheet to a public owned asset management vehicle. To overcome the moral hazard inherent in this tool, the Commission suggest that this tool is to be employed in conjunction with another resolution measures.

Bridge bank tool: the power to transfer the rescued bank’s business to a temporary structure (for example a “bridge bank”). This will enable continued essential banking functions of the affected institution before its eventual sale to the private sector

Bail-in tool: this is also known as the debt write-down or conversion tool, it involves the write-down of the claims of unsecured creditors of a failing financial institutions or the conversion of its debt claims into equity in order to restore the failing bank’s capital position. Table 6 summarised the eligible and exempted securities from the proposed bail-in tool,

| Eligible liabilities for bail-in | Exempted liabilities |
|-------------------------------|----------------------|
| Senior subordinated unsecured debt with a maturity greater than one month | Short-term liabilities (less than one month to maturity) |
| OTC Derivatives liabilities, according to their maturity | Derivatives cleared through CCPs and derivatives excluded by national authorities could be exempted. |
| Deposits exceeding the guarantee ceiling (€100,000 per depositor per bank), such as corporate or high net worth individual deposits. DGS schemes are included. | Guaranteed deposits up to the limit. |
| Secured liabilities not fully covered by collateral | Secured liabilities (e.g. covered bonds) up to the value of collateral |
| | Client assets and money, and other operating liabilities (e.g. due to employees, tax authorities) |

Source: IMF

These tools, according to the Commission would help to restructure ailing financial institution as a going concern, wind-down gone concern institutions in an orderly manner with minimal use of public fund and prevent negative impact on global and EU financial systems.

Assessing the Impacts of EU Resolution Regimes on SIFIs

The focus of this paper is to explore the potential impact of the proposed resolution tools of the new EU banking resolution and recovery directives on systemic important financial institutions in the EU. The directive is post the financial crisis and has not been implemented by any of the EU Member States. Due to lack of data, it is difficult to empirically measure the impact of the new directive on systemic important banks. This paper provides an ex ante impact assessment of the new resolution regime on systemic important financial institution (SIFIs) in the European Union.

Potential Impacts of bail-in tool

The bail-in tool has been hailed by many policy makers as the perfect resolution tool for tackling failing/failed SIFIs. If properly implemented may reduce or eliminate government implicit bailout guarantee of SIFIs, reduce moral hazard inherent in bailout and safeguard financial system stability. According to the Commission, bail-in would be an invaluable tool to use to absorb losses of a going concern financial institution, and to wind down a gone concern
entity. According to Zhou, J, et al (2012), “the removal of the too-big-to-fail premium will help restore market discipline by aligning bank funding costs more closely with risks”. However, imposing losses on creditors of systemic important institutions could have massive implication for banks and the banking systems. These implications include the following:

**Impacts on bank’s funding Costs**

Bail-in, by design requires mandatory capital write-down that is; the unsecured and subordinated debt claims of creditors of ailing SIFIs should first be written down or converted into equity before any public intervention. The implementation of bail-in could have a significant impact on banks’ funding costs. The financial and sovereign crises have already made it difficult to access unsecured funding in Europe, and with a bailing regime kicking in 2018, will become more difficult for banks within EU. Increasing funding costs induced by the bail-in regime could weigh on European banks currently under the pressure of meeting the requirement of Basel III’s net stable funding ratio (NSFR). According to a research conducted by Oliver Wyman, European banks will need to issue about 2.7 trillion Euros in long-term debt to meet net stable funding ratio requirement.

Investors in senior unsecured bank debt will demand a premium (“bail-in premium”) for the additional risk of having to meet losses if a financial institution is close to failure. Riskier SIFIs will be more affected as they will have to pay higher price to raise sufficient senior unsecured debt. Jassaud, N. and Lesle, V, (2012) documented that the additional cost/spread (resulting from bail-in) for a large, well-rated bank could vary between 300 basis points (bps) and 450 bps, and over time, spreads of senior unsecured debt will converge toward those of subordinated debt and other capital instruments. Funding costs of systemic important banks have been rising since the financial crisis started (see figure 1). Higher funding costs on SIFIs could have implications on banks return on investment (ROI). Weaker banks might have difficulties raising sufficient fund for their normal operations, if mandatory bail-in clauses are attached to them. Such banks will be forced to raise short-term capital to fund their risky assets, which eventually may lead to a funding gap between the bank’s assets and liabilities. Funding gap problem increases a bank’s probability of default (PD) and expected loss (EL).\(^9\)

![Figure 1: Bank Spreads on the Rise Since 2009](source: MarkIT, Bloomberg)

**Impact on SIFIs Capital Structure**

Bail-in regime may also have a significant implication on SIFIs’ capital structure in terms of the composition of the bank liabilities. Bank managers might attempt to rearrange their funding structure in order to avoid bail-in measures, for example, going for short-term and secured borrowing. Short-term funding for SIFIS could be a recipe for another

\(^9\) **Expected Loss (EL) = Probability of Default (PD) * Earning at Default (EAD) * Loss Given Default (LGD)**
financial crisis, waiting to explode. Diamond, D, and Rajan, R (2001) explained that if banks financed illiquid investment from short-term borrowing, the increased illiquidity of the investment being financed could trigger a financial crisis. Funding structure also has an implication for financial stability; a report by the International Monetary Fund (2013) documented that overreliance by some banks on certain types of wholesale funding contributed to the global financial crisis. If the capital structure of SIFIs is altered in favour of short-term debt, it would make compliance with the Basel III’s net stable funding ratio (NSFR\textsuperscript{10}) requirements nearly impossible to meet. Also there could be serious implications for the bank’s profitability, rating and ability to withstand shock.

**Potential Impacts of Asset Separation Tool**

Unlike bail-in, asset separation, also known as “Good Bank Bad Bank” is not a new bank resolution tool. It is dated back to the great depression era, and since been used to resolve ailing financial institutions. Asset separation as a crisis resolution measure has been tested again and again, the list of systemic important financial institutions (SIFIs) that has been successfully restructured through this mechanism in the last few decades is not exhaustive (see table 7). It is obvious from table below that the recent financial crisis has made bad banks a financial crisis resolution tool of choice.

**Table 7: Bad Banks, Country of Origin and Year of Establishment**

| SIFIs                  | Country of Origin | Year |
|------------------------|-------------------|------|
| Royal Bank of Scotland (RBS) | United Kingdom    | 2009 |
| UBS AG                 | Switzerland       | 2008 |
| Irish Nationwide       | Ireland           | 2009 |
| Bank of Ireland        | Ireland           | 2009 |
| AIB                    | Ireland           | 2009 |
| Fortis Bank            | Netherlands       | 2008 |
| Societe Generale       | France            | 2008 |
| Commerze Bank          | Germany           | 2009 |
| Dresdner Bank          | Germany           | 2003 |
| Unicredit              | Italy             | 2008 |
| Landesbank             | Germany           | 2009 |
| Nordbanken             | Sweden            | 1992 |
| Nordbank               | Germany           | 2009 |

*Source: Central Bank Web sites, Government reports, press search*

Given the number of bad banks that have been used to resolve problems in the recent financial crisis, one would wonder why “Good bank Bad bank” is a resolution tool of choice for policy makers, and why the Commission included it as one of the tools for the banking resolution and recovery directive.

In a good bank-bad bank structure, the assets of a sick systemic important financial institution (SIFI) is separated into its profitable and non-profitable components, allowing the profitable entity (good bank) to continue its normal business operations while the non-profitable or distressed entity (bad bank) is structured with a view to liquidating bad assets or loan recovery. Schafer, D, and Zimmermann, K, (2009) documented that bad banks provides a transparent removal of toxic assets and gives banks a fresh start, keep the costs to taxpayers low and curtailed the risk of moral hazard. The impacts of this type of arrangement on SIFIs include:

**Impact on SIFIs Rating**

Removing distressed asset from the good bank balance sheet of and placing them in the bad bank should improve the debt rating of the good bank. Higher credit rating will boost the confidence of potential equity and debt investors and

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\textsuperscript{10} The NSFR is an essential component of the Basel III reforms to promote a more resilient banking sector. It is designed to ensure that banks maintain a stable funding profile in relation to the characteristics of their on- and off-balance sheet activities. A robust funding structure reduces the likelihood that a bank's liquidity position deteriorates, due to disruptions to its regular sources of funding, in a way that would lead to increased risk of failure and, potentially, to broader systemic stress. In particular, the NSFR limits over-reliance on short-term wholesale funding, encourages better assessment of funding risk across all on- and off-balance sheet items, and promotes funding stability. (Basel III, 2014)
other clients to transact business with the bank. One of the main goals of taking banks through the path of “good bank-bad bank” structural solution is to maximise the value of the good bank. Investors, depositors and counterparties will put a much higher valuation on a financial institution with a healthy balance sheet with less risky assets. Confidence in a bank to meet its obligations is particularly vital at a time when credit risk in the financial system is on the high.

**Impact on SIFIs Profitability**

Separating distressed assets will reduce the cost of funds of the good bank; reduce loss provision to the barest minimum. This will make more funds available to the good bank to engage in more profitable business activities. Impact of asset separation on profitability was evident in the restructuring of Mellon Bank Corporation in 1988, the earnings of the “good bank,” Mellon Bank NA, increased following the sale of the distressed asset to Great Street National Bank (GSNB). GNSB completed the liquidation of all loans within three years and wound down in 1995 after meeting all its obligations.

**Impact on SIFIs “Going Concern”**

Asset separation tool provide an ailing systemic important financial institution a lifeline to survive. With minimal public intervention, separation of a highly leverage bank into “good bank- bad bank” provides the good bank with a new lease of life to continue business operations on a clean slate. Many of the Swedish banks affected by the house-price bubble in the early 1990s were successfully restructured by creating “bad banks”, and are still in in operations. UBS AG and Citigroup also went through the “good bank-bad bank” structural solution in 2008 and 2009 respectively.

**Impact on SIFIs business Model/Strategy**

A successful restructuring will equip the good bank’s management with the opportunity to refocus the bank on its core business. The ability to separate the viable assets from the non-performing asset gives banks management the advantage of de-leverage the good bank balance sheet. New business strategies/models to move the good bank forward will be better implemented on a clean slate without the distractions associated with non-performing assets.

**Potential Impact of Bridge Bank**

A bridge bank is a temporary arrangement designed to bridge the gap between a failed bank and the time such bank is acquired by a third party. Technically, a bridge bank is a nationalized bank, administered by government agency in many countries. For example bank of England in the UK or the Federal Deposit Insurance Corporation (FDIC) in the U.S. In a bridge bank, the assets and liabilities of the failed bank are transferred to the administering government agency, which runs the day to day operations of the bank. The impacts of bridge on SIFIs include:

**Impact on the Continuity**

Bridge bank arrangement maintains the “going concern” of the failed bank. It is a crisis resolution tool of choice for large and complex banks. When a systemic important financial institution administration is transferred to a bridge bank, it provides the administrator the power to take full control of the bank and stabilise it and eventually sold to a third party. In addition, bridge bank also preserve the franchise value of the bank in question.

**Impact on Banking Operations**

The banking operations of the affected banks are allowed to continue as normal without the disruption of a closure which usually characterises failed bank.

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11 During its early-1990s banking crisis, the Swedish authorities established two AMCs (Securum and Retrieve) to managed the bad debts of two of its largest banks, Nordbanken and Gota Bank, These AMCs successfully managed the bank’s bad assets.

12 Some operations of the bridge bank for example, lending may be scaled back
Conclusions

It is difficult to provide a full analysis of the impact of the new banking directive before it is implemented; further work will be required to provide a detail empirical impact analysis on TBTF banks. Our objective in this paper however, has been to provide an ex ante assessment of the implementation impacts of the directive. We have not considered all the possible implications of the directive on systemic financial institutions; the paper is narrowly focused on some of the key resolution tools proposed by the Commission.

The failure of systemic important financial institutions in the last financial crisis has had a debilitating impact on both the real economy of the EU Member States and the financial system, and the handling of the crisis has exposed some fundamental flaws and weaknesses in the existing resolution regimes. Public funds were largely used to bail out the so called TBTF banks, and the concomitant moral hazard of the bailout regime among other factors, led the European Commission authorities to seek “optimal” strategy to meet the Key Resolution Attributes as specified by the Financial Standard Board (FSB). The new banking resolution framework will equip policymakers in Member States with common powers and tools to proactively resolve any failing/failed systemic financial institution in an orderly manner.

The impact of the new directive on SIFIs could be significant. For instance, possible effects of the bail-in tool could result in an increase in funding costs and a change in the funding and capital structure of the affected SIFI. Other adverse effects may include credit rating downgrade and adverse implication for bank lending. Asset separation and Bridge bank resolution regimes could provide an ailing SIFI a new lease of life. While asset separation could significantly improve profitability and credit rating of affected banks, Bridge bank could ensure uninterrupted business operations and continuity of resolved banks.

References

Acharya, V.V. (2013). “Understanding Financial crises: Theory and evidence from the crisis of 2007-2008”. NYU Stern School of Business Working Paper.
Akinsoyinu, C.A. (2015). The Great Financial Crisis: How effective is the macroeconomic policy response in the United Kingdom? International Journal of Finance & Banking Studies, Vol.4, No 2, 2015
Altunbas, Y., Manganelli, S., & Marques-Ibanez, D. (2011). “Bank risk during the financial crisis: do business models matter”? European Central Bank Working Paper, No. 1394
Anderson, S., Cavanagh, J., & Redman, J. (2008). “Skewed priorities: How the bailout dwarfs other global crisis spending”. Washington, DC: Institute for Policy Studies
Ariccia, G. D., & Ratnovski, L. (2012), Bailouts, contagion, and moral hazard. International Monetary Fund (February)
Baker, M., & Jeżrey, W. (2013). “Would stricter capital requirements raise the cost ofcapital? Bank capital regulation and the low risk anomaly”. Working Paper
Bandt, O. B., Camara, B., Pessarossi, P. & Rose, M. (2014) “Does the capital structure affect banks’ profitability? Pre- and post-financial crisis evidence from significant banks in France”. Débats économiques et financiers N°12
Bech, M., Gambacorta, L., & Kharroubi. E. (2012). Monetary policy in a downturn: Are financial crises special? BIS Working Papers No 388
Berger, A. & Bouwman, C. (2011). How does capital affect bank performance during financial crisis? Journal of Financial Economics 109 (2013) 146–176
Carvalho, C., Eusepi, S., & Grisse, C. (2012). “Policy Initiatives in the Global Recession: What did forecasters expect? Federal Reserve Bank of New York, Volume 18, Number 22012
Dam, L., & Koetter, M. (2011). “Bank bailouts interventions and moral hazard” Deutsche Bundesbank, October 2011.
Daniel, L. T. (2012). “The Federal Reserve’s Response to the Financial Crisis: What It Did and What It Should Have Done” Federal Reserve Bank of St. Louis Working Paper 2012-050A
Diamond, D., & Rajan, R. (2001). “Banks, short-term debt and financial crises: theory, policy implications and application.”

Dumontaux, N., & Pop, A. (2009). “Contagion Effects in the Aftermath of Lehman’s Collapse: measuring the Collateral Damage”

Günter, C., Straub, R., & Trabandt, M. (2012). “Fiscal policy and the great recession in the Euro area” European Central Bank (ECB)

Hett, F., & Schmidt, A. (2012). Do Bank Bail-Outs create Moral Hazard? Evidence from the recent Financial Crisis. Goethe University Frankfurt and Gutenberg University Mainz.

Henriques, R. (2011). “The Great Bank Downgrade: What Bail-In Regimes Mean for Senior Ratings?” JP Morgan Chase Europe Credit Research, January 7

Kevin, D. (2009) “Moral Hazard and the Financial Crisis” Cato Journal, Vol. 29, No. 1 (Winter 2009).

Jassaud, N., & Leslé, V. (2012). “Bail-in proposals: What is the future of banks debt in Europe?” PROGRES Newsletter No. 55, June 2012

Kim, Y. (2013). “Bank Bailouts and Moral Hazard? Evidence from Banks' Investment and Financing Decisions.”

Kashyap, K., Jeremy, S., & Samuel, H. (2010). “An analysis of the impact of "substantially heightened" capital requirements on large financial institutions”, Discussion paper.

Kisin, R., & Manela, A. (2014). The shadow cost of bank capital requirements. Available at SSRN 2280453.

Koopman, G. (2011). “Stability and competition in EU banking during the financial crisis: The role of state aid control. Competition Policy International”

CEPS (2010). “Bank state aid in the financial crisis: Fragmentation or level playing field?” Centre for European Policy Studies October 2010

Laeven, L., & Valencia, F. (2010). “Resolution of banking crises: The good, the bad, and the ugly”. IMF Working Paper.

Taylor (2008). “The Financial Crisis and the Policy Responses: An Empirical Analysis of What Went Wrong”. NBER Working Paper No. 14631 Issued in January 2009

Lesle, V. (2012). “Bank Debt in Europe: Are Funding Models Broken?” IMF

Mishkin S. F. (2009). “Is Monetary Policy Effective During Financial Crises”? NBER Working Paper No. 14678.

Petrovic, A., & Tutsch, R. (2009). “National rescue measures in response to the current financial crisis”. ECB Legal Working Paper Series, 8.

Ragalevsky, S., & Ricardi, S. (2009). “Anatomy of a Bank Failure” Published in the December 2009 issue of The Banking Law Journal,

Samwick, M. (2009). Moral Hazard in the Policy Response to the 2008 Financial Market Meltdown”. Cato Journal, Vol. 29, No. 1 (Winter 2009)

Schafer, D., & Zimmermann, K. (2009). “Bad Bank(s) and Recapitalization of the Banking Sector” IZA Policy Paper No.10, June 2009

Schich, S., & Lindh, S. (2012). “Implicit Guarantees for Bank Debt: Where Do We Stand”? OECD Journal: Financial Market Trends Volume 2012 Issue 1

Schich, S., & Kim, B. H. (2012). “Developments in the value of implicit guarantees for bank debt: The role of resolution regimes and practices”. OECD Journal: Financial Market Trends, 2012(2), 1{31

Schildbach, J. (2010). “Direct fiscal cost of the financial crisis” Deutsche Bank Research, May 14. Available via the internet: ww.dbresearch.com

Spiegel, M., & Yamori, N. (2002). “The Impact of Japan’s Financial Stabilization Laws on Bank Equity Values”
HM Treasury (2012). “White Paper on “Banking Reform: Delivering Stability and Supporting a Sustainable Economy”, June 14.

Zhou, J., Rutledge, V., Bossu, W., Dobler, M., Jassaud, N., & Moore, M. (2012). “From Bail-out to Bail-in: Mandatory Debt Restructuring of Systemic Financial Institutions,” IMF Staff Discussion Note 12/03, April 24 (International Monetary Fund

Bank of International Settlements. (2002). “Supervisory Guidance on Dealing with Weak Banks: Report of the Task Force on Dealing with Weak Banks” Bank for International Settlements, March 2002

Basel Committee on Banking Supervision. (2014) “Basel III: the Net Stable Funding Ratio - consultative document”

European Commission. (2012). “Bank recovery and resolution proposal: Frequently Asked Questions.” European Commission, June 2012.

Financial Stability Board. (2013). “Assessment Methodology for the Key Attributes of Effective Resolution Regimes for Financial Institution” FSB Consultative document. August 2013

International Monetary Funds. (2009). “Fiscal Implications of the Global Economic and Financial Crisis” Fiscal Affairs Department, June 9. Available via the Internet: w.imf.org/external/pubs/ft/spn/2009/spn0913.pdf

International Monetary Funds (2013). ” European Union: Publication of Financial Sector Assessment Program Documentation—Technical Note on Progress with Bank Restructuring and Resolution in Europe”, March 13. International Monetary Fund. Available via the internet: (http://www.imf.org

International Monetary Funds (2013). “Global Financial Stability Report: Transition Challenges to Stability”. International Monetary Fund | October

Organisation for Economic Co-operation and Development. (2009). “Policy Responses to the Economic Crises: Investing in Innovation for Long-Term Growth” June 9. Available via the Internet: (www.oecd.org/sti/42983414.pdf)