Will the new legal framework within the EU prevent another crisis?

Directive on Recovery and Resolution of credit institutions and investment firms; BRRD

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Preface

This paper represents 30 ECTS and is written for my Thesis in MS Degree in Financial Economics at University of Iceland. This subject is quite complex, yet fascinating. It took quite an effort to wrap my mind around it. At this time I would like to thank my supervisor, Guðrún Johnsen, for all her assistance and patience during the project. Also I would like to thank Einar Jóhannesson and my colleagues, Linda Kolbrún Björgvinsdóttir, Ragnar Haflíðason, Rúnar Órn Olsen, Guðmundur Jónsson and Tinna Jökulsdóttir. Finally I thank my husband and son, since I have overtaken many weekends and our home for this subject.

I was a new staff member at the FME (Financial Supervisory Authority of Iceland) when the crisis hit in Iceland, on 6 October 2008. That event will likely remain the most monumental event of my working life. I got to participate in so-called Post Crash Investigations and witness some truly unique data during those Investigations.

Like most of us, I dearly hope that nothing comparable will hit the economy again. This Directive, BRRD, is a huge step towards that goal.

I consider it extremely important in minimising effects that financial institutions can have on society. I have on many occasions in the text of this paper bolded words for emphasis, even within quotations. In the Appendix I included a short overview of the Articles of the BRRD.

I hope this reading will shed some light on the Directive and the perspective of a small country hit hard in the Great Recession.
Abstract

The Great recession is as the name indicates, the largest recession in history to date and the one most widely spread. The answer of the EU and US authorities to the Great recession has been transformation of financial regulations, both in the US and Europe.

One of the legislative measures is the European Union’s Directive on Recovery and resolution of credit institutions and investment firms (BRRD). The purpose of the Directive is to provide the authorities, the flexibility to intervene much sooner by setting in place recovery plans and intervention powers before resorting to serious measures like a bail-out, a bail-in or winding-up the financial institution. The purpose of the Directive is furthermore intended to ensure that the dissolution is handled in a similar manner everywhere within Europe.\(^1\)

I will look to the substance of articles and books discussing the directive and the financial crisis, in Iceland, the EU and the U.S., and what various experts consider to be best to prevent or reduce the harmful effect a financial crisis can have. It seems that most experts conclude that the required capital banks hold is too small and many of them address the flaws of the RWA methodology and the complexity of the capital requirement. Also that there are still ways for the Member States to avoid bail-in and revert to bail-out.

Some of the resolution measures covered by the BRRD directive are quite similar to the measures applied in resolution of the three failed banks in Iceland in 2008-2010. I will compare the Directive to the “Icelandic way” as far as it can be compared.

How effective is the new BRRD? Will it be sufficient to solve the problem caused in last crises?

In short, in case of dealing with many banks or institutions in distress, one cannot expect the measures in the BRRD to be sufficient. Even in 2017, many major banks are still too interconnected to fail. It seems that the Directive is too complicated and that simpler methodology could be applied.

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\(^1\) It entered into force in January 2015 within the EU - it has not yet entered into force within the three EEA EFTA countries.
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1 Purpose and motivation

After a period of reconstruction Icelandic banks are preparing a listing on the stock exchange again. At this junction it is timely to review the banks' reconstruction process and evaluate how it compares with the framework put forward by European policymakers on how such a process should take place in the future, through the EU Directive on Recovery and Resolution of Financial Institutions. This new legislation provides the unique opportunity to measure the real deal, ex post, with how policymakers envision this process, ex ante.

I will present the European Union's Directive on Recovery and resolution of credit institutions and investment firms (BRRD). The purpose of the Directive is to provide the authorities, especially the regulators, the flexibility to intervene much sooner through setting in place recovery plans and intervention power before it comes to serious measures like bail-out, bail-in or winding-up the financial institution. The purpose of the Directive is furthermore intended to ensure that dissolution and separation is handled in a similar manner anywhere within Europe. The directive is new and will have a significant impact and its provisions will reach outside Europe, in cases where there is an institution with cross border activities with branches and subsidiaries that are located in countries outside Europe.

Some of the resolution measures covered by the BRRD directive are quite similar to the measures applied in resolution of the three failed banks in Iceland in 2008-2010 and some even claim that the BRRD is partly inspired by the Icelandic method. I will compare the Directive to the "Icelandic way" as far as it can be compared. Moreover, I will look to the substance of a report given by the Minister of Finance in Iceland, statements by the Financial Supervisory Authority of Iceland, and articles and books discussing the directive and the financial crisis, in the EU and the U.S., and what various experts consider to be best to prevent or reduce the harmful effect a financial crisis can have.

New banks were established in Iceland as bridge banks on the ruins of the old banks. The deposits and assets of the old banks in domestic operations were transferred to the new banks. According to the Ministry of Finance (MoF), the assets were transferred at approximately 40% (original estimates were that recovery of the previous value be between 35-55%) of the previous value (2011). The main focus, when deciding which method would be used, was to secure the provision of essential financial services to the domestic clients and cross border. Since in matter of days more than 90% of the banking sector was suffering it was crucial to the firms and the public of Iceland that the authorities
would provide banking operations, including payment services to import/export etc. Continuity is absolutely vital in this kind of situation. It is worth pondering how borrowers were affected by the method the authorities applied. Some consider that the banks were rather harsh in collecting the payments of the loans in full, taking notice of the fact that the loan portfolios were transferred at approximately 40% of the face value. The people of Iceland were already suffering from unemployment, devaluation of the currency which resulted in higher cost of living etc. The banks are large and rarely give in when there is disagreement about value. Furthermore, the claim right is very strong.

The directive stipulates in what cases assistance or recovery is important, depending on how interconnected the financial institution is and how it will affect the economy in question.
2 Background

Though it is hard to pinpoint the exact time when the Great recession began, most experts point to the Bankruptcy of Lehman Brothers on 15 September 2008 as the triggering event. Five financial institutions in the US became insolvent shortly after, Fanny Mae, Freddie Mac, AIG, WaMu and Wachovia. After that, 20 banks in Europe became insolvent (i.e. Danske bank, Fortis, HYPO, Anglo-Irish, RBS, HBOS and more) and most countries in Europe had to act in order to support them (Jónsson, 2016). Three banks collapsed in Iceland and collectively caused what became the third largest bankruptcy in history (Johnsen, 2013). It was clear that in US and Europe things had changed dramatically.

The Great recession is as the name indicates, the largest recession in history to date and the one most widely spread.

The answer of the EU and US authorities to the Great recession has been transformation of financial regulations, both in the US and Europe. Within Europe, new systems of financial supervisors were formed as independent authorities and became fully operational, EBA, EIOPA and ESMA. Furthermore, there were founded systemic risk boards due to the fact that the institutional structure within the US and EU countries were ill-equipped to deal with such crises in the financial markets (Jónsson, 2016).

In the US the Dodd Frank Act that attempts to lower the costs of dealing with banks in difficulties by giving authority to the FDIC to take over and resolve any systemically important financial institution, was one of the measures that were put forward to the crisis (Admati & Hellwig, 2013). The Dodd-Frank Act focuses on strict control of derivatives, CDOs and shadow banking. The Glass-Steagall Act separating commercial and investment banking replaced by the Dodd-Frank Act and the latter prevents the banks from risk taking through uses of state guaranteed deposits with the so called Volcker rule.

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2 As separate entities Kaupthing ($83 billion) would rank fifth, Landsbanki ($50 billion) ninth and Glitnir ($49 billion) tenth (Benediktsdottir, Danielsson & Zoega, 2011).
4 The three Supervisory Authorities within the European Union, the European Banking Authority, the European Insurance and Occupational Pensions Authority and the European Securities and Markets Authority
5 The Dodd-Frank Wall Street Reform and Consumer Protection Act is a massive piece of financial reform legislation passed by the Obama administration in 2010 as a response to the financial crisis of 2008. The act's numerous provisions, spelled out over roughly 2,300 pages, are being implemented over a period of several years and are intended to decrease various risks in the U.S. financial system. The act established a number of new government agencies tasked with overseeing various components of the act and by extension various aspects of the banking system. http://www.investopedia.com/terms/d/dodd-frank-financial-regulatory-reform-bill.asp
The new regulations address excessive or elevated risk, strengthen supervision, tighten requirements on capital and liquidity, increase deposit guarantees and prevent the taxpayers from bearing the cost of failed financial institutions (Jónsson, 2016).

One of the legislative measures is the European Union’s Directive on Recovery and resolution of credit institutions and investment firms (BRRD). The BRRD entered into force on 1 January 2015. The purpose of the Directive is to provide the authorities, especially the regulators, the flexibility to intervene much sooner by setting in place recovery plans and intervention powers before resorting to serious measures like a bailout, a bail-in or winding-up the financial institution. The purpose of the Directive is furthermore intended to ensure that the dissolution and separation is handled in a similar manner everywhere within Europe. The directive will have a significant impact and its provisions will reach outside Europe, in cases where institutions within the EEA have with cross boarder activities with branches and subsidiaries that are located in countries outside Europe. I will ponder the question: How effective is the new BRRD? Will it be sufficient to solve the problem caused in last crises, and avoid delays of economic recovery should systemically important institutions break down?

The adoption of BRRD has brought about a major reform in the EU regulatory framework for banks and is, by EBA, considered a milestone in addressing the problem of banks being “too big to fail”. At the core of this reform is the aim that the cost of bank failure should be borne, first and foremost, by shareholders and creditors rather than taxpayers. I have noticed when introducing this subject to my colleagues, they often ask whether it hasn’t always been that way. But the fact is that most of the banks that collapsed in the crises 2008-2009 were bailed-out, such as the Royal Bank of Scotland, Barclays, Fortis Bank, Dexia, Roskilde bank. Actually, the list of banks that have been bailed out during the Great recession are more than 6 dozen. In fact between 2007 and 2013, European Union governments provided €836 billion to guarantee bank funding and €448 billion to recapitalise banks (Berger, Hüttl, Merler, 2016). So the consequence was that the taxpayers were footing the bill instead of shareholders and creditors.

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6 It entered into force in January 2015 within the EU - it has not yet entered into force within the three EEA countries.
7 [https://www.theguardian.com/business/2015/aug/03/rbs-sale-fred-goodwin-bailout-years-of-losses](https://www.theguardian.com/business/2015/aug/03/rbs-sale-fred-goodwin-bailout-years-of-losses)
The BRRD is one of three main legislative acts that together\(^8\) are referred to as the Single Rulebook that collectively govern the financial sector across the entire European Union\(^9\). The provisions of the single rulebook are set out in three main legislative acts:

- **Capital Requirements Regulation and Directive also known as CRD IV; Regulation (EU) No 575/2013; Directive 2013/36/EU**, which implements the Basel III capital requirements for banks.
- **Deposit Guarantee Scheme Directive (DGSD; Directive 2014/49/EU)**, which regulates deposit insurance in case of a bank’s inability to pay its debts.
- **Bank Recovery and Resolution Directive (BRRD; Directive 2014/59/EU)**, which establishes a framework for the recovery and resolution of distressed credit institutions and investment firms.

Many consider, after the tremendous financial effect the crisis had on everyone, including the public, that there should be action taken to protect the public from the risks of the financial sector. "When banks have success the profit goes to the shareholders, but when they are unsuccessful they rely on other than shareholders, namely the public. Depositor’s insurance fund and debt offices are examples of such support" (Stiefmüller, 2016).

This is what BRRD is designed to solve. It needs to be implemented into Civil-, Bankruptcy- and Commercial law. Why not just allow banks to go into bankruptcy? Because there is high risk of contagion and risk of systemic effect. Also it is important to clarify the legal situation, the last thing needed in a crisis is legal uncertainty, or uncertainty in general. Yet another reason is “too big to fail,” they frequently play an important role in serving the community, cross-border payments, etc. (Stiefmüller, 2016).

The crisis in Europe has been taking place in the European Union since 2009. Some of its member states were unable to refinance their government debt or to bail out over-indebted banks without the assistance of other Eurozone countries. The detailed causes of the debt crisis varied, (Harari, 2014).

Many different financial support measures were implemented in an effort to solve the crisis such as the ECB lowering interest rates and providing cheap loans of more than one trillion euro\(^10\) (EC, 2013) in order to maintain money flows between European banks.

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\(^8\) Within the banking sector. There are also single rulebooks within the Securities and Insurance sectors.

For Icelanders the crises started earlier, at the end of 2008, after the collapse of Lehman Brothers and the majority of the banks in Iceland. European Union governments provided €836 billion to guarantee bank funding and €448 billion to recapitalise banks (Berger, Hüttl, Merler, 2016). In Iceland the supported amount was €1.6 billion (Davidsdottir & Matthiasson, 2012).

When it came to losses, the biggest one was incurred by domestic transactions with the Central Bank of Iceland, CBI. Bank facilities that the CBI had accepted as collaterals against repo loans became worthless overnight when the three big banks – Kaupthing, Glitnir and Landsbanki – collapsed. The CBI was in reality bankrupt and had to be recapitalised by the state to the sum of ISK267.2 billion11. ....

The biggest loss stems from the evaporation of collateral at the Central Bank, ISK267.2bn. Consequently, they calculated the expected losses to be in the range of ISK348-393bn, which amounts to 20-25% of GDP (Davidsdottir & Matthiasson, 2012).

To many it is a concern that the government currently owns two of three largest banks in the country, since it may be strenuous to support any difficulties the banks may incur. According to La Porta, Lopes-de-Silva and Shleifer, higher government ownership of banks is associated with slower subsequent development of the financial system, lower economic growth, and, in particular lower growth of productivity (La Porta, Lopes-de-Silanes & Shleifer, 2002). Furthermore, it increases the vulnerability of the country due to interconnectedness. It must be vital that the banks have stable long term ownership.

During the reconstruction of the economy after the banking crisis in Iceland the corporates had limited access to financing from Icelandic banks and almost no access to financial markets outside the country.12 A precondition for Icelandic corporates to achieve a sustainable and robust growth is to counteract the recession by adjusting and minimizing debt, to hinder the problem from becoming chronic. It does seem like they succeeded if the GDP growth is used as a measure, although it is not the only benchmark. The GDP growth in Iceland in 2016 was 7.2% compared to US 1.6 %, EU 1.7%, Japan 0.4% and Germany 0.4%.13

11 €1.6 billion and $2.1 billion. ISK = Icelandic krona, exchange rate on 22 April 2009. ($=130,€=168,7)
12 The first foreign funding for an Icelandic bank since 2007 was in early 2013, a bond of 500 million NOK. http://www.vb.is%2Frettir%2Ftraust-bankakerfinu-ad-auktast%2F114910%2F%3Fq%3DA&usg=AFQjCNc0HyT34mYoXrHNIUum8BLlcKbmCba&sig2=AZolq2FDwvOzAzcENqxmJO
3 The Recovery and Resolution Directive

The Single Rule book is the foundation that all the EU states shall comply with, as well as the EEA EFTA States. The BRRD applies to all 7000 credit institutions within the 28 EU states (27 now due to BREXIT), plus the institutions within the three EEA EFTA States. Nineteen of the EU states fall within supervision of both the SSM (Single Supervisory Mechanism) of the ECB (European Central Bank) as well as the NCAs (National Competent Authorities) of the countries within the Eurozone. 130 of the largest banks are formally supervised by the ECB, the others are supervised by NCA in each country. The SRM (Single Resolution Mechanism) will be involved when a bank experiences problem and then the BRRD and SRM will be involved in each country. There is a separate entity, a resolution authority, within each country according to BRRD.

3.1 About the Directive

Directive 2014/59/EU the Bank Recovery and Resolution Directive on crisis prevention, management and resolution (BRRD), assigns to the European Banking Authority (EBA) the task “to develop a wide range of Binding Technical Standards, Guidelines and Reports”. Its main focus is on key issues such as ensuring effective and consistent procedures across the European Union, in particular with respect to cross-border financial institutions. The ultimate objective of this framework is to enhance financial stability, reduce moral hazard, protect depositors and critical financial services, save public money and ensure the smooth functioning of the internal market for financial services. The BRRD is complemented by the ongoing review of the Deposit Guarantee Scheme Directive (DGSD), which also assigns rulemaking tasks to the EBA, and by other forthcoming regulatory initiatives on financial institutions other than banks (EBA, 2017).

This EU banking reform is aimed “to complete the post-crises regulatory agenda by making sure that the regulatory framework addresses any outstanding challenges to financial stability, while ensuring that banks can continue to support the real economy” (European Commission, 2016). This is what the European Commission (EC) states regarding the Directive and its annexes and technical standards.

The aim is to provide adequate tools at European Union level to deal with unsound or failing credit institutions. Including making sure that a bank or an institution can be

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14 See Chapter 4 where the EEA EFTA States are described.
15 Due to BREXIT, the Institutions will most likely become fewer within EU. However, there is some uncertainty how it will be resolved. Furthermore, it should not affect the list of 130 largest since the UK was not a part of the Eurozone.
resolved speedily and with minimal risk to financial stability. Insuring that on failure the shareholders and creditors bear the loss rather than taxpayers.

Each member state within the EU has had different insolvency procedures regarding how to deal with banks. The laws in some member states enable authorities to intervene in a failing or unsound institution before insolvency. This has given rise to difficulties for authorities in different countries to co-operate when dealing with cross-border banking groups.

The directive requires each EU member state, and the EEA EFTA States, to appoint a public authority to be the resolution authority responsible for the resolution powers.

The scope of the directive applies to all credit institutions and investment firms that are subject to the Capital Requirement Directive (CRD). Furthermore, it applies to EU-based parent and intermediate financial holding companies and mixed financial holding companies, as well as subsidiary financial institutions of an EU credit institution or an investment firm.

Each institution will need to prepare a full recovery plan that sets out the measures it will take in different scenarios where it is at risk. There are information requirements regarding the recovery plans in an annex to the Directive. The supervisory authority will then review the recovery plan and assess whether it is sufficient and evaluate how critical functions of the institution or group are taken care of according to the plan. The supervisory authority may have to require isolation of functions within the group and has the power to require an institution to take steps to restore financial soundness or reorganise its business plan.

Furthermore, the financial supervisory authorities will have early intervention powers in order to intervene if the financial situation or solvency of an institution shows signs of deterioration. They may require the institution to start their recovery plan measures or remove or replace management.16

Moreover, if these measures are insufficient, a supervisory authority may appoint a special manager to replace the management of the institution. The manager will then have all the powers that the management had according to the company’s rules and according to

the national law. For example increase in capital, reorganisation or takeover of the company by another viable institution (Freshfields, 2013).

There will be a new authority, a **resolution authority** in each member country. Each member state will appoint a special resolution authority. The resolution authority will prepare a **resolution plan** for an institution, both at an entity and group level, setting out options for resolving the institution in various scenarios, including systemic instability. The resolution plan will include details of how to apply the resolution tools and how to make sure the institution continues to provide critical functions (Freshfields, 2013).

The resolution authorities assess the resolvability of each institution. If the resolution authorities identify a significant barrier to a resolution, they will have the power to require the institution to resolve or remove this obstacle.

The resolution authorities will have **resolution tools** (Articles 37-44) which will enable them:

1. The sale of business tool. It enables the authority to sell part of the business without shareholder consent,
2. The bridge institution tool. It enables the authority to transfer all or part of the business to an entity owned by the public authorities, which will then continue to provide essential financial services while pending sale or wind down of the entity,
3. The asset separation tool. It enables the authority to separate the assets and the possibility to transfer "bad" assets to a separate vehicle,
4. The bail-in tool. This enables authorities to write down equity and debt and is intended to ensure that most unsecured creditors of an institution bear the appropriate losses.

The scope of liabilities subject to the **bail-in tool** is extensive. All liabilities are subject to the tool unless excluded (in paragraphs 2 and 3 under Article 44). **Excluded liabilities** are covered deposits, secured and collateralised liabilities (including repos), liabilities with original maturity of less than one month, liabilities from the holding of client monies or client assets, employee salary and benefit, tax liabilities and liabilities to commercial or trade creditors for provision of goods and services.
Institutional structure

Single Rule Book is the foundation for the EU states. The BRRD directive is applicable for all the 7000 banks within the EU states, as well as the EEA EFTA countries Norway, Iceland and Liechtenstein, see Chapter 4.3 regarding EEA EFTA states. Nineteen of the EU states, who are in the Eurozone, fall under the supervision of both SSM (Single Supervisory Mechanism) at the ECB (European Central Bank) and the NCA (National Competent Authorities) within each country.

130 of the biggest banks within the 19 Eurozone countries are directly regulated by the European Central Bank (ECB), other banks are supervised by the NCA in each country.

The Single Resolution Mechanism (SRM) will be an independent authority, a resolution authority, within each country with its own independent board of directors. SRM is triggered when a bank experiences difficulties. Then the BRRD will apply and the SRM in each country. The SRM is often placed within the FSAs within the EU countries as it is considered convenient that the FSAs have IT systems and much of the information the resolution authorities require, and they can work together on some of the tasks.

At this stage, resolution planning is still at an early phase for most institutions. Many institutions are already adjusting their funding structures. As of December 2016,\textsuperscript{17} three resolution authorities, the Bank of England (UK), the SRB (the Banking Union) and the Swedish National Debt Office have either published their policy or publicly communicated their policy intentions for setting MREL for institutions in their jurisdictions. These are the three EU resolution authorities responsible for setting MREL for G-SIBs established in the EU.

Conditions for resolution (Article 32) when all the following conditions are met:

- The competent authority or the resolution authority determines if the institution’s financial condition is rapidly deteriorating, failing or likely to fail. This is determined by objective tests, including breach of capital requirements, having more liabilities than assets, being unable to pay obligations or requiring extraordinary public finance.

- There are no reasonable prospects for the institution, with regard to the circumstances, taking relevant factors into account; it would seem that any

\textsuperscript{17} December 2016, EBA report p. 22
alternative action (including early intervention measures or the write down or conversion of relevant capital instruments (Article 59(2)) would not prevent the failure of the institution (at least not within a reasonable timeframe).

- Action is necessary in public interest. The action must be proportionate to one of the resolution objectives and only be taken if a winding up or insolvency of the institution or parent undertaking is not believed to meet those objectives to the same extent.

- In addition to the competent authority (NCA) the determination that the institution is failing or likely to fail can be made by the resolution authority, after consulting the competent authority.

The impact of the directive on banks and financial institutions
The impact of the directive on banks, credit institutions and large investment firms is quite extensive. They will be required to produce a detailed recovery plan on entity and group basis. Furthermore, non-EU banks/investment firms with an EU sub-group will be required to prepare a recovery plan on entity and group basis, without regard to its home country requirements. Supervisors will have powers to remove impediments to the implementation of recovery plans. Resolution authorities may require firms to take appropriate action to ensure impediments are removed. It may result in increasing work and resource for firms, due to the engagement and time required at a senior management level to produce recovery plan and working with authorities.

The main emphasis is that before there will be state aid from the national government or the EU the financial company will carry most of the weight of the loss first. The resolution authority must do everything to avoid a bail-out. For example, sell the company, if a buyer can be found, establish a bridge bank which will be a new company often founded by the government and would be a sort of a provisional bank.

According to Article 73, no one will be worse off by the measures taken according to BRRD on revaluation of the assets than in case of bankruptcy. Investors are supposed to contribute at least 8% of total liabilities and own funds before external funds can be accessed, according to article 44/5 in BRRD. This provision is under revision by the Commission for now, but a final decision has not been made (Stiefmüller, 2016).
3.3 MREL

MREL is a **Minimum Requirement** for own funds and **Eligible Liabilities** and is presented in Article 45 of the BRRD directive.

The adoption of BRRD has brought about a major reform in the EU regulatory framework for banks and is considered a milestone, by EBA, in addressing the problem of banks being "too big to fail". At the core of this reform is the aim that the cost of bank failure should be borne, first and foremost, by shareholders and creditors rather than taxpayers.

**Bail-in versus Bail-out**

During the crash there were many bail-outs. This new instrument, the Bail-in tool, means that the cost should be coming from within the bank, who is facing failure, rather than outside, such as government and taxpayer's funds.

To support the outcome that the cost of bank failure should be borne, first and foremost, by shareholders and creditors a new tool, the bail-in tool, has been presented. It is meant to enable resolution authorities to write-down shares and debt instruments in order to absorb losses and convert debt instruments into new shares to recapitalise systemic functions. It “is a crucial element of the resolution reforms but its **efficiency** depends on whether banks have issued, at the point of failure, **enough instruments that are eligible** to be bailed-in.” (EBA, 2016). Furthermore, it is vital that they can be bailed-in without threatening financial stability. That is why the BRRD requires resolution authorities to determine minimum requirements for own funds and liabilities eligible for bail-in, known as MREL. MREL is an essential compliment to the **bail-in tool** (EBA, 2016).

The [MREL] requirement can be met both through **equity** and/or **loss-absorbing debt**. It is conceptually similar to the Total Loss-Absorbing Capacity (TLAC) standard of the Financial Stability Board (FSB) which **applies to Global Systemically Important Banks (G-SIBs)** but MREL captures the wider population of firms in the scope of the BRRD [within Europe]. (PwC, n.d.).

**Early stages of MREL implementation**

In 2016, a report was "prepared by the EBA in close cooperation with the Single Resolution Board (SRB) and national resolution authorities in order to draw lessons from their experience of the early stages of MREL implementation. The European Central Bank (ECB) and the Commission were also involved" (EBA, 2016). In its main findings it states that the
task was to identify changes necessary to improve the technical soundness of MREL without alteration of two principles;

first that MREL should be set (for each bank) at a level necessary and sufficient to implement the resolution strategy by absorbing losses and recapitalising the institution; and second, that the calibration should be consistent with the prudential capital requirements applicable to the institution before and after resolution. Any amendments to the MREL framework should therefore not lead to the alteration of these principles.

this report identifies a number of changes necessary with a view to improve the technical soundness of the MREL framework and implement the FSB TLAC standard as an integral component of the framework.

First, EBA supports maintaining a link between MREL and the capital requirements. It would be better achieved if both requirements used a consistent denominator, namely risk weighted assets (RWA) with (in time) a leverage ratio exposure backstop requirement [emphasis added].

Second, according to the report,

in order to preserve the usability of capital buffers, equity should not be counted towards MREL and capital buffers at the same time. [The report by EBA states that] this could be done either by stacking the buffers above MREL or by treating the buffers as parallel framework to MREL. Nevertheless, it is crucial that a breach of MREL is treated as seriously as a breach of capital requirements [emphasis added].

MREL is an essential factor of bank’s resolvability. It must be met at all times [emphasis added] and any breach should trigger an appropriate and proportionate response.

The EBA ... recommends that resolution authorities be given strengthened powers to respond to a breach of MREL, including an expedited impediment removal process and the power to require an institution to draw up an MREL restoration plan. [It also recommends] that [a] toolbox of the resolution authority should be further improved through the introduction of powers to proactively monitor and manage the maturity of an institution’s MREL stack. A redemption approval regime [emphasis added] should also be implemented to ensure that there is an approval requirement for any redemption by an institution of a MREL-eligible instrument where that redemption would bring the institution into breach of its MREL requirement (or combined buffer requirement (CBR) if this stacks on top of MREL) or where the institution is already in breach of its MREL requirement. In addition, the EBA has considered the interaction between resolution authorities and competent authorities in responding to an MREL breach and has proposed an approach that aims to ensure consistency and coordination depending on the nature of the breach.
The report recommends requiring that globally systemically important banks (G-SIBs) meet their MREL with subordinated instruments at least to a level of 14.5% of RWAs (+CBR) in line with the TLAC term sheet. In addition, considering the systemic importance of other systemically important institutions (O-SIs), level playing field and cost considerations, it is recommended to also require O-SIs to meet a subordination requirement of 13.5% of RWAs (+CBR). However, taking into account the heterogeneity in the O-SII population, authorities should be given some flexibility in applying this subordination requirement.

Loss-absorbing capacity should be distributed within banks and their related parties to best support the resolution strategy for the group by passing losses from the entities where they originate to the entities where resolution action is implemented. In the EBA’s view, EU material subgroups of third-country G-SIBs should be required to collectively meet a level of MREL in line with the TLAC term sheet.

The EBA further makes a recommendation for harmonised reporting and disclosure requirements in the area of MREL. Disclosing the MREL requirements and capacity of banks would carry some important benefits. It would provide transparency to investors and thus support market discipline, decrease speculations about banks’ health and facilitate appropriate pricing. (EBA, 2016).

The report addresses “quantitative analysis of the MREL stack and funding needs of banking groups operating in the EU as well as preliminary analysis of the potential macroeconomic impact of the introduction of MREL” (EBA, 2016).

**MREL and TLAC**

There are two sets of rules for the largest banks in the EU:

- The international TLAC (Total Loss Absorbing Capital) sets 16% requirement on RWA and 6% of total assets (capital & liabilities = total assets (will be raised in 2022 to 18% and 6.75% respectively)). TLAC enters into force 2019 and in steps to 2022.

- The EU MREL that sets no binding minimum

13 banks in Europe will be subject to both; they are globally systemically important (G-SIIs).

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18 Combined Buffer Requirement


20 [http://www.eba.europa.eu/risk-analysis-and-data/other-systemically-important-institutions-o-siis](http://www.eba.europa.eu/risk-analysis-and-data/other-systemically-important-institutions-o-siis). There is a two-step process for the identification of O-SIs. In the first step, on the basis of mandatory quantitative indicators (related to size, interconnectedness, relevance for the economy, complexity), competent authorities will obtain scores indicating the systemic importance of each bank. Banks scoring above a certain threshold (upper threshold) will have to be identified as O-SIs, those scoring below a certain threshold (lower threshold) can never be identified as O-SIs.
The European Parliament has put together an overview of comparison of TLAC and MREL;

Table 1. Main differences between MREL and TLAC\textsuperscript{21}

<table>
<thead>
<tr>
<th>Entry into force</th>
<th>MREL</th>
<th>TLAC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2016 with phase-in period</td>
<td>1 January 2019 (16% RWA/6% LRE) &lt;br&gt; 1 January 2022 (18% RWA/6.75% LRE)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Scope</th>
<th>All institutions within the EU</th>
<th>GSIBs</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Approach</th>
<th>Bank-specific (Pillar 2)</th>
<th>Minimum standard (Pillar 1) and individual add-on</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Calculation</th>
<th>Sum of the Loss Absorption Amount (current capital requirements) and Recapitalisation Amount (capital requirement post-resolution), subject to various adjustments by the resolution authority, including potential use of DGS &lt;br&gt; Denominated as % of total liabilities and own funds &lt;br&gt; Capital can be used to meet both MREL and regulatory buffers</th>
<th>The higher of 16%/18% of RWA (2019/2022) or 6%/6.75% of the leverage exposure, excluding capital instruments used to comply with regulatory buffers &lt;br&gt; Bank-specific add-on above the minimum requirement to be applied by competent authorities, if necessary and appropriate</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Deductions</th>
<th>No deduction of cross-holdings</th>
<th>Deduction of TLAC eligible instruments issued by other GSIBs</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Eligible instruments</th>
<th>Eligible instruments are not necessarily subordinated, but the resolution authority may require that part of the MREL be met with contractual bail-in instruments which must be subordinated to other eligible instruments &lt;br&gt; A number of further specifications apply (unsecured, fully paid up, residual maturity of at least one year...), and some instruments are excluded (derivatives, covered deposits...)</th>
<th>Eligible instruments must be unsecured and formally subordinated to excluded liabilities, with few exceptions (in particular option to allow non-subordinated instruments to count toward TLAC for an amount up to 2.5%/3.5% of RWA) &lt;br&gt; A number of further specifications apply (in particular, a residual maturity of at least one year, instrument fully paid up) and some instruments are excluded (including structured notes, derivatives, insured deposits...)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>If the instrument is governed by the law of a Third country, the institution must demonstrate it can be legally and effectively bailed-in upon resolution</th>
<th>As from 2022, eligible instruments must be issued directly by the resolution entity</th>
</tr>
</thead>
</table>

The two set of rules make it complex for the 13 banks to comply with both rules, so the table gives a great overview. Within the Banking Union the Single Resolution Board is responsible for setting the MREL for institutions under its direct remits (European Parliament, 2016).

![Diagram](image)

**Figure 1. Determination of MREL requirements. From European Parliament (2016)**

According to the European Parliament

The MREL is to be calculated on the basis of three components:

- the **loss absorption amount** (LAA), based on the capital requirements of the current balance sheet, including regulatory capital requirements (8% of RWA), the combined buffer requirements, and additional pillar 2 requirements (bank specific) set by the supervisor;

- the **recapitalisation amount** (RCA), which aims at covering the capital requirements of the failing institution post-resolution, taking into account potential divestments and other resolution actions under the preferred resolution strategy (the RCA may be set to 0 if the SRB considers it can be put into liquidation), as well as the need to maintain sufficient market confidence;

- the **DGS adjustment**, linked to any potential involvement of a DGS to protect insured depositors.

For each of those three components, the SRB may consider upward or downward adjustments, on the basis of a thorough case-by-case analysis of financial information at granular level, supervisory data and resolution strategies. While the calculation of the MREL is mainly based on risk weighted assets (RWA), the MREL will eventually be denominated as a percentage of total liabilities and own funds. (European Parliament, 2016).

**State of play regarding MREL and TLAC implementation**

The BRRD entered into force on 1 January 2015 with a requirement to transpose bail-in and MREL provisions into national law by the 1 January 2016. Transposition is now

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22 The combined buffer requirement consists of the sum of the countercyclical buffer, the capital conservation buffer and the higher of the systematically important institution buffer (G-SII/O-SII) and the systemic risk buffer.
complete in all Member States” (EBA, 2016). The RTS on MREL entered into force on 3 September 2016. With the BRRD, the Single Resolution Mechanism Regulation (SRMR) and the RTS on MREL, “...resolution authorities now possess a broad set of regulatory provisions to determine MREL for all credit institutions across the internal market on a consistent basis. It is now their responsibility to determine, in context of resolution colleges and in line with resolvability assessments, the resolution strategy for each firm and the level of MREL sufficient to implement it” (EBA, 2016).

As has been mentioned before, Article 45 of BRRD requires banks to hold sufficient bail-in-able liabilities and meet at all times a Minimum Requirement for own Funds and Eligible Liabilities (MREL). The EBA published a Regulatory Technical Standard on MREL in July 2015 that set out the MREL measures that combine a loss-absorption amount and a recapitalisation amount as can be seen in figure 2.

![Figure 2. MREL according to EBA RTS from Berger et al (2016)](image)

*DGs is the Deposit Guarantee Scheme. SREP is the Supervisory Review and Evaluation Process

The MREL is currently viewed as a Pillar 2 measure, which is not a minimum standard but one set individually for each bank. EBA maintains “that the regulatory capital requirements reflect the judgement of the supervisor about the level of unexpected losses that an institution should be able to absorb, so as a baseline, losses equal to capital” (Berger et al, 2016) requirement should be absorbed. Combined buffer requirements could be added as could any existing Pillar 2 requirement. The RTS’ leave discretion to the resolution authority to change these requirements, after consultation with the supervisor.

Another component is a recapitalisation amount that ensures that the institution will be able to re-enter the market.
Comparing MREL and TLAC
In 2016 the European Parliament noted that deduction of crossholding may present a problem.

if all loss absorbing instruments were held by other banks then bailing-in those instruments could trigger contagion of financial instability, and the overall loss-absorbing capacity of the sector would not be enhanced. The question is, whether holdings of MREL eligible instruments should be deducted from T2 capital or from MREL liabilities, and according to which rules when it comes to the limited exemptions foreseen in the TLAC standard regarding instruments which are not subordinated to excluded liabilities.
The Parliament aggregated the data for Table 2 in order to map the financial instruments.

Table 2. Eligibility of various classes of financial instruments under MREL and TLAC from EP (2016)

<table>
<thead>
<tr>
<th>Unsecured or not collateralised liabilities</th>
<th>Bail-in liable liabilities</th>
<th>MREL eligible liabilities</th>
<th>TLAC eligible liabilities</th>
<th>Hierarchy of claims</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CET1</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>1</td>
</tr>
<tr>
<td>AT1</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>2</td>
</tr>
<tr>
<td>T2</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>3</td>
</tr>
<tr>
<td>Wholesale funding</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subordinated debt &amp; T3</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>4</td>
</tr>
<tr>
<td>Senior debt</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unsubordinated Senior debt &gt; 1 year</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subordinated Senior Debt &gt; 1 year</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Covered Bonds</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Mortgage bonds</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Securities</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Structured notes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Promissory notes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial paper</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Certificate of deposit</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deposits by credit institutions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maturity &lt; 7 days</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>7 days &lt; maturity &lt; 1 year</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maturity &gt; 1 year</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deposits by central banks</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deposits by other organizations</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deposits by the public administration</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer deposits</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non covered deposits</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retail deposits / SME - sight</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retail deposits / SME - fixed term</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corporate deposits - sight</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corporate deposits - fixed term</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DGS covered deposits</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collateral financing (REPOS)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Derivatives</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CCP derivatives</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OTC derivatives</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secured liabilities (collateralized)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employees' - clients - fiduciary - tax &amp; SS - critical services liabilities</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

* If excluded liabilities ranking pari passu are 10% or less
* * Up to 2.5% (until 2022) or 3.5% (thereafter) of RWAs if excluded liabilities ranking pari passu are less than 5% of total external TLAC
3.2 Technical Standards, Guidelines & Recommendations

The three ESAs; EBA, EIOPA and ESMA\textsuperscript{23} are entitled to develop technical standards to be submitted to the Commission for endorsement. Depending on the level 1 mandate the ESAs will either develop regulatory technical standards (RTS) or by implementing technical standards (ITS) which are adopted by the Commission.\textsuperscript{24} The technical standards further explain and implement the directives and regulations issued within the EU. The agencies also issue guidelines directed at both supervised entities and national supervisory or resolution authorities.

There have been issued approximately 40 documents; RTS, ITS, and guidelines regarding BRRD, some are final, while others are still under development. The following are some of the ones that have been issued or are under development\textsuperscript{25};

- **ITS on MREL reporting by Resolution Authorities.**\textsuperscript{26} These standards will enable the EBA to monitor on a consistent basis the implementation of MREL across the Union.

- **Report on the appropriate target level basis for resolution financing arrangements under BRRD.**\textsuperscript{27} This report defines the reference point for the target level of national resolution financing arrangements. The appropriateness of the basis for the target level is assessed on the basis of a number of qualitative criteria and historical data. The draft report recommends changing the basis from covered deposits to a total liability based measure.

- **Guidelines on cooperation agreements between deposit guarantee schemes.**\textsuperscript{28} These Guidelines are part of the EBA's work to promote a consistent and coherent approach to cooperation agreements between deposit guarantee schemes (DGSS) across the European Union (EU). The proposed Guidelines specify the objectives and minimum content of cooperation agreements.

\textsuperscript{23} The three Supervisory Authorities within the European Union, the European Banking Authority, the European Insurance and Occupational Pensions Authority and the European Securities and Markets Authority.

\textsuperscript{24} Depending on the level 1 mandate the ESAs will either develop regulatory technical standards (RTS) which are endorsed by the Commission by means of delegated acts or by implementing technical standards (ITS) which are adopted by the Commission by means of implementing acts under Article 291 TFEU (Treaty of the Functioning of the European Union). Usually, the ESAs will conduct open public consultations before submitting the technical standards to the Commission.

\textsuperscript{25} Retrieved 10 April 2017.

\textsuperscript{26} https://www.eba.europa.eu/regulation-and-policy/recovery-and-resolution/its-on-mrel-reporting-by-resolution-authorities


Regulatory Technical Standards on Business Reorganisation Plans. These Regulatory Technical Standards (RTS) define the content of "Business Reorganisation Plans and Progress Reports". These RTS have been developed within the framework established by the Bank Recovery and Resolution Directive (BRRD) which sets procedures for the recovery and resolution of credit institutions, investment firms and related entities across the EU. The draft RTS develop in detail the elements that should be included in a resolution plan and the content of the related progress reports.

### 3.4 Contagion and financial stability

Between 2007 and 2013, European Union governments provided €836 billion to guarantee bank funding and €448 billion to recapitalise banks (Berger, Hützl, Merler, 2016).

Direct or indirect subsidy like government subsidies can result in moral hazard for the management of the banks who have such support. They are more likely to take greater risks and have lower capital ratio when they know that the government will assist them if needed. The problem lies at the heart of privatization of profits while loss is socialized and carried by the public. As Berger, Hützl and Merler put it: "When those banks have success the profit goes to the shareholders, but when they are unsuccessful they rely on other than shareholders, namely the public. Depositor's insurance fund and debt offices are examples of such support."

The reason why it is not possible for banks to go into bankruptcy, like most companies is due to the fact that there is often high risk of contagion and systemic effect. The Directive aids to clarify the legal situation, which is important in resolution. "...the last thing needed in a crisis is legal uncertainty or uncertainty in general. Yet another reason is "too big to fail," they frequently play an important role in serving the community, cross-border payments, etc." (Striefmüller, 2016).

Within each country and in cooperation with the ECB there will be Single Supervisory Mechanism. See Figure 3, by Striefmüller, which shows one way to picture the mechanism.

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Figure 3. From Stiefmüller (2016)

On the bottom there is the Single Rulebook and the Banking structure that applies to all. The banking structure aims at reducing interconnectedness and making bail-in credible. Then there is either Supervision or Crisis management, in which case the SSM or the SRM will apply and CRR/CRD IV or BRRD respectively, depending on the state of the financial institution in question. (Stiefmüller, 2016).

A Single Resolution Fund will be set up according to an Agreement of 26 of the 28 EU countries and will be financed by banking sector within the countries. The fund will be used to assist banks that are in difficulties, to keep them afloat until they can be rearranged.

"According to BRRD most of the 7000 credit institutions within EU **will not be saved** since they do not present contagion for the market, rather the 130-140 that are large, plus 8-12 that are Globally Systemically Important (GSIs). So the other banks will be liquidated without triggering systemic risk." (Stiefmüller, 2016). This will most likely promote risk-taking within the banks that will be saved. Furthermore, creditors may be more willing to lend those banks and depositors, especially large depositors, more likely to want to keep

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30 BREXIT
their money within banks that will be surely saved. How will this affect small countries with no banks that will be saved?

**Financial stability in Iceland**
The Republic of Iceland represents the smallest currency area in the world (Jónsson & Sigurgeirsson, 2016) and a small financial area. It is sensitive to economic and financial instability. The three largest banks are subject to O-SIs supervision, but are not amongst the 130-140 that are large within the EU. They are not cross border banks as pre-crisis and would not present contagion outside the country. They are, however, inter-connected and if they become distressed it would impact the nation substantially.

However, now there is a financial stability board in the country. The financial stability board is comprised of the Minister of Finance and Economic Affairs, who chairs the Council, the Governor of the Central Bank and the Director General of FME31 (Ministry of Finance, 2016).

The Financial Stability Council, established in May 2014, is formal platform for the public institutions on financial stability. The Council is a forum for consultation, exchange of information and policies related to financial stability and coordinates preparedness public financial crisis. The main tasks of the Financial Stability Council are as follows:

1. Shaping public policy on financial stability,

2. Assessing macroeconomic imbalances, risks in the financial system, undesirable incentives and other conditions that are likely to threaten the financial stability,

3. To define the functions other than the application of the Central Bank’s monetary policy, which are considered necessary at any time to have an impact on the financial system for the purpose of promoting and preserving financial stability,

4. To confirm the definition of systemically important regulated entities, infrastructure and markets are such that their activities can affect financial stability.

The Council will have additional meetings if there is considered a risk of imminent financial crisis or risk events that may have a significant spill-over effects.

Due to the size of the economy it is sensitive to financial instability, inter alia; the closeness of the small community, small currency and few banks. There will be little room

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31 The Icelandic Financial Supervisory Authority
for special adjustments after the BRRD will take effect. How important will that be for the countries?

There are different views on pros and cons of having to implement an International or European directives where a lot of compromise have taken place, where the bigger nations have more opportunity to affect how the legislation will be in the end. The BRRD may be mostly beneficial for the EU and EEA EFTA States. However, there may be such a serious disadvantage that will not be clear until it hits. How much leeway will the directive allow for? Will we be able to take special measures if necessary? There are further subjects regarding contagion in Chapter 5.4.
4 Key components of the BRRD explained and its effect on the EFTA States

To further understand the essence of BRRD we need to have a look at some of the key issues regarding financial institution's capital requirements. Here we consider the basis of CRD IV and CRR as well as RWA and CAR.

Moreover, how are the EEA EFTA States affected by this Directive? This chapter presents the background of the EEA Agreement and explain its Two-pillar structure as well as discussing challenges posed by the implementation of EU legislation.

4.1 CRD IV and CRR

After the collapse of the banks in Iceland, it became apparent that after a rapid rise in lending, the banks were lacking in capital to support such excessive lending, both in quantity and quality. Furthermore, the risk management and governance were lacking. The situation was similar in many countries in Europe and the US. The excessive lending and many other issues (see Chapter 5) were the reason that credit institutions in Iceland were by no means ready to withstand the shock that hit the small economy in the fall of 2008.

To respond to the global shortcomings revealed by the crisis, the Basel Committee on Banking Supervision issued the Basel III in December 2010. Subsequently, the European Union transposed the core of the Basel Accord with Directive 2013/36/EU (CRD IV) and Regulation 575/2013 (CRR). The legislation was published in June 2013 and applies as of January 2014 within the EU countries with full application as of January 2019.

The main contents of CRD IV and CRR provide, among other things, increased requirements for financial institutions on liquidity and equity. The difference between Basel III and the CRD IV package is that the Basel III is an international standard that is not legally binding. CRD IV and CRR are, to the contrary, a single European framework that Iceland, through its membership to EFTA, is required to adopt. Furthermore, CRD IV and CRR have a wider scope than Basel III (Sæþórsson, 2014).

The role of supervisory authorities is to evaluate the risk inherent in the operations of a financial institution, whether the measures the firm can apply are adequate, whether it has solid management and whether the capital is adequate in relations to its risks. This evaluation is carried out in a Supervisory Review and Evaluation Process (SREP). If the supervisory authority concludes that there are uncertainties regarding an institution’s capital adequacy, it can demand necessary measures to be taken, such as requiring higher capital than 8% of risk weighted assets.
The capital requirement under CRR comprises two factors; Tier 1 and Tier 2. Tier 1 consists of two parts; Common Equity Tier 1 (CET1) and Additional Tier 1 (AT1). Tier 1 plus Tier 2 sets the requirement, as before, i.e. CAR 8% minimum. Currently, the required capital ratio minimums are 4.5% for CET1, 6% for Tier 1 and 8% for total capital.32

In CRD IV there are five types of additional capital requirements or buffers.33

- Capital Conservation Buffer
- Institution Specific Countercyclical Capital Buffer
- Systemic Risk Buffer
- Global Systemically Important Institutions Buffer (G-SIIs)
- Other Systemically Important Institutions (O-SIIs)

All the capital requirement buffers (Combined buffer requirement) consist of CET1 capital, and these buffers are in addition to the original capital requirements.

Following is a more detailed description of above buffers:

The capital conservation buffer (2.5% of RWA) is a contingency plan to support the institution if the RWA has decreased.

The purpose of the institution specific countercyclical capital buffer is to counteract impacts of volatility in the environment and decrease fluctuations in the supply of lending caused by volatility. It is 0-2.5% of RWA (and may be higher in certain circumstances).

The purpose of the systemic risk buffer is to mitigate long-term structural or macroeconomic risks that may have a significant negative impact on the financial and economic system. It is 0-3% of RWA of financial institutions, but, in certain circumstances, it may amount to 3-5% of RWA or in some instances even more than 5%.

The G-SIIs buffer means the own funds that must be maintained, “not only global systemically important institutions (G-SIIs), but also other large institutions with an overall


exposure measure of more than EUR 200 billion Euro and which are potentially systemically relevant, will be subject to the same disclosure requirement as the G-SIIs”. The purpose of O-SIIs is to hinder or mitigate long term effect that systemic or financial instability can have on the economy. It will amount to 2% of RWA of financial institutions (Sturluson, 2014).

Figure 4 shows the combination of buffers and the basic requirement in more detail.

![Figure 4](image)

The main purpose of Basel III is to capture what instruments financial institutions can consider capital and to improve the quality of said capital. Provisions on capital buffers are set to make sure that institutions maintain sufficient capital to withstand shocks and counteract excess lending (FME, 2015).

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4.2 RWA and CAR

Risk Weighted Assets (RWA) and the Capital Adequacy Requirement (CAR) are key factors in calculating the solvency of banks.

RWA

Risk weighted assets (RWA) are the assets of the bank or other institutions used to determine the minimum amount of capital that must be held by the banks or institutions to reduce the risk of insolvency. The loan portfolio is assessed by risk and the capital requirement is then based on that risk assessment. There are many types of loans, some are secured by collateral such as a mortgage or machinery and equipment or they may be secured by a letter of credit.

It became apparent in the financial crisis that, for example mortgage loans had a much higher risk of default than bank management and regulators had believed. Many financial institution lost huge amounts of capital when consumers defaulted on their mortgages. Now it is demanded by supervisory authorities that each bank group its assets by risk category, so if a certain asset class declines significantly in value, it could minimise the likelihood of the bank losing capital.

[The assets risk is assessed by] several tools to assess the risk of a particular asset category. Since a large percentage of bank assets are loans, regulators consider both the source of loan repayment and the underlying value of the collateral. A loan for a commercial building, for example, generates interest and principal payments based on lease income from tenants. Since the building serves as collateral for the loan, bank regulators also consider the value of the building itself. [A] treasury bond, on the other hand, is secured by the ability of the federal government to generate taxes. [Normally treasury bonds] carry the higher credit rating, and holding these assets requires the bank to carry far less capital than a commercial loan.

[On the other hand,] bank managers are also responsible for using assets to generate a reasonable rate of return. In some cases, assets that carry more risk can generate a higher return to the bank, because those assets generate a higher level of interest income to the lender. [Although that is not always the case.] Managers have to balance the potential rate of return on an asset category with the amount of capital they must maintain for the asset class. [It is feasible for the management to create a diverse] portfolio of assets, [it increases the possibility to] generate a reasonable return on the assets and also meet the regulator’s capital requirements (Investopedia, 2017).

CAR

First, RWA is measured to assess the riskiness of each loan to see how much capital is necessary to fulfil the minimum capital adequacy requirements. Each loan is assigned with
a percentage number, the riskier the loan, the higher the percentage. The percentage is then applied to the loan or loan portfolio, and the loans in Tier 1 and Tier 2 capital are added together and finally divided by the RWA. This shows the CAR ratio of the bank or institution.

To calculate the Capital Adequacy Ratio Tier 1 and Tier 2 are added together and divided by the RWA.

\[
\text{Tier One Capital + Tier Two Capital} \div \text{Risk Weighted Assets}
\]

4.3 How does BRRD affect the EEA EFTA States

Background, what are the EFTA States?

The European Economic Area (EEA) unites the 28 EU Member States and the three EEA EFTA States (Iceland, Liechtenstein and Norway) in an Internal Market governed by the same basic rules. These rules aim to enable goods, services, capital, and persons to move freely within the EEA in an open and competitive environment, a concept referred to as the four freedoms. The objective of the EEA Agreement, as laid down in Article 1, is to “promote a continuous and balanced strengthening of trade and economic relations between the Contracting Parties... with the view to creating a homogenous European Economic Area” [emphasis added].

The EEA Agreement provides for equal conditions for businesses across the entire Internal Market, through competition and state aid rules. It also contains horizontal provisions relevant to the four freedoms, as well as cooperation outside the four freedoms in so-called flanking areas. The latter cover areas such as research and technological development, information services, education, training and youth, employment, enterprise and entrepreneurship, and civil protection. Co-operation is to be carried out through common activities of various types, such as EEA EFTA participation in EU programmes and agencies.

[The EEA Agreement is an addition to the] establishment of EFTA in 1960, [as] the European Union has been EFTA’s most important trading partner. In 1972, individual EFTA countries signed free trade agreements with the EEC with the aim to abolish import duties on industrial products. This aim was more or less achieved by 1977. (EFTA, 2014).

Supranational powers of the ESAs

According to the Constitution of Iceland, no other country or body can impose on the country or its citizens any enforcement or binding decisions of institutions or authorities to which Iceland is not a party. The ESAs, especially ESMA (European Securities and Market Authority) but also EBA, have such powers over supervised entities and market
participants within the EU. Through its membership of EEA, Iceland must implement laws and regulations that include articles with such powers. The Icelandic Authorities have referred to this as the “constitutional problem” (and Norway has the same problem). In October 2014, the EU and the EEA EFTA countries found a solution called the two-pillar solution. The two-pillar structure refers to the incorporation of EU Acts into the EEA Agreement.

To quote directly from the Two Pillar Agreement (EFTA, 2016):36

**General**

1. Through the Agreement on the European Economic Area (EEA Agreement), the three EEA EFTA States – Iceland, Liechtenstein and Norway – participate fully in the Internal Market of the European Union (EU). The aim of the EEA Agreement is to achieve a homogeneous EEA based on common rules and equal conditions of competition, thus extending the Internal Market to the EEA EFTA States. This is ensured through the incorporation of EEA-relevant EU acts into the EEA Agreement, and the uniform interpretation and application of such rules throughout the EEA.

2. The institutional framework of the EEA consists of two pillars and is thus often referred to as the “two-pillar structure”. The EU and its institutions constitute one pillar (EU bodies), while the EEA EFTA States and their institutions constitute the other pillar (EEA EFTA bodies), mirroring those of the EU. Between these two pillars, a number of joint bodies have been established. Through these joint bodies, the 31 EEA States jointly implement and develop the EEA Agreement.

3. The two-pillar structure is necessary because the EEA EFTA States have not transferred any legislative competences to the EU or to the joint EEA bodies. In addition, the EEA EFTA States are also, as a main rule, **constitutionally unable to accept binding decisions made by the EU institutions directly** [emphasis added].

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Figure 5. The Two-Pillar Structure. Switzerland is an observer.

This figure illustrates the management of the EEA Agreement. The left pillar shows the EFTA States and their institutions, while the right pillar shows the EU side. The joint EEA bodies are in the middle.  

This structure was necessary for the EEA EFTA countries to be able to continue implementation of European Union Law. All provisions must be introduced to, and passed by, the respective parliament before said provisions enter into force. Due to constitutional restrictions in the EEA EFTA countries, or the constitutional problem, there has been considerable delay in transposing EU law into the legislation of the EFTA countries. The two-pillar structure is a solution to the immediate problem, but there are a significant number of directives, regulations and delegated acts waiting for implementation. The EU countries have called the Law-making within the EU a tsunami, referring to the excessive volume, but both this “constitutional problem” and the micro size of the market make this an even larger task in Iceland.

The powers of the ESAs to take binding decisions in all the countries, which may go against decisions of the NCA, are referred to as supranational powers. An example of such

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37 Source: [http://www.efta.int/media/publications/fact-sheets/EEA-factsheets/EFTAFactsheetEuropeanEconomicAreaEEA.pdf](http://www.efta.int/media/publications/fact-sheets/EEA-factsheets/EFTAFactsheetEuropeanEconomicAreaEEA.pdf)
powers is the power ESMA has to temporarily stop, or suspend, transactions of shares in stock exchanges. Furthermore, ESMA can suspend or prohibit conduct in the market, such as short selling. Those decisions may reach and go against the interest of the respective country.

Directives and regulations that do not include any power to take binding decisions\textsuperscript{38} by the EU are easier to transpose and implement respectively.

Recently the EU has issued regulations rather than directives. The difference is that the regulations are generally implemented without any, or slight, adjustments and take effect immediately or soon after the issued date. Directives normally have provisions that may be adjusted to each country with minimum requirements. Since regulations are implemented faster and with less adjustment, they have become even more delayed within the EEA EFTA counties. Furthermore, the EU does not prepare translations for the EEA EFTA countries which further delays implementation and increases the amount of work for the small countries due to the volume.

\textsuperscript{38} \url{http://www.althingi.is/altext/145/s/1674.html}
5 Is BRRD a saviour or a false illusion of safety?

This chapter covers some of the papers, webinars and books that have been published on the subject of banking, financing and how to respond to the recent crisis. What do they say about the BRRD and current legislation and do they consider the Directive sufficient to prevent or minimise the effect of another sovereign or financial crisis? In addition, I will summarise the pros and cons according to the institutions and the experts.

5.1 Bank Runs, Deposit Insurance, and Liquidity

Diamond and Dybvig (1983) wrote a paper on extreme crisis and introduced a model on bank runs in 1983, well before the recession of 2008. However, it is a unique model, and the paper points out that existing theoretical analysis had neglected to explain why bank contracts are less stable than other types of financial contracts and it had not investigated the strategic decision that depositors face. “The model we present has an explicit economic role for banks to perform: the transformation of illiquid assets into liquid liabilities.”

In their model, they show the main economic problem associated with banks. The assets of a bank, i.e. the loan portfolio, are typically long-term contracts with customers. However, the deposits are generally available on demand. “Traditional demand deposit contracts which provide liquidity have multiple equilibria, one of which is a bank run.”

According to Diamond and Dybvig, their model demonstrates three important points.

First, bank issuing demand deposits can improve on a competitive market by providing better risk sharing among people who need to consume at different random times. Second, the demand deposit contract providing this improvement has an undesirable equilibrium (a bank run) in which all depositors panic and withdraw immediately, including even those who would prefer to leave their deposits in if they were not concerned about the bank failing. Third, bank runs cause real economic problems because even “healthy” banks can fail, ... In addition, our model provides a suitable framework for analysis of the devices traditionally used to stop or prevent bank runs, namely, suspension of convertibility and demand deposit insurance (which works similarly to a central bank serving as “lender of last resort”).

The model has two periods and two types of deposit owners. The first one wants a deposit in period one, the second in period two, and the second one benefits from waiting. The model demonstrates the imbalance between assets and liabilities and the maturity transformation and liquidity problems banks may face if too many depositors decide to withdraw within a short amount of time.
The authors point out that if the lender of last resort were always required to bail out banks with liquidity problems, there would be “perverse incentives for banks to take risks [emphasis added], even if bailouts occurred only when many banks fail together.” However, they also consider the result that deposit insurance dominates contracts that the bank alone can enforce, showing that there is a potential benefit from government intervention into banking markets. “In contrast to common tax and subsidy schemes, the intervention we are recommending provides an institutional framework under which banks can operate smoothly…”

The model is still relevant today and is a useful framework for analysing the economics of banking and associated policy issues.

5.2 Circularities and lessons on crises

Gylfi Zoega has written papers on crises where he has been searching for signs of circularities since the first recorded crisis in 1636 (the Dutch tulips crisis). There are many ways to map what happens in a financial crisis and Zoega developed the following timeline for financial booms and busts:

1. The initial shock that leads to non-sustainable imbalances of trade
2. Increase in demand for domestic securities of a country
3. Domestic currency appreciates, domestic asset prices increase
4. Credit binge (borrowing increases)
5. Surge in asset prices (i.e. Real estate, Minsky moment39)
6. GDP growth rate quickens, fiscal revenues surge
7. The inevitable reactionary shock to unsustainable imbalances
8. Domestic currency depreciates, foreign asset prices increase

In the most recent crisis, one of ECB’s actions, taken in September 2012, calmed financial markets by announcing free unlimited support for the whole euro area countries involved

39 According to Investopedia it is when a market fails or falls into crisis after an extended period of market speculation or unsustainable growth.
in a sovereign state bailout or precautionary programme. This action was one of the key solutions and the cheapest one for the EU, according to Zoega, by providing support without further payments. However, the total cost and the adverse effects of the crisis showed that there were substantial reasons for the EU to develop a legal solution.

Lessons from a collapse of a financial system
In a 2011 paper, "Lessons from a Collapse of a Financial System", on the Icelandic collapse, Zoega, Benediktsdottir and Danielsson mapped subjects that should be observed and that may help prevent banking crises. Their recommendation is to monitor closely rapidly growing financial institutions and even possibly slowing growth when institutions are systemically important. Furthermore, they warn about weak and understaffed institutions, not least regulators, but also central banks and the ministries in charge of economic affairs. In addition, it is important that central banks can be credible as a lender of last resort, having sufficient funds to support a large financial sector. Finally, there are lessons about the European passport system in financial services. There is a question of when home regulators are exercising adequate controls and, this may be a problem where the regulator is understaffed, as happened in Iceland.

5.3 Politics, regulators and government support.

Practitioner’s view
In an interview with a senior official, Ragnar Hafliðason, former Deputy Director of FME, on what happened before the crisis in Iceland, he stated that the reports from the banks to FME were incorrect as submitted to the FME which, among other things, resulted in so called Post-crash investigations where more than a hundred cases were sent from FME to the Special Prosecutors Office (SPO). Forty-five people were dedicated to investigations at FME for two and a half years, from mid-2010 to year end 2012. Bankers were facing jail sentences for an unprecedented length of time, where most of the sentences were due to market abuse and breach of fiduciary duty. Furthermore, a special on-site division was founded within FME, to put more emphasis on verifying information from supervised entities.

40 https://en.fme.is/media/utgefid-efni/Arsskyrsla_2013_ENSKA.pdf
In the interview, I inquired about the **similarities of the Emergency Act in Iceland and the BRRD** since Hafliðason has extensive experience from dealing with the collapse of the banking system in Iceland, which transpired in a matter of days.

According to Hafliðason, the main differences between the Emergency Act in Iceland and the BRRD are the following:

1. **BRRD cannot differentiate between domestic and foreign operations**
2. **Not all deposits are priority deposits, only the first €100.000 according to BRRD**
3. **BRRD defines Bail-in-able liabilities**
4. **Getting the final value of the assets in the collapsed banks, were the most difficult subject. The valuation is expressed clearly in BRRD**

Although Hafliðason maintains that the Emergency Act may have somewhat inspired the policy makers in the preparation of BRRD, the Directive applies to more than 30 nations and across borders, and, hence, it is wider reaching and with a more extensive scope. Furthermore, the Directive is more detailed and covers a lot of issues not covered by the Emergency Act. This subject is covered in more detail in Chapter 6.

In setting policy, there are many considerations to account for and the market, regulators and politicians all have an opinion on the best way to proceed. According to Admati and Hellwig (2013):

> Basel III, and regulations as implemented, appear to be the result of a political process much more than of valid scientific analysis. [They point out that] the studies that support the Basel III rules are based on flawed models and their quantitative results are meaningless. [...] The “scientific” papers that discuss cost and benefits of different capital requirements also ignore the distinction between private and social costs.

It seems that they are of the opinion that the international legal framework of Basel III and related regulations could be improved substantially. The BRRD relies substantially on CRD IV and CRR, which are based on Basel III. The RWA, CAR and Capital buffers originated in the Basel Accord. Along the same note Zoega, Benediktsdottir and Danielsson warn about politicians interfering too much in (one sector of) the economy. In their paper they introduce key numbers for what happened, such as rapid expansion of the banking sector, supported and encouraged by politicians who wanted to make Iceland an international financial centre. Moreover, privatisation and deregulation of the banking system and, among other things changes to corporate tax, were actions in accordance with that goal.
“The total assets of the banking system went from 174% of GDP at the end of 2003 to 744% of GDP at the end of 2007, a period during which real GDP rose by 5.5% each year on average” (Zoega, Benediktsdottir & Danielsson, 2011, p.186).

Table 3. The size of the Icelandic banking system 2003-2008.41

<table>
<thead>
<tr>
<th>Date</th>
<th>Total assets (ISK billions)</th>
<th>GDP (ISK billions)</th>
<th>Assets/GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003a</td>
<td>1,462</td>
<td>841</td>
<td>1.74</td>
</tr>
<tr>
<td>2004a</td>
<td>2,208</td>
<td>928</td>
<td>2.38</td>
</tr>
<tr>
<td>2005a</td>
<td>3,854</td>
<td>1,026</td>
<td>3.76</td>
</tr>
<tr>
<td>2006a</td>
<td>6,232</td>
<td>1,168</td>
<td>5.34</td>
</tr>
<tr>
<td>2007a</td>
<td>9,739</td>
<td>1,309</td>
<td>7.44</td>
</tr>
<tr>
<td>2008M02b</td>
<td>10,172</td>
<td>1,478</td>
<td>6.88</td>
</tr>
<tr>
<td>2008M04</td>
<td>11,730</td>
<td>1,478</td>
<td>7.94</td>
</tr>
<tr>
<td>2008M06</td>
<td>12,574</td>
<td>1,478</td>
<td>8.51</td>
</tr>
<tr>
<td>2008M08</td>
<td>12,787</td>
<td>1,478</td>
<td>8.65</td>
</tr>
</tbody>
</table>

a End of year value.

b 2008M02 refers to February 2008.

In 2004-2005, the three largest banks borrowed around €21 billion in the foreign debt securities market, or approximately double the GDP of Iceland at the time. The rapid expansion of Iceland’s banking system and its ability to borrow amounts that were disproportionate to the economy is mostly due to liquidity overflow in international markets, acceptance for increased leveraging in a world of cheap capital and high capital adequacy ratios within the three large banks. (Zoega et al., 2011).

Cochrane (2014) further points out the problem of government support, whereby deposit insurance schemes, tax shields, too-big-to-fail, lender-of-last-resort and such give the banks, and similar institutions, an incentive to take on too much asset risks and an incentive to fund those risks by using too much debt. In addition, he notes that bank management is now playing with a free option, artificially cheap debt and a source of crisis financing. Bank depositors no longer have an incentive to monitor the quality of the bank’s assets or to care about capital buffers. He posits that regulatory supervision is a poor substitute for market discipline.

The government played its part in the expansion of the Icelandic economy by lowering corporate taxes from 30% to 18% at the end of 2001 and further in February 2008 to 15%. The government, among other things, abolished property tax for individuals in 2003 and

41 Source: (Zoega, Benediktsdottir & Danielsson, 2011).
lowered VAT in 2007. It may be noticed in Table four how consumption decreases due to the effect the crisis had on the public. Moreover, the unemployment, which has always been very low, was at a historic high (went to 9.3% in February and March 2010) (Zoega et al, 2011).

The institutions in charge of managing and regulating the financial sector were not up to the task of dealing with an international banking system, according to Benediktasdottir, Danielsson and Zoega. The prime minister’s office was officially responsible for economic policy. However, it had only 20 employees before and during the banking collapse. The Ministry of Commerce was in charge of the FME, the setting of rules and regulations and their application. The Ministry had 20 employees, and only two of them were responsible for financial markets at the time of the privatisation of the banking system in the early 2000s. The FME had 47 employees in September 2008 compared to the 3000 or so employees at the British financial supervisory authority (FSA). Finally, CBI had 115 staff members (Zoega et al, 2011).

According to Benediktasdottir, Danielsson and Zoega:

The Icelandic banks shared some of the features that according to Black (2005) characterise banks that are being looted from the inside: they grew very fast, made bad loans at high yields, were highly leveraged, and had low bad-debt reserves. They also point to Akerlof and Romer (1993) that describe how a bank’s owners can take advantage of deposit insurance and other implicit or explicit backing by the state. The owners take in deposits, pay themselves dividends greater than the net worth of the business and then leave the government to pay off the resulting debts.

In a panel discussion regarding the paper, by Zoega, Benediktasdottir and Danielsson Richard Portes commented on several aspects. He did not fully accept that the size of the regulatory institution was as significant a factor in the banking crisis as was argued in the paper. He noted that the FSA in the UK “was approximately 60 times the size of the Icelandic counterpart yet they also failed to protect their financial system from the banking crisis.” On the role of core capital in banks, he noted that many banks had good core capital ratios, including Lloyds Bank, but it did not protect them from the crisis in 2008.

To put the Icelandic collapse into perspective;

...The total assets of the banks were $182 billion three months before the crash which is about 1.8 times the assets of WorldCom before its failure in 2002 and almost three times the assets of Enron before its failure in 2001.
It was, therefore, an enormous hit for the small economy. In Table 4, which is part of a table from the authors, shows the macroeconomic impact before and during the first part of the crisis in Iceland. It only shows figures until 2010, since the paper is written in early 2011.

Table 4. Macroeconomic developments in Iceland 2000-2010.\(^{42}\)

<table>
<thead>
<tr>
<th></th>
<th>00</th>
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<th>02</th>
<th>03</th>
<th>04</th>
<th>05</th>
<th>06</th>
<th>07</th>
<th>08</th>
<th>09</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth of GDP (%)</td>
<td>4.3</td>
<td>3.9</td>
<td>0.1</td>
<td>2.4</td>
<td>7.7</td>
<td>7.5</td>
<td>4.6</td>
<td>6.0</td>
<td>1.0</td>
<td>-6.8</td>
<td>-3.0</td>
</tr>
<tr>
<td>Consumption growth (%)</td>
<td>4.2</td>
<td>-2.8</td>
<td>-1.5</td>
<td>6.1</td>
<td>7.0</td>
<td>12.7</td>
<td>3.6</td>
<td>5.6</td>
<td>-7.9</td>
<td>-16.0</td>
<td>0.6</td>
</tr>
<tr>
<td>Investment growth (%)</td>
<td>11.8</td>
<td>4.3</td>
<td>14.0</td>
<td>11.1</td>
<td>28.1</td>
<td>35.7</td>
<td>22.4</td>
<td>-11.1</td>
<td>-20.9</td>
<td>-50.9</td>
<td>-8.9</td>
</tr>
<tr>
<td>Unemployment rate (%)</td>
<td>1.3</td>
<td>1.4</td>
<td>2.5</td>
<td>3.4</td>
<td>3.1</td>
<td>2.1</td>
<td>1.2</td>
<td>1.0</td>
<td>1.6</td>
<td>8.0</td>
<td>8.6</td>
</tr>
<tr>
<td>Nat. expenditure (%)</td>
<td>5.9</td>
<td>-2.1</td>
<td>2.3</td>
<td>5.7</td>
<td>9.9</td>
<td>15.8</td>
<td>9</td>
<td>0.2</td>
<td>-8.9</td>
<td>-20.7</td>
<td>-1.9</td>
</tr>
</tbody>
</table>

The figures in Table 4 are a summation showing a few of the key macroeconomic developments in Iceland during the expansion and the subsequent crisis of the banking system, and the effect it had on the nation. Investments dropped 50 percent year on year at the height of the crisis in 2009. The figures make the situation readily apparent, and it is useful to look at such a small economy since the changes reflect the highs and lows quickly within each figure when considering the benefits and drawbacks of BRRD under catastrophic systemic collapse.

Anat Admati and Martin Hellwig published *The Bankers’ New Clothes*, in 2013. They wanted to answer questions such as; why did the banks get into so much trouble in the crisis, were the bailouts necessary, will these institutions be bailed out again if they run into trouble and will the new regulations help or hurt. They think that more action is urgently needed.

Since the crisis, many have demanded that there should never be bailouts again. In the United States, the Dodd-Frank Act forbids government bailouts and certain forms of support by the Federal Reserve. (Admati & Hellwig, 2013).

The Act is meant to deliver on that promise by giving authority to the Federal Deposit Insurance Corporation (FDIC) to take over and resolve any systemically important financial institution and by mandating that no taxpayer money be used. It requires that the costs of the FDIC taking over and unwinding a financial institution be covered by the institution’s creditors or by contributions from other financial institutions. This requirement corresponds to the principle that the FDIC should be self-financing. However, the FDIC is guaranteed by taxpayers, Admati & Hellwig point out. So, if the entire banking industry is in

\(^{42}\) Source: (Zoega, Benediktsdottir & Danielsson, 2011).
trouble, and if imposing additional charges on remaining banks would deepen a crisis, taxpayers would have to step in and support the FDIC. That would also be the case in Europe. Even if the BRRD would attempt to prevent the taxpayers from having to foot the bill when a large bank or credit institution are in distress, with regard to deposit guarantee schemes, they will not be able to support an entire banking industry.

5.4 Contagion
In a webinar on BRRD, *A false illusion of safety*, by Finance Watch’s Senior Policy Analyst, Christian M. Stiefmüller⁴³ states that one reason for the new BRRD legislation is to stop contagion, the domino effect that difficulties of one bank can have on other banks. Another reason is what happened in 2007 - 2008 where the taxpayers had to foot the bill by means of a bail-out. Bail-outs have caused huge debt in many countries and cost the taxpayers billions of euros across Europe (Stiefmüller, 2016).

According to Stiefmüller insolvency is not a sufficient solution and not one that can be allowed to occur because the banks are too large and too interconnected i.e. „too big to fail“. There is a huge risk of contagion, huge risk of systemic effect. There have been different insolvency regimes, and no international regime until now; as a result, it has been difficult for NCAs to cooperate across borders.

Stiefmüller adds that we are still facing the reality that investors of the banks cannot bear to lose their investment, such as individuals and other financial institutions, he says. So there are still large contagion effects present. Large institutional investors like insurers and pension funds increase the potential systemic risk due to the sheer size of the aggregate exposure to the banking sector. Stiefmüller asks if we are better off with this legal frame than before. We probably are not.

However, according to EBA the main emphasis is that before the state aid from national government or the EU the bank will carry most of the weight and the resolution authority must do everything to avoid a bail-out.

Regarding BRRD, for example bail-in, there are still ways for the Member States to avoid politically fraught bail-in decisions by reverting to bail-outs. Bail-in is likely to remain hobbled in practice by legal uncertainty and the complexity of dealing with creditor claims under national insolvency laws. Legally there are still quite a few complexities, the priority of claims are lined up according to applicable law in each country and may vary from one

⁴³ [https://www.youtube.com/watch?v=8UopuKeQZjQ](https://www.youtube.com/watch?v=8UopuKeQZjQ) published 25 March 2016
country to another. Therefore, the probability of reversal of decisions is substantial. (Stiefmüller, 2016).

Regarding MREL the conditions are not considered solid enough in its current form. It falls short of providing a solid basis for the uniform implementation of BRRD. There are not enough own funds and not enough bail-in-able liabilities.

Integrating TLAC and MREL within the CRR/CRD IV capital framework should coincide with strict limitation on eligibility (e.g. Tier 2).

This raises the question, who will pay for the banks that will be bailed out. Admati and Hellwig point out

Because the fragility of the financial system is costly and harmful to society, a correct statement, contrary to the claim [should be]: "Increasing equity requirements would reduce the cost to society of having a fragile and inefficient financial system where banks and other financial institutions borrow excessively, and thus it would be highly beneficial."

Regarding TLAC in resolution Admati and Hellwigs' response is that

the suggestion that debt that serve as TLAC (or as the [BRRD] calls it, bail-in-able debt) can do something that equity cannot do is false and misleading. Obviously, once a bank is insolvent, there is no equity left and thus any losses must be borne by someone else, which must be some debt holders if a bail-out is to be avoided. However, the point of insolvency itself is immediately affected by how much equity there is to begin with. The more equity there is, the more losses it can absorb so as to avoid insolvency and entry into resolution in the first place.

....

[T]his flawed claim neglects the fact that equity absorbs losses more reliably than any other form of "loss absorbing capital," and that it is best to use equity instead of any poor alternatives. It is precisely the virtue of equity that it absorbs losses without anyone triggering a formal resolution procedure. Systemic affects from the triggering of such a procedure may well prevent the procedure from being triggered at all[.]

Stiefmüller, Admati and Hellwig agree on that BRRD, as implemented, does not solve the contagion aspect and that increasing own funds would be a sounder solution for banks. Cochrane has a similar view but another approach to contagion. He explains that instant communication through technology such as the internet has fundamentally changed the playing field with regard to information, among other things, on the prices of securities, indices and the value of money market funds. He is in favour of increasing transparency and technological advances and notes that, through instant communication, people could sell their securities in self-service withdrawal machines where they could also check the value
of their securities and assets at each time, which would reduce the incentive for runs. He states: “If we knew exactly what the bank’s assets were worth at all times, there would be little incentive to run.” (p. 8).

Regarding contagion, Cochrane tells a story from Chamley, Kotlikoff and Polemarchakis (2012):

“Eight bottles of Tylenol laced with cyanide, sold in a Chicago drugstore, instantly transformed 31 million bottles of Tylenol located in stores all over the globe into toxic assets that could find no buyers.” It’s just not worth investigating each bottle.

The information-sensitivity story applies to securities as well as to bank debt. Long-lived securities, including highly rated tranches of mortgage-backed securities, collateralized debt obligations, and corporate bonds, are information-insensitive and therefore liquid. Cash-like liabilities of special-purpose vehicles, auction-rate securities or other structures that issue short term debt to hold long-lived or illiquid securities and thus emulate banks are so as well. As long as the assets are complex, illiquid, and hard to value, they can suddenly become information-sensitive and much less liquid (p. 10).

A “systemic run breaks out when one institution’s or asset class’s troubles bring into question many others – [and then we see] flight to quality, fire sales, frozen markets and illiquidity. There is a dramatic shift in total demand toward government debt and money and away from private debt” according to Cochrane (p. 11).

The run in recent crisis “provoked a massive shift in demand” Cochrane claims, “away from private securities corresponding to physical investment and toward government debt [and money], but also longer maturity government debt.” Furthermore, he points out that “someone has to hold the existing assets, so this demand shift ends up simply changing prices. Government bond prices rose .... while prices on private securities dropped. .... A rise in risk aversion and economic forecast of poor conditions ahead led to a sharp drop in consumption and investment demand. Tying these ideas together, the aggregate budget constraint says that aggregate nominal demand for goods and services must add up to demand for nominal government debt. [So] the only way to consume less and invest less is to pile up government debt. (p. 12)

A flight to quality and a decline in aggregate demand are the same thing. There was a rise in demand for money and short-term government debt; the perfect substitute at zero interest rates is deflationary, and we saw a short and sharp deflationary period. “Sufficient deflation might provide government debt people want to hold, but add some sticky prices and you have a theory of real recession.” (p. 12).
5.5 Capital - Equity

Stiefmüller says that the banks operate with capital that is approximately 10-15% of RWA and that the minimum capital requirement that will enter into force in 2018 sets a minimum requirement of capital at a modest 3% of total assets. That ratio is called the leverage ratio. If a bank loses money, it does not have a large buffer, and the 3% can be easily exhausted. Stiefmüller compares it to the stock market, in particular the STOXX50 index in Europe, where he reviewed the previous 15 months. In those 15 months, there were 12 instances where a one-day drop exceeded 3%. Such a drop would result in a complete capital wipe-out for a bank meaning capital is very easily exhausted. In those circumstances, a bank would have to be recovered or resolved. The resolution or recovery will be conducted by the resolution authority either as the national authority or as part of the SSM if it involves one of the big banks in Europe. The new legislation is intended to prevent a resulting systemic shock.

Admati and Hellwig (2015) have responded to a statement regarding that higher equity requirements would increase funding costs (p. 11):

it is fallacious to suggest that using more equity in the funding mix is more costly on the basis of the mere observation that the required return on equity is higher than the required return on debt. [Furthermore,] the required return on equity, debt or any other security depends on the entire funding mix. [Moreover,] the required return on equity .... will go down if the bank has more equity. .... A reason that total funding costs of banks might increase as a result of higher equity requirements is that with more equity banks would be less able to benefit from guarantees and subsidies which come at the expense of taxpayers. For the policy debate, the relevant concern must be the cost and benefits to society ......

Banks are funded by either liabilities or by equity, a so-called funding mix for banks. Investing your fund in a bank, you would require some interest return on that money, a yield or return on equity. The debtors and equity owners want an even higher yield or return on equity due to the fact that now, under BRRD, those investments can be subject to bail-in-able liabilities. That is the liabilities the bank owes to an equity holder, a debtor or even a deposit owner (the amount that is higher than the deposit guaranteed amount) may be taken over or “bailed-in” if the bank is in severe difficulties. According to Cochrane, Stiefmüller, Admati and Hellwig, there is less risk of that occurring if the bank has sufficient equity. Furthermore, when a bank is listed in a stock exchange, the risk is borne by many investors, and it is diverse. Consequently the banks are unlikely to be as interconnected as debtors (large banks, for example). However, they will not benefit from guarantees and

44 Loans from other banks or investors such as hybrids and convertible bonds as CoCos’
subsidies. That is why the cost may be considered higher for funding, where Admati and Hellwig point out that it must be considered whether this increases societal cost as a whole.

According to Admati and Hellwig many claim that equity is expensive for banks relative to debt. Admati and Hellwig do not agree, they explain they believe that statement is false because required return for liabilities is higher than for debt. They point out that the cost of borrowing depends on how much is borrowed since more indebted borrowers have a higher risk of default. Regarding how the Debt – Equity mix affects the required return on equity. Admati and Hellwig give an example:

Two people, Kate and Paul both buy houses and both pay $30,000, however Kate borrows $270,000 to buy a $300,000 house; Paul borrows only $120,000 to buy a $150,000 house. Kate has 10% equity in her house; Paul has 20%. Imagine that both houses value increase by 5%; the value of Kate’s house goes up by $15,000, the value of Paul’s house by $7,500. This will mean that Kate will have made 50% return on her investment of $30,000, while Paul makes “only” 25% return on his.

So according to the authors, leverage is wonderful when investments go up in value because it magnifies the gains. But the downside is magnified as well.

Suppose both houses decrease in value by 5%. For Kate this will mean a loss of $15,000 or 50% of her $30,000 investment. For Paul the loss of $7,500 will not be as painful, because it will amount to only 25% of his initial investment. A 12% decline in housing prices would wipe Kate out and leave her underwater, but Paul would still have equity in his house.

Another example from the authors involved a bank and its shareholders when Bank of America had to pay $8.5 billion in a settlement when the total value of its equity in the stock market was approximately $110 billion. This represented about 7.5% of the market value of its equity at the time. If a shareholder had $100,000 invested in Bank of America at that point, the part of the loss that was borne by his shares was approximately $7,500.

These examples show that Admati and Hellwig remain firmly of the opinion that more equity is the best way to keep banks safe. On the other hand, Cochrane wants there to be run-proof securities in intermediaries (banks should still be able to mediate transactions, but should not be able to fund themselves by issuing large amounts of run-prone debt) and 100% CAR. He adds that regulators should be controlling debt rather than capital ratios.

Admati and Hellwig further point out that Basel III has three major flaws, unnecessarily long transition period, equity requirements are too low, and, for the most part, the required equity is related not to a bank’s total assets but to risk-weighted assets.
Basel III requires that banks have equity equal to at least 7 percent of their risk-weighted assets by January 1, 2019. ... It can make a great difference, they say, whether the 7 percent equity requirements relate to total assets of a bank or to its risk-weighted assets. For example the roughly €55 billion in equity that Deutsche Bank had on its reported balance sheet at the end of 2011 represented more than 14 percent of the bank’s risk-weighted assets of €381 billion but only 2.5 percent of the bank’s total assets of €2.2 trillion.

Furthermore, the authors quote Merton Miller on book values pointing out that whether they are smaller or larger than market values, has nothing to do with the cost of equity. Finally, Admati and Hellwig posit that the banks should be strengthened immediately. The easiest way to increase the health and stability of the financial system would be to ban banks from making cash payouts to shareholders and to requiring banks to retain their earnings until they have significantly more equity.

5.6 Risk weighted assets as a measure

Hafliðason warns about the measure used for risk weighted assets. As explained in the introduction to CAR, the sum of RWA is the denominator in the calculation of Capital Adequacy Ratio and Tier 1 and Tier 2 are added together in the numerator.

\[
\text{Tier One Capital + Tier Two Capital} \quad \frac{\text{Risk Weighted Assets}}
\]

Hafliðason notes that there are manipulation opportunities in having the denominator, the RWA, as low as possible since that directly increases the Capital Adequacy Ratio. The lower the RWA, the higher the CAR. He warns that it is much easier for banks using the IRB (Internal Ratings-Based approach) method when calculating the CAR to manipulate the RWA than for banks applying the standardised approach (SA). Supervisory Authorities should therefore take potential manipulation of RWA into account.

Along the same lines Stiefmüller points out that the capital itself is quite small in comparison to a bank’s total capitalisation; operating liabilities are much larger. Within the Basel III framework, the bedrock is the capital that shareholders and bondholders have put up to keep the bank stable. It is measured against what he calls an artificial measure; RWA. He claims that the RWA has many flaws. Usually, RWA is between 25-50% of assets in European banks. In the US it is usually between 70-100% of risk weighted on the assets. He posits that it is not because US banks are riskier than European banks. RWA is average risk...
weighting which the bank itself has applied. Differences in calculations are extreme, so it is evident that it is an imprecise measure, according to Stiefmüller.

Similar views are reflected by Admati and Hellwig who are confident in asserting that equity levels of 3% of total assets, as admitted by Basel III, are unsafe, and that a significant increase will substantially improve the health and safety of the financial system. Low levels of equity expose the banks and the economy to unnecessary risk. Allowing banks to relay as much on subsidized borrowing distorts and harms the economy.

A significant challenge in specifying any specific capital ratio has to do with setting the appropriate numerator and denominator, which have to do with valuations of the relevant asset and liabilities. Accounting conventions matter greatly, including how to deal with off-balance-sheet exposures and derivatives. The key to capital regulation is high requirements for genuine, loss absorbing equity, and prompt intervention by regulators if equity is depleted through losses.

In their paper Admati and Hellwig point out that “the risk-weighting system used in capital regulation creates incentives for banks to invest in securities in the market rather than, for example, make business loans.”

As explained in Chapter Four, the risk-weighting system requires the banks themselves to evaluate how much risk is assigned to each loan portfolio and that will reflect how much binding capital is needed to protect the bank from losses due to loans defaulting. The banks do not need to bind capital when they are investing in securities, which is the other main source of income for banks.

The idea behind risk-weighing is if the assets banks hold are less risky, less equity may be needed for a bank to be able to absorb potential losses. … For example, because cash is not risky, banks are not required to back their holdings of cash with equity.

Therefore, a Bank A, which has both loans and cash, is required to have the same amount of cash as a Bank B, which only has loans. Even in Europe, if Bank A has $1.8 trillion in loans and $200 million in Spanish or Greek government debt, and Bank B has $1.8 trillion in loans and $200 million in cash, they are required to have the same amount of equity. The regulations assume that such government debt is not riskier than cash, but this presumption was proven wrong when Greece defaulted on its debt in March 2012. (Admati & Hellwig, 2013).

With regard to the European Passport system in the financial market, a subject Zoega, Benediktsdottir and Danielsson were warning about, the BRRD has not addressed that
subject, and perhaps there are not that many who have criticized the Passport system with regard to the Crisis. However, the BRRD does unite the methods to deal with cross border activity, in what order the bail-in-able assets shall be recovered and such. Although, there is ample discretion given to each countries’ resolution authority in the Technical Standard regarding loss absorption, as mentioned in Chapter 3.

**Total assets versus risk weighted assets: does it matter for MREL?**

In a paper by Bennet Berger, Pia Hüttl and Silvia Merler, the authors review the differences and comment on the choice of the measure through which requirements are expressed: risk-weighted assets or total assets.

As has been mentioned before, Article 45 of BRRD requires banks to "hold sufficient bail-in-able liabilities and meet at all times a minimum requirement for own funds and eligible liabilities (MREL)" (Berger, Hüttl & Merler, 2016). Berger, Hüttl and Merler address two questions in their paper, “the choice of the denominator, i.e. the measure against which requirements are benchmarked” and “how different metrics impact potential loss absorption amounts.” Their analysis is based on a “sample of 105 banking groups that were assessed in the 2015 EBA transparency exercise, covering about 70% of the EU’s banking assets.”

The use of risk-weighted assets in banking supervision has been criticised on several counts. Le Leslé and Avramova (2012) … highlight the procyclicality of this metric, and the incentive for banks to game the system by underestimating risks. The [leverage measure], introduced by Basel III, is non risk based and is intended to complement the risk-weighted requirement, as leverage ratios are simpler to compute and they tend to be more countercyclical than risk weighted assets (Brei and Gambacorta, 2014). Leverage ratios are also expected to give a more complete and harmonised picture of a bank’s total exposure, including on- and off-balance sheet items (Berger et al., 2016).

The concept of total assets is now once again relevant due to BRRD minimum bail-in requirements, which is expressed as a percentage of total liabilities, that banks are required to meet before external funds can be accessed (Berger et al., 2016).

“The choice of the metric”

For 12 G-SIBs in the EU, Figure [6] shows the amounts of risk-weighted and total assets, i.e. total liabilities including own funds … It emerges that even within the same bank size bracket, the ratios of total and risk-weighted assets are quite different, ranging from 21.9 percent to 46.4 percent. As an example, if risk-weighted assets were
used as the underlying metric, Banco Santander would face higher requirements than Société Générale, even though both have similar sized balance sheets. (Berger et al., 2016).

Figure 6. RWA and total assets for G-SIBs (in € billions)

“The impact of metric choice on loss absorption requirements.”

In the paper, they say that due to the fact that

the EBA RTS gives ample discretion to the resolution authority, they had to make some simplifying assumptions. [For example they did] not take into consideration any Pillar 2 buffers, [since it] reflects the bank’s risk profile, which may be substantially altered during resolution. [Also, they] include the combined buffer because the EBA RTS links the assessment of the appropriate capital position of a bank after resolution, which determines the recapitalisation amount of MREL, to the capital position of the peer group, in particular for G-SIBs. The surviving bank should therefore fulfil the capital requirement including the combined buffer after resolution.

We therefore apply the following requirements to all G-SIBs: (i) full bail in is the resolution strategy; (ii) the capital requirement is composed of: 8 percent total capital ratio, 2.5 percent capital conservation buffer, and the higher of G-SIB buffer and systemic risk buffer; (iii) we exclude the counter-cyclical capital buffer since it is time-varying, (iv) we disregard potential deposit guarantee scheme and Supervisory Review and Evaluation Process (SREP) adjustments.
Figure 7. Hypothetical loss absorption amounts for G-SIBs (% of total assets) 45

The red line represents the EBA’s proposal, taking 8 percent of total liabilities as a constraint. [It can be seen that both] hypothetical MREL and TLAC (both in leverage exposure and RWA terms (red and blue columns)) are below 8 percent of total assets for eight out of the 12 banks. [Furthermore], the hypothetical MREL exceeds TLAC (which is the higher of the leverage exposure and RWA based) in all but one case. In other words, MREL for G-SIBs seems to be more demanding in terms of requirements than TLAC, in all but one case. [Finally], when looking at TLAC, for nine out of 12 G-SIBs, the leverage ratio constraint [is binding (as opposed to the RWA constraint)].

In the paper, it is shown that the choice of measure is quite relevant and can change the allocation of required bail-in-able liabilities across banks. If the measure were based on risk-weighted assets, smaller banks would face higher loss absorption amounts for a given requirement, as their risk-weighted to total asset ratio tends to be higher. However, since capital requirements are calculated against risk-weighted assets and the EBA RTS link MREL to going-concern capital requirements, [they found] it hard to conceive an MERL that is based on total rather than risk-weighted assets. One option to implicitly account for total assets and to limit the dominance of risk-weighted assets is to **increase the leverage ratio requirement in proportion to RWA** [emphasis added] instead of only using it as backstop.

Furthermore, [they] showed that if MREL and TLAC were to be aligned for G-SIBs, the hypothetical loss absorption amount would vary greatly. The 8 percent total liabilities

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45 Source: Bruegel based on EBA and SNL Financial (as cited in Berger et al, 2014).
constraint, as proposed by EBA, would exceed both MREL and TLAC requirements for eight out of 12 banks [(see Figure 7)]. (Berger et al, 2016)

Comparing their hypothetical MREL with TLAC requirements, MREL seems to be more demanding in terms of requirements than TLAC in all but one case. Notice that MREL and TLAC are below 8% of total liabilities for eight out of the 12 banks. And MREL is more demanding than TLAC in general, given the simplified assumptions made by Berger, Hüttl and Merler.

5.7 Is the legal framework too complex?
In 2014, John H. Cochrane wrote a paper called “Toward a Run-free Financial System”, putting forward his theory on the nature of the last crisis. He describes it as a systemic run. In the paper, Cochrane introduces a potential solution to such crises, in an effort to prevent such events from being repeated. He takes the example of Bear Stearns and Leman Brothers, where they were

financing portfolios of mortgage-backed securities with overnight debt at 30:1 leverage. For every thirty dollars of investment, every single day, they had to borrow a new twenty-nine dollars to pay back yesterday’s lenders. (p. 2)

Cochrane criticises how

our policy response consists of enhanced risk supervision, timid increases in bank capital ratios, [emphasis added] fancier risk weighting, macroprudential risk regulation, a new resolution process in place of bankruptcy, tens of thousands of pages of regulations [emphasis added] and tens of thousands of new regulators. (p. 2)

Instead, he says that “the central task for a regulatory response should be to eliminate runs.” (p. 2)

On the same note, Admati and Hellwig ask in their book about the reason for all this complexity. Interconnectedness was key to the contagion that caused the 2007-2009 financial crisis to be as damaging as it was. They claim that the bailout of the insurance company AIG was motivated by the fear of contagion from an AIG default on its commitments to credit insurance. Many banks had bought this insurance in order to reduce estimates of their risks and, hence, their required equity. Without the AIG bailout, the credit insurance could have been worthless, resulting in many banks being hit by the credit risks that they had insured.
According to Cochrane the original idea of TARP\textsuperscript{46} “was to use $700 billion to buy mortgage-backed securities on the open market to prop up their prices and thus make banks look more solvent.” (p. 38). He claims that “this price-manipulation impulse has continued in the Fed’s quantitative easing (QE) program ...” (p. 38). The idea is, in general, for central banks to keep prices from rising too fast in a boom and then to prop prices in a bust. ”In short, policy should now fight runs by manipulating prices and economies so that banks don’t ever lose money in the first place. This truly is a grand expansion of regulation [emphasis added].”

[A r]esolution authority fails on simple elemental contradiction. [The authority’s] premise is that large financial institutions are too complex to be resolved by bankruptcy law, with its .... precedent, and experience, and with ample fine print in contracts specifying just who gets what and when. But if that is too complex, how is a team of appointed officials going to figure out who gets how many billions of dollars out of hundreds of thousands of complex contacts, over a weekend? (p. 40)

Cochrane seems therefore not to be quite at ease with the solution on offer in the BRRD and the Dodd-Frank Act to the recent bank crisis.

5.8 Pros and cons of the BRRD

Here, I will summarise my understanding of what the experts are pointing out with regard to the benefits and drawbacks of the implementation of the new Directive and the associated Technical Standards.

First, it seems that most experts conclude that the required capital banks hold is too small. Secondly, many of them address the flaws of the RWA methodology. Thirdly, the transition period and complexity of the capital requirement. Fourthly, there are still ways for the Member States to avoid bail-in and revert to bail-out. Finally, it is unclear whether this legal framework makes us better off than before.

The RWA measure was first introduced in Basel I. It introduced a minimum capital ratio to RWA. In Basel II there were changes made where there was more leeway in assessing what assets and loans could be deducted from the requirement of binding capital. Are the banks able to assess their loans with integrity?

\textsuperscript{46}The Troubled Asset Relief Program is a program created and run by the U.S. Treasury to purchase troubled companies' assets and equity to strengthen the U.S. financial sector. The fund was created on 3 October, 2008. (Investopedia, 2017).
On 19 September 2015, the Economist wrote in an article titled "Risk-weighted capital. Whose model is it anyway?"

Regulatory models work by looking at all of a bank’s assets (the money a bank expects to recoup from outstanding loans is usually the biggest) and establishing whether they are more akin to safe mortgages or speculative loans. The resulting blended figure, risk-weighted assets has become one of banking’s most important yardsticks. Lowering banks’ RWAs means less equity is required, which usually means higher returns. It is therefore an obsession for bank bosses. Big banks’ RWA as a percentage of their assets, known in the jargon as RWA density, has been drifting down. That may be because banks are making safer loans. But regulators have long suspected something fishy may be afoot: that banks are assessing their ropy loans to Kazakh mines as little riskier than residential mortgages. If that is indeed happening, regulators must partly blame themselves. The models used to gauge the riskiness of a loan book were once provided by regulators, with fixed weightings for categories such as business credit or loans to other banks. But an update to the global regulatory guidelines, known as Basel II and adopted just before the financial crisis, encouraged banks to come up with their own risk models.

So it seems that, according to the Economist, that fixed weighting for loan categories is better than risk weighting.

There are significant benefits to the BRRD. The core aim is that the cost of bank failure will not be borne by taxpayers, but by creditors and shareholders. Authorities cross-border will be working within the same legal framework. The directive gives authorities possibility and flexibility to intervene much sooner through recovery plans and intervention power before it comes to more serious measures. That may prevent contagion and systemic effects. There are therefore solid reasons to support this framework within the EU.

There are a few unanswered questions concerning BRRD. Including whether the Directive has been subject to too much compromise, since 28 states had to agree on its contents, whether it is too complicated, how the financial sector should be managed and how we can support each other to make the banking sector safer and whether BRRD is a net benefit with increased equity requirements, better benchmarks and cooperation between accountants, supervisors and supervisory bodies.

BRRD may provide a benefit but not enough according to Stiefmüller who is of the opinion that BRRD is insufficient and he claims that we are probably not better off with this legal frame than before. The same conclusion can be derived from the research conducted by Hellwig and Admati, and Cochrane, where they recommend more equity or capital.
According to Stiefmüller (2016) bail-in is a poor substitute for capital. It adds complexity, and it adds volatility, but, on the other hand, it does provide the benefit that the banks have expected, i.e. sustainably lower funding costs and not having to raise more capital, what they call “expensive funding” equity capital. He is therefore of the opinion that higher regulatory capital is the answer and a much sounder solution than bail-in.

As pointed out by Hellwig and Admati there are three major flaws, long transition period, low equity and problematic allocation of risk-weighted assets. Furthermore, the procyclical of the banking sector and that the FDIC is guaranteed by taxpayers. So if the entire banking industry were in trouble the taxpayers might have to step in and support the FDIC. In addition Admati and Hellwig ask, why all this complexity? and that TLAC or bail-in-able debt cannot do anything that equity cannot do. Finally they want capital requirement to be 15-30% of total assets.

Many of the experts talk about RWA being a flawed measure and having the RWA as low as possible will directly increase the Capital Adequacy Ratio.

According to Cochrane the central task for a regulatory response should be to eliminate runs, secure 100% CAR, and that regulators should be controlling debt rather than capital ratios.

According to Berger, Hüttl and Merler a good solution would be to increase the leverage ratio requirement in proportion to RWA instead of using it only as backstop.

Zoega, Danielsson and Benediktsdottir take a lesson from Iceland and inter alia encourage that we monitor closely rapid growth in banks, support the supervisory institutions and that politicians don’t exaggerate rising boom by deregulation.

Many of the authors, including Diamond and Dybvig, Cochrane, Hellwig and Admati criticise that government support does less good than harm such as the deposit insurance, tax shields, too-big-to-fail, quantitative easing programme, and lender-of-last-resort. It gives the banks and credit institutions incentive to take on too much asset risks and an incentive to fund those risks by too much debt.

Zoega, Benediktsdottir and Danielsson agree and point to an article by Akerlof and Romer (1993) who describe how a bank’s owners can take advantage of deposit insurance and other implicit or explicit backing by the state.
6 Comparing BRRD and the Emergency Act

This chapter compares the BRRD and the Emergency Act that was applied in Iceland to cope with what seems to be the third largest bankruptcy in history, measured in dollars. The collapse of the three largest banks in Iceland affected about 95% of the banking sector in the country which by size was approximately 12 times the GDP of the country. Furthermore, the collapse affected several other European countries through subsidiaries and branches operating in those countries (Ministry of Finance, 2011).

As mentioned before, the old banks’ assets (loans to customers) were transferred to the new banks, at a value between 35-47% (Ministry of Finance, 2011) of its previous value, but that was not the final value. The devaluation amounted to almost five times the GDP at that time (Johnsen, 2013).

I calculated the reversal of impairments on the transferred loans which amounts to 15-24% of the amounts of the transferred loans, see Table 5. There have been new calculations that conclude that the cost to the State was less than the original amounts indicated, due to the equity returns to the Treasury through its ownership in the new banks. It seems that in the period 2008 – 2015 net dividend minus interest expenses amount to +5.5% (Jónsson & Sigurgeirsson, 2016).

6.1 Background on what happened in Iceland

The focus of the chapter is on the Emergency Act (No 125/2008) and how it compares to BRRD but it is useful to consider the circumstances. There was extensive debate on some aspects of the Emergency Act. The Government issued a statement in which it guaranteed all domestic deposits, which was even more disputed. However, both the Supreme Court of Iceland and the ESA (EFTA Surveillance Authority) ruled that the Emergency Act was appropriate and lawful considering the circumstances.

In October 2008, the Government faced an unprecedented challenge due to the collapse of the three largest commercial banks in the country and having to maintain banking operations for the economy as a whole and firms and the public in particular. The Emergency Act entered into force on 6 October 2008 where FME was granted

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47 https://www.fme.is/media/frettir/12.03.2010.Hlutfoll-JEB.pdf
48 In March 2011 the Icelandic Ministry of Finance (MoF) issued a report on the actions of the State concerning the restoration of the commercial banks in 2008 and 2009. The report explains in some detail what happened and how the Ministry came to a solution.  
49 http://www.eftasurv.int/media/decisions/571071.pdf
unprecedented powers to take over financial institutions and disposing of assets and liabilities as needed. According to the Emergency Act, deposits were given priority ranking in the winding up of financial institutions and the Minister of Finance was granted the power to establish new financial institutions. Furthermore, on 6 October 2008, the Government of Iceland issued a statement saying that deposits in domestic banks would be guaranteed in full (Ministry of Finance, 2011).

Because of the extraordinary circumstances in the financial sector, where the size of the banking sector exceeded by far the financial capacity of the Treasury, the options were limited, and the solutions were therefore unorthodox and differed from the solutions applied in other countries. The State was unable to guarantee all claims due to the size of the banking sector at almost 12 times the GDP (Ministry of Finance, 2011); the enactment of the Emergency Act was therefore necessary.

6.2 The Emergency Act

Act No 125/2008 on the Authority for Treasury Disbursements due to Unusual Financial Market Circumstances etc. (The Emergency Act) is only six pages, and is summarised below:

- Under unusual and extraordinary circumstances on the financial market the Treasury can take over the banks. The Act authorises “the Minister of Finance, on behalf of the Treasury, to disburse funds in order to establish a new financial undertaking or take over a financial undertaking or its bankrupt estate, either wholly or in part.”

The Financial Supervisory Authority (FME) was granted extensive authority, disconnecting or overruling other laws, to intervene in financial undertakings:

- FME can call for shareholders’ meeting and take over (overrule) the power of shareholders’ meetings
- FME can restrict or prohibit the financial undertaking on its disposition of its assets and property
- FME may demand that financial undertaking apply for moratorium
- FME is granted powers to take special measures in case of difficulties of other regulated entities and financial institutions

Other acts that were disconnected or overruled in the event of unusual and extraordinary circumstances:

50 [https://www.forsaetisraduneyti.is/media/island/frettir/21.pdf](https://www.forsaetisraduneyti.is/media/island/frettir/21.pdf)
If the FME considers it necessary to intervene and merge financial institutions, it does not need to obtain the approval of the Competition Authority

Administrative rules may be set aside for specific measures by the FME that require a rapid action

The HFF (Housing Financing Fund owned by the state) was authorised to purchase mortgage loans from the financial undertakings

The provisions of the Act on Securities Transactions pertaining to mandatory takeover bids and prospectuses do not apply to the acquisition and handling of Government holdings in financial undertakings in accordance with this Act

The provisions of the Act on Financial Undertakings do not apply to the Government’s authorization to acquire a qualifying holding in a financial undertaking

A company shall be exempt from the provisions of the Act respecting Public Limited Companies concerning the minimum number of shareholders

The Ministry of Finance established three limited liability companies as hubs for the domestic operations of the three collapsed banks, appointed boards of directors and the FME then transferred to them the domestic deposits and domestic assets from the old banks into the three new banks, respectively (they were originally bridge-banks). Interim balance sheets were prepared by 14 November 2008, showing i.a. the bond amounts to be issued to the collapsed banks as a payment for the difference of the provisional valuation amounts between transferred assets and liabilities. FME engaged an independent consulting company, Deloitte LLP (in London), to assess the value of the assets and liabilities. They delivered their evaluation on 22 April 2009. The evaluation suggested that the recovery ratios of loan portfolios in the three banks would be between 47-55%. Therefore, the difference between assets and liabilities transferred from the old banks to the new banks were estimated to range between ISK442 – 766 billion51 ($3,390 – 5,875 million and €2,620 – 4,540 million) (Ministry of Finance, 2011).

In the contract FME made with the consultant company, it quickly became apparent that FME would not receive a definitive number in the assessment of assets and liabilities, but a price range. The creditors of the banks were displeased with the method and considered it to be unilateral and that it was difficult, using this method, for them to protect their interests. Therefore, the recovery plan was changed so there would be negotiations on valuation rather than a unilateral decision. The Ministry of Finance governed the negotiations on behalf of the new banks and the Resolution Committees of the old banks negotiated in the name of the creditors.

51 ISK = Icelandic krona, exchange rate on 22 April 2009. ($=130,€=168,7)
One of the biggest challenges faced by the new banks was the imbalance in the foreign currency accounts since a substantial part of the mortgage loans was in foreign currencies or currency linked, but the deposits were mostly in ISK. The depreciation of the ISK was approximately 50% (Figure 8) which added to the problem. The main solution was considered to be refinancing currency loans in ISK for everyone who did not have their income in foreign currency and the settlement with the old banks could be in foreign currency to compensate for the lending in foreign currencies.

![Graph showing depreciation of ISK from January 2008 to January 2009.](image)

**Figure 8. Depreciation of ISK January 2008 – January 2009.**

The depreciation of the ISK, setting EUR and USD = 1 in January 2008, the amount of krona that was needed to buy one dollar had increased by 210% in November 2008 and by 182% to buy one euro in the same month.

An initial assessment for the capitalisation of the banks was negotiated to reach an agreement on the valuation of the assets transferred to the new banks resulting in certain initial assessment to base the capitalization of the banks on. The creditors would subsequently benefit from any increase in the value of assets in excess of the base valuation in the form of value enhancement on their shares or contingent bonds. At that time, however, it had become clear that the creditors of Glitnir and Kaupthing might be interested in owning shares in the new banks and in that way enjoy the potential value enhancement of the transferred assets. The FME accepted the claimholders qualified holding in the fall 2009 and confirmed their ownership, with several conditions, including a
ban on dividend payments for three years (FME, 2010) and high capital requirements (at least 16%), consequently putting further pressure on the banks to withhold dividends.

By the end of the negotiations the Treasury’s investments in the restoration of the three banks amounted to ISK135 billion ($1,035 million and €800 million) in shares and ISK55 billion ($420 million and €325 million) in subordinated debt. The total amounted to ISK190 billion ($1,475 million and €1,125 million). The State took over 81.3% in Landsbanki hf. and the rest was owned by its creditors\textsuperscript{52}. Kaupthing (now called Arion) was 13% owned by the State and 87% by its creditors. And, Glitnir (now called Íslandsbanki) was owned 95% by the creditors and 5% by the State (MoF, 2011).

![Figure 9. Ownership of the new banks in 2009.](image)

In 2009, FME set out its conditions for the banks. The main conditions concerned financial strength requiring capital to be a minimum of 16% of the risk weighted assets and of which at least 12% should be according to conditions of Tier 1. FME also set out conditions for the liquidity concentration assumed, requiring that each of the banks access to cash should be at least 20% of its deposits.

The assets of the old banks were protected from creditors according to stand-still provisions in law and provisions were enacted into law to ensure the orderly winding-up of the old banks. Hence, the Resolution Committees and creditors had more time and gained an opportunity to maximise the estates’ assets over time.

The new banks were subsequently able to collect more of the loan portfolios from the old banks, and according to the annual reports of the banks\textsuperscript{53} the reversals of impairment amounted to ISK98 billion in Íslandsbanki, ISK110 billion in Arion bank and ISK178 billion

\textsuperscript{52} In April 2013, 98% of Landsbanki was owned by the state and 2% by the bank’s employees. In October 2015, Íslandsbanki became fully owned by the state. \url{https://corporate.landsbankinn.com/about-us/history/}
\url{https://www.islandsbanki.is/um-islandsbanka/fretir/frett/2015/10/20/Islandsbanki-hf.-Krofuhafar-Gilitisleggja-til-breytt-eignarhald-a-islandsbanka/}

\textsuperscript{53} Still using the exchange rate of 22 April 2009.
in Landsbanki. The total amount of the reversals was approximately ISK387 billion or slightly less than $3 million or €2.3 million.

Table 5. Reversals of impaired loans from the old banks to the new, 2009 – 2015. All amounts are in ISK millions.

<table>
<thead>
<tr>
<th>ISK millions</th>
<th>Arion/ Kaupthing</th>
<th>Islandsbanki/ Glitnir</th>
<th>Landsbanki/ Landsbanki Islands</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original loans to customers transferred from the old banks</td>
<td>455.532</td>
<td>631.369</td>
<td>739.405</td>
</tr>
<tr>
<td>Reversals of impairment 2009-2015</td>
<td>110.339</td>
<td>98.374</td>
<td>178.384</td>
</tr>
<tr>
<td>Percentage</td>
<td>24.2%</td>
<td>15.6%</td>
<td>24.1%</td>
</tr>
</tbody>
</table>

Figure 10. Reversals of impaired loans from the old banks to the new 2009 – 2015. All amounts are in ISK millions.
In the end, the remaining challenge for the State is to set policy on the treatment of State holdings in financial institutions and the extent to which the State intends to sell the stakes or keep certain core holdings.

### 6.3 The BRRD

The BRRD is one of **three main legislative acts** that comprise the **Single Rulebook** (EBA, 2017) that collectively governs the financial sector across the entire European Union. The provisions of the single rulebook are set out in three main legislative acts:

- Capital Requirements Directive (Directive 2013/36/EU) and Regulation (Regulation (EU) No 575/2013) also known as CRD IV and CRR, which implement the Basel III capital requirements for banks.

- Deposit Guarantee Scheme Directive (DGSD; Directive 2014/49/EU), which regulates deposit insurance in case of a bank’s inability to pay its debts.

- Bank Recovery and Resolution Directive (BRRD; Directive 2014/59/EU), which establishes a framework for the recovery and resolution of credit institutions and investment firms in danger of failing.

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In table 6 is the comparison of the BRRD to the Emergency Act. It is clear that the two acts are comparable in many ways, when compared generally.

Table 6. Similarities between the BRRD and the Emergency Act

<table>
<thead>
<tr>
<th>The Emergency Act was only six pages and its main content/provisions were:</th>
<th>Are there similar provisions in the BRRD (Y/N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The state can take over the banks under unusual and extraordinary circumstances on the financial market. An authorization to establish new financial undertakings or take over FU</td>
<td>Y</td>
</tr>
<tr>
<td>The Treasury may propose capital to savingsbanks</td>
<td>NA</td>
</tr>
<tr>
<td><strong>Financial Supervisory Authority (FME) was granted extensive authority to intervene in financial undertakings:</strong></td>
<td>Y</td>
</tr>
<tr>
<td>FME can call for shareholders’ meeting and take over (overrule) on majority stock holders meetings</td>
<td>Y</td>
</tr>
<tr>
<td>FME can restrict or prohibit the FU on its disposition of its assets and property</td>
<td>Y</td>
</tr>
<tr>
<td>FME may demand that financial institutions apply for moratorium</td>
<td>Y</td>
</tr>
<tr>
<td>FME is granted powers to take special measures in case of difficulties of other regulated entities and financial institutions (taka þetta rauðlitaða út)</td>
<td>Y</td>
</tr>
<tr>
<td><strong>Other acts that were disconnected or overruled in case of unusual and extraordinary circumstances.</strong></td>
<td></td>
</tr>
<tr>
<td>If the FME considers it necessary to intervene and merge together financial institutions it does not need to obtain the approval of the Competition Authority - The provisions of the Competition Act and the merger provisions of the Act on Financial Undertakings shall not apply to the merger</td>
<td>Y</td>
</tr>
<tr>
<td>Administrative decision may be set aside for specific measures by the FME that require a rapid response</td>
<td>Y</td>
</tr>
<tr>
<td>The HFF (Housing Financing Fund owned by the state) was authorised to purchase mortgage loans from FU</td>
<td>NA</td>
</tr>
<tr>
<td>Act on Securities Transactions regarding mandatory takeover do bids and prospectuses not apply to the state</td>
<td>Y</td>
</tr>
<tr>
<td>The provisions of the Act on Financial Undertakings do not apply to the Government's authorisation to acquire a qualifying holding in a financial undertaking</td>
<td>Y</td>
</tr>
<tr>
<td>Special provisions in collective agreements expire with the takeover of FU - The provisions of the Act on the Legal Status of Employees upon Change of Ownership of an Undertaking do not apply to the takeover of a financial undertaking</td>
<td>Y</td>
</tr>
<tr>
<td>A company shall be exempt from the provisions of the Act respecting Public Limited Companies concerning the minimum number of shareholders</td>
<td>Y</td>
</tr>
</tbody>
</table>

The scope of the Directive is much wider than the scope of the Emergency Act in Iceland, and its coverage is more extensive. According to Hafliðason at FME, the main differences between the Emergency Act in Iceland and the BRRD are:

1. **BRRD does not differentiate between domestic and foreign operations**
2. **Not all deposits are priority deposits under BRRD, only the first €100,000**
3. **BRRD defines bail-in-able liabilities**

4. **The most difficult task under the Emergency Act was assessing the final value of the assets in the collapsed banks. BRRD explains the valuation explicitly**

Regarding point 1: Due to the fact that BRRD is created to simplify the cross-border activities of financial institutions that may reach outside the EU through subsidiaries and branches, it cannot differentiate between domestic and foreign operations. This is addressed for instance in Article 30.

Chapter IX (Articles 85-98), Title V; Cross-border group resolutions and Title VI; Relations with third countries set forward general principles to address subjects such as resolution proceedings in a third country or involving a subsidiary of a group.

Regarding point 2: Article 34 h states that covered deposits are fully protected, according to Directive 2014/49/EU. Furthermore, the insolvency hierarchy in Article 108 of BRRD shows the ranking of deposits. Under the Emergency Act in Iceland, all deposits were ranked as priority deposits.

Regarding point 3: The Emergency Act did not define bail-in-able liabilities. BRRD has MREL, scope of bail-in tool and much more, in Chapters IV and V, Articles 43 – 62 of the Directive.

Regarding point 4: The most complicated issue was the valuation of the assets of the collapsed banks as the Emergency Act lacked provisions on the methods and finality of the valuation of the transferred assets. This is very clearly stated in BRRD, Chapter III; Valuation states in Article 36 that “resolution authorities shall ensure that a fair, prudent and realistic valuation of the assets and liabilities of the institution .... is carried out by a person independent from any public authority [(and according to some listed requirements in the directive)]...., that the value shall be considered to be definitive [emphasis added]”.

It should be noted, however, that the Emergency Act was dealing with a total financial system failure, very unusual circumstances. That is not the case with the BRRD. Therefore the two Acts are not entirely comparable, even if an attempt has been made to compare them. Furthermore, many major banks are still too interconnected to fail, although it is claimed that only the 130 largest will be saved, there are uncertainties as Stiefmüller has stated, so probably that will not be the case. He pointed out that for example bail-in – there still are ways for the Member States to avoid bail-in decisions by reverting to bail-outs and the fact that there are still quite a few complexities, the priority of claims are lined up
according to applicable law in each country. However, the Resolution authority must do everything to avoid bail-out, according to the BRRD.
7 Will the BRRD be able to prevent banking crisis?

Many measures have been taken to relieve the most recent crisis, such as in early 2010 and thereafter when leading European nations implemented a series of financial support measures such as the European Financial Stability Facility (EFSF) and the European Stability Mechanism (ESM). The ECB also contributed to solving the crisis by lowering interest rates and providing cheap loans of more than one trillion euro (EC, 2013) in order to maintain monetary flows between European banks.

Furthermore, the ECB calmed financial markets by announcing free unlimited support for all the countries in the euro area. However, the cost and the difficulties resulting from the crisis showed that there were substantial reasons to enact legal solutions for the EU.

7.1 BRRD de facto

In an article titled “EU Resolution Regime Aces Banco Popular Test Amid Criticism” for The Global Risk Regulator, Justin Pugsley wrote about the use of BRRD to rescue a Spanish bank, where the BRRD was put to the test. He wrote that despite earlier concerns over the complex bank resolution mechanism in the euro area, the rescue of Banco Popular – a Spanish bank and one of the 130 biggest within the EU, and hence under the supervision of the ECB–worked admirably, though the process had raised some questions. It seems that European authorities are billing the rescue a success, the article claims, pointing out that critics are not entirely satisfied. "Banco Popular was the Single Resolution Board's (SRB) first case and a test of the EU's still evolving Bank Recovery and Resolution Directive (BRRD)."

Regarding what happened in Spain, it would seem that the bank never quite recovered from the 2007-9 financial crisis despite numerous investor capital injections, and was finally hit by a deposit run. "On June 6 [2017], the ECB declared it "Failing or likely to fail" as it could not meet future liabilities and debts, which triggered the [Single Resolution Board] SRB intervention."

Due to that the bank was considered unsustainable the authorities did not wait until instruments such as CoCo’s\(^{55}\) started converting to equity, there was considered to be too much risk of the bank being of no value if that delay had been the case. So it was purchased

\(^{55}\) Contingent convertible bonds are fixed-income bonds that convert into equity under certain circumstances.
by the rival bank, Banco Santander, for €1. “Shareholders and junior bond holders particularly CoCo’s, got hit to make it viable for Santander to buy” and in order to leave the taxpayers safe from costs, as required under the BRRD. The Santander rescue avoided working through the full winding-down process and the resolution can be deemed a success... (Justin Pugsley, 2017)

However, there was some disapproval, for instance from the European Parliament, where the chair of the Economic and Monetary Affairs Committee; saying problems should have been detected earlier. Furthermore, a dean at the London Institute of Banking and Finance said: “One of the [recovery & resolutions directive’s] founding concepts – beyond avoiding taxpayer loss – was providing a mechanism and time for righting a failing institution and, barring that, being able to dispose of its pieces in an orderly manner.” He concluded that the directive's prospects during a real economic downturn look “decidedly poor”. (Justin Pugsley, 2017).

Some say this event demonstrated the effectiveness of the Directive, whereas others raise concerns, i.a. of the loss-absorbing capacity requirements (MREL and TLAC) which are still in process. The article also points out that banks in many EU jurisdictions “have not yet issued significant volumes of junior rated and hybrid instruments to sufficiently cushion senior creditors” (Justin Pugsley, 2017).

7.2 Strengths and weaknesses of the new Directive
BRRD entered into force on 1 January 2015. The purpose is to provide the authorities, especially the regulators, the flexibility to intervene much sooner through setting in place recovery plans and intervention power before it comes to serious measures like bail-out, bail-in or winding-up the financial institution. The purpose of the Directive is furthermore intended to ensure that dissolution and separation is handled in a comparable manner anywhere within EEA.

I stated in the beginning that I would address the question about the effectiveness of the new BRRD. As part of the answer, I have considered whether it will suffice to solve the problem observed in the last crisis, and how to avoid delays of economic recovery should systemically important institutions break down. Let us look at the strengths and weaknesses of the Directive according to the lawmakers and experts.
Strengths
The adoption of BRRD has brought about a major reform in the EU regulatory framework for banks, in addressing the problem of banks being “too big to fail”. At the core of this reform is the aim that the cost of bank failure should be borne by shareholders and creditors rather than taxpayers. This, of course, is very important in light of what happened in the most recent crisis.

Assigning the cost to shareholders and creditors minimises the harm and loss of distressed banks since it makes it possible to intervene much sooner. This solution will now be an option since there will already be in place, within the banks, recovery plans for quick recovery in smaller instances of distress or difficulties. Furthermore, a harmonised legal framework will apply to cross-border banks. The Directive will allow for intervention where management is reluctant to take measures, not facing the seriousness of the banks’ situation in distress.

Stiefmüller noted in 2016, banks return their profit to shareholders, however when they experience loss or are in distress the banks rely on the public. This is what BRRD is meant to solve. The reason why it is not possible for systemically important banks to go into bankruptcy, like most companies, is due to the fact that there is high risk of contagion and adverse systemic effects. The Directive aids to clarify the legal situation, which is important in resolution.

According to EBA, the key issues of BRRD are ensuring effective and consistent procedures across the European Union, in particular with respect to cross-border financial institutions.

The ultimate objective of the BRRD framework is to enhance financial stability, reduce moral hazard, protect depositors and critical financial services, save public money and ensure the smooth functioning of the internal market for financial services. The framework BRRD is complemented by the Deposit Guarantee Scheme Directive (DGSD), which also assigns rulemaking tasks to the EBA, and by other forthcoming regulatory initiatives on financial institutions other than banks. (EBA, 2017).

The aim is to provide adequate tools at the European Union level to deal with unsound or failing credit institutions. Including making sure that a bank or an institution can be resolved speedily and with minimal risk to financial stability ensuring that on failure the shareholders and creditors bear the loss rather than taxpayers.
**Weaknesses**

In 2016, The European Parliament noted that deduction of crossholding may present a problem. If all loss absorbing instruments were held by other banks then bailing-in those instruments could trigger contagion of financial instability, and the overall loss-absorbing capacity of the sector would not be enhanced. The treatment of MREL eligible instruments is unclear and it is not certain which rules will prevail when it comes to difference between MREL and TLAC, for the 13 banks that are subject to both.

Banks operate with capital that is approximately 10-15% of RWA and the minimum capital requirement that enters into force in 2018 sets a minimum requirement of capital at 3% of total assets, the leverage ratio. This leverage ratio does not offer the bank much buffer if a bank loses money the 3% can be quite easily exhausted.

It is comforting though the statement from the European Parliament (2016) that the MREL will eventually be denominated as a percentage of total liabilities and own funds.

Currently, shareholders and creditors of the banks cannot bear to lose their investment. As a result, there are still large contagion effects present. Large institutional investors, such as insurers and pension funds, add to the potential systemic risk due to the size of the aggregate exposure to the banking sector (Stiefmüller, 2016).

Perhaps, as Admati and Hellwig point out regarding Basel III, the outcome is a result of political process; the same may be said about BRRD. The Directive will apply in 30 European nations and there must have been some compromises made which could be detrimental and present a problem when least expected. Furthermore, the authors pointed out that the legal framework for banks is unnecessary complex, and Stiefmüller criticised the complexity of the BRRD concretely. Surely the framework could be simpler without jeopardising healthy financial markets.

**Final words**

How to keep banks safe is a controversial topic. The policy makers’ solution was to implement BRRD as an effective attempt to prevent banks from becoming insolvent and resolving them efficiently and methodically if necessary, even at times of excessive market fluctuations.

According to Stiefmüller on Finance Watch:
“Bail-in does not solve the risk of contagion and systemic risk. Major banks and other systemically important financial institutions are still too interconnected to fail.

Resolution needs to be accompanied by structural separation and separate capitalisation of capital markets/trading and core banking activities.”

BRRD does not take into account a total systemic collapse, such as was the case in Iceland, and therefore it is not entirely comparable to the Emergency Act or the measures taken in the crisis in Iceland. However, it is important to consider how decisions are made during such extreme conditions, which may be the case when applying the provisions of the BRRD in the future. It is unclear if BRRD will become a problematic for small states like Iceland.

Regarding the subject of understaffed institutions, which Zoega, Benediktsdottir and Danielsson warned about, that situation has improved in most countries and centrally after the crisis. For example, the EBA, EIOPA, and ESMA have been founded as independent authorities, taking on the role of supervisors and developing a regulatory framework to help prevent abuse and financial difficulties. In addition, the European Systemic Risk Board (ESRB) was founded in 2010 to prevent and mitigate systemic risk, to name a few of its tasks. However, will the regulators and institutions responsible for applying the legal framework for the financial market be supported to maintain sufficient staff in the long run? That question can potentially pose a problem, that cannot solved by law or regulation.

According to the regulators interviewed for this dissertation, the cross-border issue remains problematic. And some questions have been raised regarding the procedures between NCA and ECB for the banks that are subject to ECB supervision. Will they be ready to operate according to BRRD in case of one of the 130 largest banks, where the supervision is divided?

The reaction time for the regulators and banks is still too slow as capital levels are still much too low, according to the regulators. They claim that it is the reason the Spaniards could not wait in case of Banco Popular, because banks and resolution authorities have little room for action when the capital ratios are so low.

It should be noted, however, that when dealing with many banks or institutions in distress or even a total financial system failure, one cannot expect the measures in the BRRD to be sufficient. Even now in 2017, many major banks are still too interconnected to fail due to contagion. Furthermore, it will be too difficult, when it comes to making decisions in resolution to allow many banks to be bailed-in in a short amount of time.
According to that, one can conclude that what Diamond and Dybvig wrote in 1983 is still relevant, if the lender of last resort is always required to bail out banks with liquidity problems, there would be “**perverse incentives for banks to take risks**, even if bailouts occurred only when many banks fail together.”

**Will the BRRD prevent another crisis?**

It is still not clear what banks will be rescued and which ones will be subject to bail-in in a distressed bank. Many factors will affect that decision, I believe. One must also think of situations like a total systemic collapse, even if it is contained within one country, whether it will trigger a systemic effect, as for example in the case of AIG, when there is so vast interconnectedness, etc.

Should there be similar circumstances as in 2008, will there be a problem for small states like Iceland to apply special solutions? Or will that not be necessary? Only time will tell, when next financial crisis or severe difficulties occur, it may help and it may hinder any of the states, depending on where the weak link is or what is needed to solve.

Looking at the overall picture of what the policy makers and experts have been pointing out regarding the Directive it is evident that even the policy makers are still mapping some of the Directive's aspects, such as MREL. There are 40 technical standards and guidelines that further explain and implement the directive, some of which are still under development. And it seems it is not a simple task. So the short answer whether the BRRD will prevent another crisis is: **NO**.

We saw, in Iceland, leading up to the collapse extremely quick expansion of the banking sector, supported and encouraged by politicians, through deregulation of the banking system and lowering corporate tax. Furthermore, politicians often interfere in the size and effectiveness of regulators, presumably by influence from the financial sector. It seems that politicians are sometimes objective. It is extremely important to allow regulators to be independent and to enforce the legal framework put in place and to be able to apply equality principle and discipline to the financial market. As Admati and Hellwig posited, Basel III, and regulations as implemented, appear to be a result of political process rather than of valid scientific analysis.

However, the Directive helps clarify the legal status and aspects such as priority of claims. It provides opportunity for intervention and quick recovery in many cases, so it has many advantages.
I am convinced, after this introduction of the Directive through this dissertation, that increasing capital would be highly beneficial for the banks and society. And I would support that more emphasis would be put on total assets methodology instead or in addition to the RWA methodology.

Finally, it seems clear that the Directive is quite complicated and perhaps too complicated and that simpler methodology could be applied. Perhaps it would be effective to review the Directive soon, and consider a contribution from scholars as well as regulators rather than politicians and the senior management of the financial market, with regard to the methodology such as for the capital requirements and the loss-absorbing requirements.
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Appendix I

The Directive is 159 pages. Here the Articles of the BRRD are listed, with some insights and emphasis added:

TITLE I Scope, definitions and authorities

1. Subject matter and scope: institutions that are established in the union. Financial holding companies mixed financial holding companies...parent financial holding companies in a member state. Branches of institutions that are established outside the Union.

2. Definitions: regarding financial instruments, types of institutions/firms. It has 108 definitions

3. Designation of authorities responsible for resolution: Each member state shall designate one or more resolution authorities empowered to apply the resolution tools and exercise the resolution powers.

TITLE II Preparation

CHAPTER I Recovery and resolution planning

4. Simplified obligation for certain institutions: (1) Having regard to the impact that the failure of the institution could have, due to the nature of its business... In this article there are number of requirements laid upon EBA on issuing guidelines, technical standards, which institutions fall under the ECB etc. and there are time limits on those issues. Furthermore, it lays down which institutions shall be considered to constitute a significant share of that Member State’s financial system. It is significant if

   a. The total value of its assets exceeds EUR 30 000 000 000 (30 bn.) or
   b. The ratio of its total assets over the GDP of the MS of establishment exceeds 20 % unless the total value of its assets if below EUR 5 bn.

5. Recovery plans. In this article there are requirements laid upon EBA on issuing guidelines and technical standards regarding recovery plans.

6. Assessment of recovery plans

7. Group recovery plans

8. Assessment of group recovery plans

9. Recovery plan indicators

10. Resolution plans

11. Information for the purpose of resolution plans and cooperation from the institution

12. Group resolution plans

13. Requirement and procedure for group resolution plans

14. Transmission of resolution plans to the competent authorities

CHAPTER II Resolvability

15. Assessment of resolvability for institutions

16. Assessment of resolvability for groups

17. Powers to address or remove impediments to resolvability

18. Powers to address or remove impediments to resolvability: group treatment
CHAPTER III Intra group financial support

19. Group financial support agreement
20. Review of proposed agreement by competent authorities and mediation
21. Approval of proposed agreement by shareholders
22. Transmission of the group financial agreement to resolution authorities
23. Conditions for group financial support
24. Decision to provide financial support
25. Right of opposition of competent authorities

TITLE III Early intervention

27. Early intervention measures. (1) Where an institution infringers or, due, inter alia, to a rapidly deteriorating financial condition, including deteriorating liquidity situation, increasing level of leverage, non-performing loans or concentration of exposures, as assessed on the basis of a set of triggers, which may include the institution’s own funds requirement plus 1,5 percentage points, is likely in the near future to infringe the requirements of CRR, CRD IV or MiFIR, Member states shall ensure that competent authorities have at their disposal, without prejudice, at least the following measures: it is then listed in points a-h, inter alia;
   a. Require the management body to implement one or more of the arrangements or measures set out in the recovery plan...
   b. Require the management body to examine the situation, identify measures to overcome any problems identified and draw up an action programme to overcome those problems and timetable for its implementation
   c. Require the management body to convene, or if the management body fails to comply with that requirement convene directly, a meeting of shareholders of the institution and in both cases set the agenda and require certain decisions to be considered for adoption for the shareholders... etc.

   (2) Member states shall ensure that the competent authorities shall notify the resolution authorities without delay upon determining the conditions laid down in paragraph (1) have been met in relation to an institution and that the powers of the resolution authorities include the power to require the institution to contact potential purchasers in order to prepare for the resolution of the institution.

28. Removal of senior management and management body. (1) Where there is a significant deterioration in the financial situation of an institution or where there are serious infringements of law, of regulations or of the statutes of the institution, or serious administrative irregularities, and other measures taken in accordance with Article 27 are not sufficient to reverse that deterioration, Member States (MS) shall ensure that competent authorities (NCA) may require the removal of the senior management or management body of the institution, in its entirety or with regard to individuals.

29. Temporary administrator. This Article and the next few ones bare resemblance to the Emergency Act. (1) Competent authorities may, based on what is proportionate in the circumstances, appoint any temporary administrator either to replace the
management body of the institution temporarily or to work temporarily with the management body of the institution and the competent authority shall specify its decision at the time of appointment. (4) MS shall ensure that the competent authorities have the exclusive power to appoint and remove any temporary administrator. (6) The competent authority may require that a temporary administrator draws up reports on the financial position of the institution at intervals set by the competent authority. (7) The appointment of the temporary administrator shall not last more than one year.

30. Coordination of early intervention measures and appointment of temporary administrator in relation to groups. (1) ... the consolidating supervisor shall notify EBA and consult the other competent authorities within the supervisory college. (3) On receiving the notification the consolidating supervisor may assess the likely impact of the imposition of requirements under Article 27 or the appointment of a temporary administrator in accordance with Article 29 to the institution in question, on the group or on group entities in other Member States. It shall communicate that assessment to the competent authority within three days. Following that notification and consultation the competent authority shall decide whether to apply any of the measures in Article 27 or appoint a temporary administrator under Article 29.

TITLE IV Resolution

CHAPTER I Objectives, conditions and general principles

31. Resolution objectives. When applying resolution tools the resolution authorities shall have regard to the resolution objectives, such as; a) to ensure continuity of critical functions, b) to avoid a significant adverse effect on the financial system, in particular by preventing contagion, c) to protect public funds by minimising reliance on extraordinary public financial support, d) to protect depositors and investors and e) to protect client funds and client assets.

32. Conditions for resolution. (1) a) Failing or is likely to fail, b) has no reasonable prospect. (4) definition of when is failing or likely to fail in one or more of the following circumstances: a) the institution infringes or in near future infringe the requirements for continuing authorisation b) assets be less than liabilities, c) institution will be unable to pay its debts or liabilities as the fall due, d) public financial support is required.

33. Conditions for resolution with regard to financial institutions and holding companies

34. General principles governing resolution. This article addresses who will bear the loss of a financial institutions resolution and what steps to take. (1) a) the shareholders, b) creditors of the institution, c) management will be replaced d) management shall provide necessary assistance for the achievement of the resolution objectives, e) natural and legal persons are made liable, f) creditors of the same class are treated in an equitable manner, g) no creditor shall incur greater losses than would have been incurred if the institution or entity had been wound up under normal insolvency proceedings, h) covered deposits are fully protected.
CHAPTER II Special management

35. Special management. (1) the resolution authority (RA) may appoint a special manager to replace the management, and shall make public the appointment of the special manager. (2) the special manager shall have all the powers of the shareholders and the management, but may only exercise such powers under the control of the RA, (4) the RA may remove the special manager at any time, (5) it will be required by RA that the special manager draw up reports on the economic and financial situation of the institution.

CHAPTER III Valuation

36. Valuation for the purposes of resolution. Final independent value. This is what was the most important part missing in the Emergency Act. (1) RA shall ensure that a fair, prudent and realistic valuation of the assets and liabilities of the institution is carried out by a person independent from any public authority (and according to some listed requirements in the directive), that the value shall be considered to be definitive. (4) the purposes of the valuation shall be: a) whether the conditions for resolution or conditions for write down are met, ... it then lists how the resolution tools apply to valuation (they are the subject in next chapter of the directive). (5) the valuation shall be based on prudent assumptions, including as to rates of default and severity of losses. The valuation shall not assume any potential future provision of extraordinary public financial support or central bank emergency liquidity assistance.

CHAPTER IV Resolution tools

37. General principles of resolution tools. (6) if only part of the assets, rights or liabilities of the institution under resolution are transferred, the residual institution or entity shall be wound up under normal insolvency proceedings within a reasonable timeframe. (8) MS shall ensure that national insolvency law do not apply or hinder the transfers of assets, rights or liabilities from an institution under resolution.

38. The sale of business tool

39. Sale of business tool: procedural requirements. (1) RA shall make arrangements for the marketing of the assets, rights, liabilities, shares or other instruments of ownership of the institution. (2) f) it shall aim at maximising, as far as possible, the sale price for the shares or other instruments of ownership involved.

40. Bridge institution tool. (2) the bridge institution shall be a legal person that meets all of the following requirements: a) it is wholly or partly owned by one or more public authorities, b) it is created for the purpose of receiving and holding shares or other instruments of ownership... Bridge banks were used in the Icelandic method.

41. Operation of bridge institution

42. Asset separation tool. This tool can only be applied together with another resolution tool.

43. The bail-in tool

44. Scope of the bail-in tool. (1) MS shall ensure that the bail-in tool may be applied to all liabilities of an institution or entity, that are not excluded from the scope of
that tool pursuant to paragraphs 2 or 3 of this article. (2) Resolution authorities shall not exercise the write down or conversion powers in relation to the following liabilities whether they are governed by the law of a MS or of a third country: (a) covered deposits (b) secured liabilities (c) any liability that arises by virtue of the holding by the institution or entity referred to in... (d) any liability that arises by the virtue of a fiduciary relationship between the institution or entity referred to in ... (e) liabilities to institutions, excluding entities that are part of the same group, with an original maturity of less than seven days (f) liabilities with remaining maturity of less than seven days, owed to systems or operators of system designated according to Directive 98/26/EU (on Central Securities Depositories; CDS) (g) a liability to any one of the following...

45. Application of the minimum requirement. The article on MREL. (1) MS shall ensure that institutions meet, at all times, a minimum requirement for own funds and eligible liabilities. The minimum requirement shall be calculated as the amount of own funds and eligible liabilities (MREL) expressed as a percentage of the total liabilities and own funds of the institution. For the purpose of the fist subparagraph derivative liabilities shall be included in the total liabilities on the bases that full recognition is given to counterparty netting rights. (2) EBA shall draft technical regulatory standards which specify further the assessment criteria mentioned in ... MS may provide for additional criteria on the basis of which the MREL shall be determined. (3) Notwithstanding paragraph 1, resolution authorities shall exempt mortgage credit institutions financed by covered bonds which, according to national law are not allowed to receive deposits ... (4) Eligible liabilities shall be included in the amount of own funds and eligible liabilities referred to in paragraph 1 only if they satisfy the following conditions: (a) the instrument is issued and fully paid up; (b) the liability is not owed to, secured by or guaranteed by the institution itself; ...and it continues to (f). (6) MREL of each institution pursuant to paragraph 1 shall be determined by the resolution authority, after consulting the NCA, at least on the basis of the following criteria: (a) need to ensure that the institution can be resolved by the application of the resolution tools including, where appropriate, the bail-in tool, in a way that meets the resolution objectives (b) the need to ensure that the institution has sufficient eligible liabilities to ensure that, if bail-in tool were to be applied, losses could be absorbed and the Common Equity Tier 1 ratio of the institution could be restored to a level necessary to enable it to continue to comply with the conditions for authorisation and to continue to carry out the activities for which it is authorised... (c) the need to ensure that, if the resolution plan anticipates that certain classes of eligible liabilities might be excluded from bail-in under Article 44 or that certain classes of eligible liabilities might be transferred to a recipient in full under a partial transfer, that the institution has sufficient other eligible liabilities the ensure that losses could be absorbed and the CET1 ratio of the institution could be restored to a level necessary to enable it to continue to comply with the conditions ... (d) the size, the business model, the funding model and the risk profile of the institution (e) the extent to which the Deposit Guarantee Scheme could contribute to the financing of resolution in accordance to Article 109 (f) the extent to which the failure of the institution would have adverse effects on financial stability...
The paragraphs of the MREL Article are 20 with many subparagraphs. I have just touched upon some to give some insight into this important Article on MREL, which has caused some debate.

46. Assessment of amount of bail-in. 2) the assessment shall establish the amount by which eligible liabilities need to be written down or converted in order to restore the Common Equity Tier 1 capital ratio of the instituting under resolution.

47. Treatment of shareholders in bail-in or write down or conversion of capital instruments

48. Sequence of write down and conversion

49. Derivatives

50. Rate of conversion of debt to equity. 2) the conversion rate shall represent appropriate compensation to the affected creditor for any loss incurred.

51. Recovery and reorganisation measures to accompany bail-in

52. Business reorganisation plan

53. Effect of bail-in

54. Removal of procedural impediments to bail-in

55. Contractual recognition of bail-in

56. Government financial stabilisation tools

57. Public equity support tool

58. Temporary public ownership tool

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60. Provisions governing the write down or conversion of capital instruments

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66. Power to enforce crisis management measures or crisis prevention measures by other Member States

67. Power in respect of assets, rights, liabilities, shares and other instruments of ownership located in third countries

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70. Power to restrict the enforcement of security interests

71. Power to temporarily suspend termination rights

72. Exercise of the resolution powers

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121. Amendment to Directive 2007/36/EC
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