The impact of Minimum Requirement for own funds and Eligible Liabilities (MREL) on EU banks’ value

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Vienna, 30^{th} March 2023

Who is presenting?

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1. Introduction and research question

- Over the past 15 years after the great recession regulators are developing new regulations and standards to ensure the stability of the banking system,

- One of the areas for improving the European banking system is the new banking regulation - MREL, which is being implemented in the context of the Single Supervisory Mechanism. The MREL defines minimum levels of own funds and liabilities in relation to a bank's risk-weighted assets and leverage exposure.

- MREL aims, among other things, to address and solve the too big to fail problem. According to this problem, large (systemically important) banks received state support in the event of a crisis.

- Some researchers argue that the MREL will have a negative impact on the profitability of European banks as banks will have to reduce their investment in certain lending assets due to the new requirements, with the strongest impact assumed to be on European banks that have problems maintaining profitability.

- But also, other researchers argue that MREL will not negatively affect the profitability of banks in the long run and that MREL will not have a significant impact on the root profitability of the banks as it will contribute to the growth of the stability of the European Union banking industry as a whole.

- The purpose of the study was to assess the impact of MREL requirements on the share prices of the banks in European Union.

- The research methodology is based on two statistical methods: firstly, event study is conducted to estimate the impact of the MREL related news and publications and secondly regression analysis is conducted to identify country related differences of reactions.

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2. Background and history

Basel I, Basel II and their shortcomings

Basel I

- ❖ Basel I was mainly focused on the issues of reducing and controlling credit risk through the management of banks' capital adequacy by regulators.
- ❖ To the main advantage of Basel I can be attributed the beginning of the international regulation of the banking industry. Also, there were quantitative criteria defined.
- ❖ The disadvantages of Basel I are the following aspects:
  - Narrow classification of banking risks, some non-credit risks and features of banking activities are not taken into account,
  - Too simple grouping of credit risks (only 4 degrees of credit risks),
  - Insufficiency of requirements to stop the crises of the banking industries in various countries.

Basel II

- ❖ Basel II included three components:
  1. Minimum capital requirements. This indicator now took into account new risks, and not only credit risks as before.
  2. Supervisory process. The second component defines the principles of the supervisory process. Banks should provide transparency in their activities, conduct stress tests, analyze credit risk and other types of risks, publish and analyze information on securitized assets,
  3. Market discipline. This component contains additional requirements, expanding Pillar 1 and 2. This Pillar contains expanded requirements for disclosure of information about the activities of the bank.

- ❖ The main shortcoming of Basel II was the insufficient consideration of the risks of financial innovation. The process of securitization was actively developed at the beginning of the 20th century, this financial innovation became dominant in the banking industry, especially in the US and the European Union. Basel II requirements were not sufficiently prudent in order to prevent the global financial crisis of 2008-2009, which was caused, among other things, by the uncontrolled growth of mortgage asset securitization. In an environment of information asymmetry, the use of securitization led to a rapid increase in lending and a wave of defaults.

2. Background and history

Implementation of a resolution regime in the context of Basel III and Basel IV

❖ The main changes that occurred in Basel III were as follows:

- ✓ New layers of capital were added. Within the framework of the Tier 1 Capital, the Common Equity Tier 1 Capital (CET1) and Additional Tier 1 Capital (AT1) were defined. New types of Tier 2 capital have also been added (in particular, subordinated debt),
- ✓ The definition of new minimum capital adequacy requirements was introduced,
- ✓ Capital buffers were introduced. Banks should create capital conservation buffer and countercyclical buffers to absorb banking sector losses at the times of severe financial and economic stress and for the times of excess credit growth respectively,
- ✓ Requirements for the minimum amount of leverage as a non-risk based backstop measure,
- ✓ Major new liquidity management standards. The requirements and concepts related to the liquidity of the banks have been specified,
- ✓ New extended requirements for the protection of banking information.

In order to more improve banking regulation, Basel IV standards have been developed in 2017-2019.

❖ The main changes that Basel IV contains are as follows:

- ✓ Output floor requirement that aims to prevent the banks' risk exposure that is calculated based on internal models to be lower than 72,5% of the one calculated based on standardized approach,
- ✓ Reductions of the risk weight for low-risk mortgage loans,
- ✓ Extended requirements for disclosure.

2. Background and history

Capital adequacy requirements under normative perspective

The Basel Committee on Banking Supervision (BCBS), among other things, aims to make sure that banks have sufficient capital to cover their current and future needs. Pillar I of Basel regulation is established for prudent calculation and maintenance of regulatory capital that should cover the credit risk, operational risk and market risk.

Total Capital (TC)

Tier 1 (T1)

Increasing quality of capital

Tier 2 (T2)

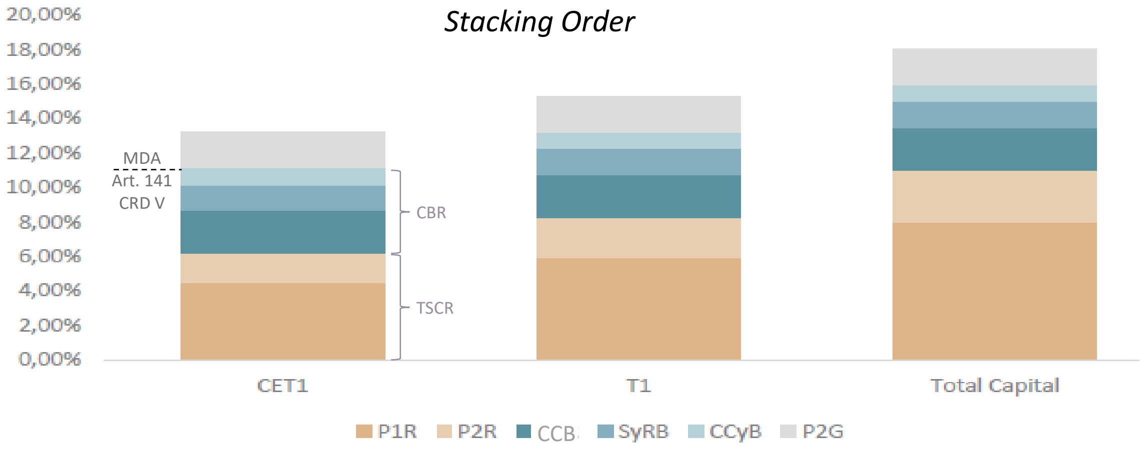
- Non-perpetual,
- Long term debt, at least 5Y maturity
- Gone concern capital
- During the last 5 years of their life the subordinated debt starts to amortize by 20% each year linearly

Additional Tier 1 (AT1)

- Subordinated loans or bonds,
- Perpetual,
- Coupons cancellable at bank's discretion,
- Contingent instrument – converted into CET1 or written down into CET1 subject to CET1 ratio (dependent on regulation and contractual terms, 5,125% CET1 according to Art. 54 CRR

Common Equity Tier 1 (CET1)

- Fully loss absorbing
- Common share, share premium,
- Capital reserves,
- Retained earnings,
- Other comprehensive income (OCI),
- Prudential filters,
- Deduction items



P1R	Art. 92 CRR – 4.5% CET1, 6% T1, 8% TC
P2R	Decided through the Supervisory Review and Evaluation Process ("SREP"), should be covered by 56.25% of CET1, 75% T1 and 100% TC
CCB	To absorb banking sector losses conditional on a plausible severe stressed financial and economic environment. Set at 2.5% for all EU banks
SyRB	Prevention and mitigation of long-term non-cyclical systemic or macroprudential risks
O-SII	For institutions that have systemic importance and may create risks to financial stability in bringing negative externalities into the system
CCyB	To safeguard against potential losses, stemming from build-up of cyclical systemic risk during periods of excessive credit growth.
P2G	Once in two years based on the Europewide stress-test result on CET1 depletion

2. Background and history

Liquidity, Funding and problematic in times of resolution

During the crisis big issues were caused by banks as they couldn't raise short-term financing. The Basel Committee introduced liquidity ratios requirments to make the banks stronger in the face of shocks and to ensure that credit institutions seek to gather more mid-term and long-term financing, namely:

- Liquidity Coverage Ratio (LCR) – the requirement is designed to take care of an institution having sufficient base of high-quality liquid assets (HQLA) that can be converted in stress times without significant loss of value.

$$LCR = \frac{\text{HQLA}}{\text{Total net cash outflows over next 30 calendar days}} \geq 100\%$$

- Net Stable Funding Ratio (NSFR) – the requirement is aimed for banks to sustain stable source of funding and to avoid over maturity transformation by means of financing the long-term liabilities excessively via short term funding.

$$NSFR = \frac{\text{Total available stable funding}}{\text{Total required stable funding}} \geq 100\%$$

The European resolution regime evolves around the idea of recapitalization and loss absorbency, not to burden the taxpayers in case of troubles. Still, practical examples show that liquidity issues, that arise in most cases in hand with solvency problems, remain unsolved, as they are not less important for the smooth process of resolution, both in the times of resolution, but also after potentially successful event of a resolution.

2. Background and history

The too big to fail problem

- The too big to fail problem is that large financial institutions could have counted on state support to avoid or overcome bankruptcy.
- Sufficiently big, sophisticated and interconnected institutions would have imposed big negative impact on a financial system as a whole and put its healthiness under risk through spillover effects.
- Another factor for such decision is the timing, in the sense that as such event occurs mostly unexpectedly and in a rapid manner, the decision makers would have the moral hazard to decide for a bail out to avoid negative short-term effect.
- This would also mean that the banks would have the incentives to take more risk and will be expanding their balance sheets without scaling the risks as they would do without such phenomena.
- The scale of the problem has been even more increasing during the time as the banks continued to grow in size and compared to few decades before these days fewer banks hold higher market capitalization. This is due to the consolidation taking place in the banking industry and the number of mergers and acquisitions speaks for its evidence.
- Having said this it becomes obvious that the too big to fail problem is all too relevant in today's financial markets.

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3. EU Resolution Framework

Resolution mechanism

Pillars of the Banking Union:

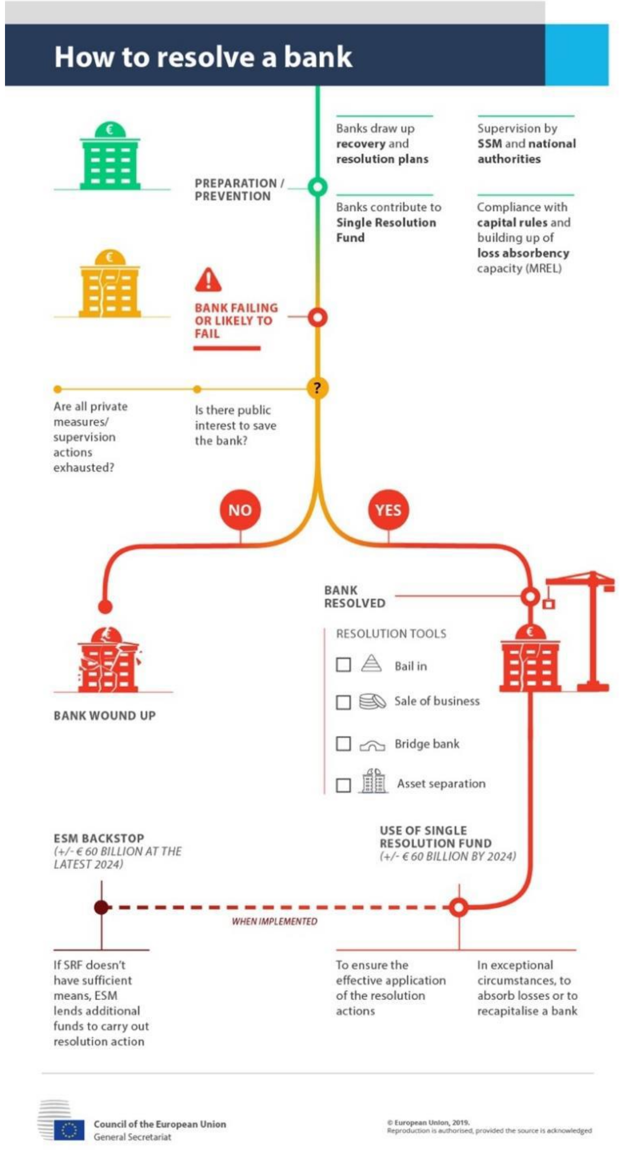
I. Single Supervisory Mechanism (SSM),
II. Single Resolution Mechanism (SRM),
III. Deposit Insurance Scheme

As described in Art. 14(2) SRMR and Art. 31(2) BRRD the resolution objectives are as follows:

- to ensure continuity of critical functions,
- to avoid significant adverse effects on financial stability, in particular by preventing contagion, including to market infrastructures, and by maintaining market discipline,
- to protect public funds by minimizing reliance on extraordinary public financial support,
- to protect depositors covered by Directive 2014/49/EU and investors covered by Directive 97/9/EC,
- to protect client funds and client assets

Condition for resolution as described in Art. 18(2) SRMR and Art. 32(1) BRRD should be fulfilled, as follows:

- the bank is failing or likely to fail,
- there is no reasonable prospect that any alternative private sector measure or supervisory action, including the write-down or conversion of capital instruments, would prevent the failure of the bank within a reasonable timeframe,
- a resolution action is necessary in the public interest



Source: Infographic of Council of the European Union,
Link: https://www.consilium.europa.eu/en/infographics/bank-resolution/

3. EU Resolution Framework

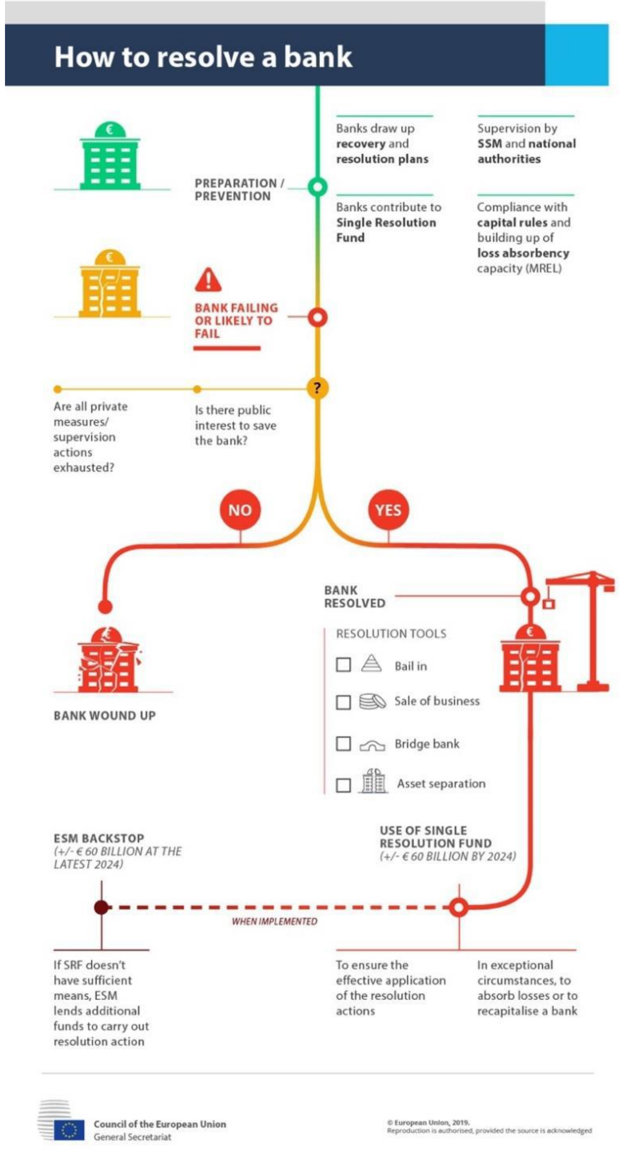
Resolution mechanism

1. Sale of Business according to Art. 38/39 BRRD II.
This is done by means of transferring shares and parts of the balance sheet or whole portfolios as such (retail, corporate, etc.) to one or several new investors and the rest of the Institution is liquidated under normal insolvency proceedings. Such procedure can be done with or without consent of the shareholder. Such mechanism can be a good tool in case of a liquidity crisis, as the bank can be recapitalized and refunded by the new owner and the operations would continue.

2. Bridge institution according to Art. 40/41 BRRD II.
In case if there are no recipients on the market a bridge bank is established. This is done until a solution is found and to preserve the critical functions of the bank. As such the bridge institution should exist no longer than for two years after which the unsold part is liquidated.

3. Asset separation tool according to Art. 42 BRRD II.
Whereas first two tools can be applied in combination with other tools or alone, the asset separation tool must be applied in combination with one of other three tools. This is done by means of transferring the bad assets of the bank to an asset management vehicle and the latter should maximize the value of the transferred assets for the future sale or wind-down. This tool may be executed only in relation to those assets whose liquidation would have negative impact on the financial markets, or if not transferred those assets would hinder functioning of the bridge intuition or performance the sale of business or bail-in and by such the transfer would maximize the value of the liquidation.

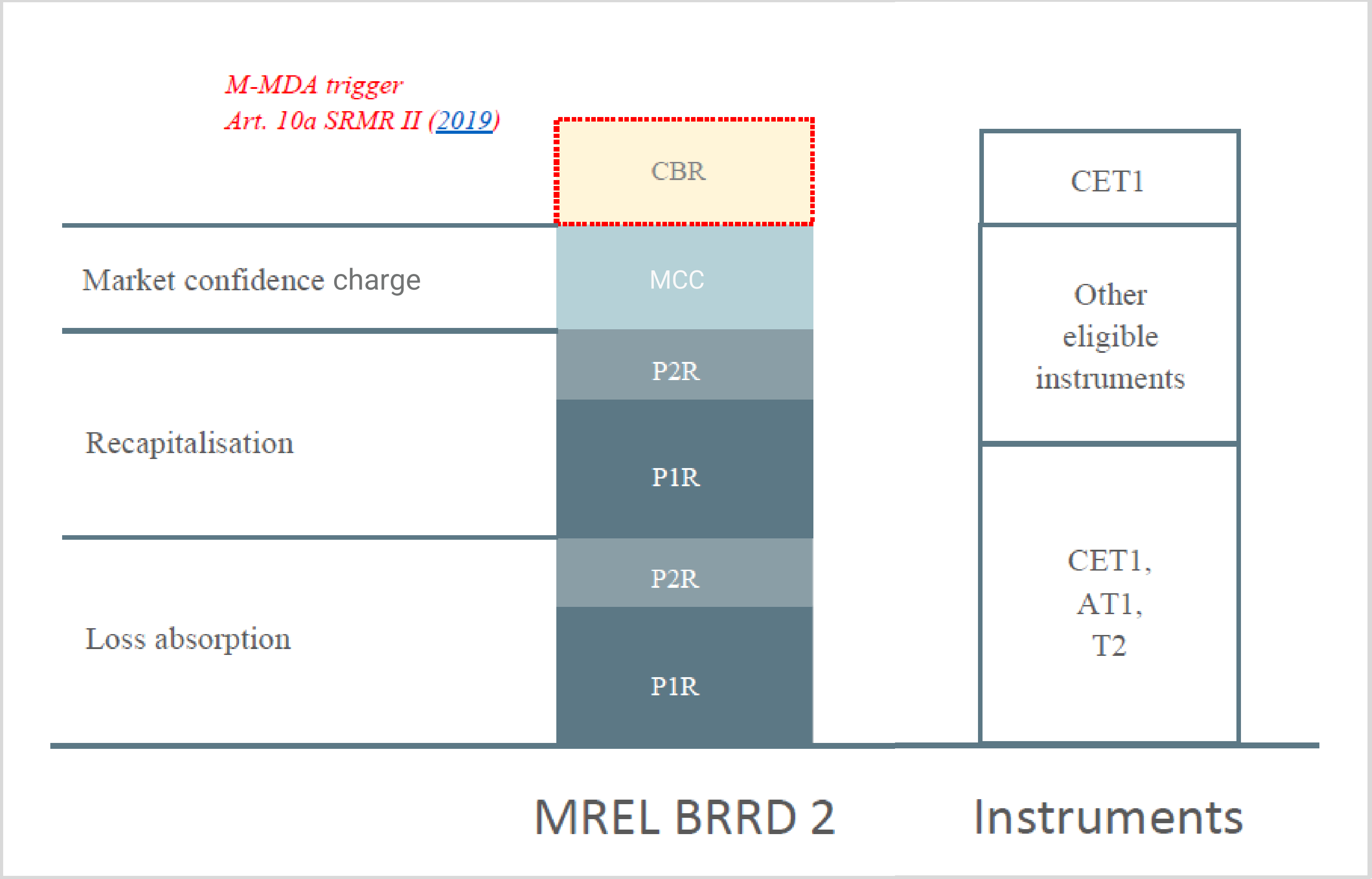
4. Bail-in tool according to Art. 43/44 BRRD II.
Bail-in tool can be used in combination with other above-mentioned tools, by means of offsetting losses via conversion of eligible liabilities into equity. Such resolution tool ensures continuity of the institution. This is the newest resolution tool developed at the authority’s disposal. The idea is to not burden the taxpayers, but instead the shareholders and the creditors which are unsecured. Liabilities that are eligible for loss absorbency are written down only after the equity instruments have been used to cover the losses. Means, the shareholders are the first ones to bear the losses. Exactly this resolution tool and the need to ensure that the institution has sufficient loss absorption and recapitalisation in form of bail-inable instruments led to the establishment and introduction of concept for minimum requirement for own funds and eligible liabilities.



Source: Infographic of Council of the European Union,
Link: https://www.consilium.europa.eu/en/infographics/bank-resolution/

3. EU Resolution Framework

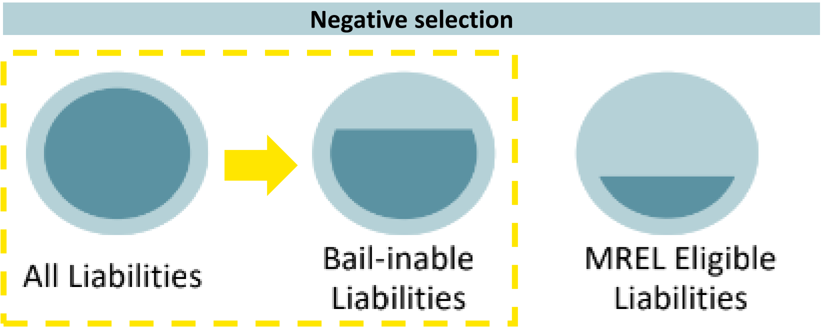
MREL as part of bail-in and resolution framework – requirement calibration



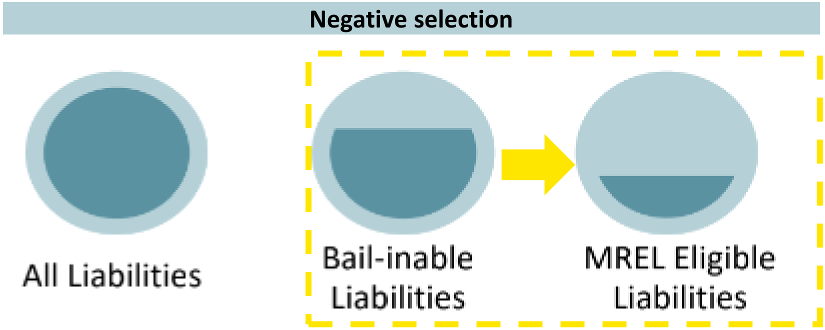
- **Loss absorbency amount (LAA)** – the amount that is necessary to comply with minimum capital requirements in going concern scenario. This is the amount needed for an efficient implementation of the bail-in mechanism by means of having sufficient loss absorbing capacities,
- **Recapitalisation amount (RCA)** – the amount needed for a recapitalisation after the loss absorbency amount was consumed. The starting point for calculating the recapitalisation amount is just replicating the pre-resolution balance and adding confidence buffer. In addition, some deductions are applied in a form of balance-sheet depletion, recovery options and etc. More detailed methodic will be described later in this chapter. It is important to highlight that RCA is not applicable to the institutions for which the preferred strategy is the liquidation.
- **Market confidence charge (MCC)** – this is an amount that is needed in excess to recapitalisation amount to ensure sufficient buffer above minimum capital requirements taking into account possible further adverse effects on the entity from the market. Market confidence charge is calculated as combined buffer requirement minus countercyclical buffer.

3. EU Resolution Framework

MREL as part of bail-in and resolution framework – eligibility criteria (1/2)



Art. 44 (1) BRRD2
Member States shall ensure that the bail-in tool may be applied to **all liabilities** of an institution or entity referred to in point (b), (c) or (d) of Article 1(1) **that are not excluded** from the scope of that tool **pursuant to paragraphs 2 or 3 of this Article.**



Art. 45b BRRD2

1. Liabilities shall be included in the amount of own funds and eligible liabilities of resolution entities only where they satisfy the conditions referred to in the following Articles of Regulation (EU) No 575/2013:

(a) Article 72a;

- **not liabilities arising from derivatives,**
- **not liabilities arising from debt instruments with embedded derivatives**

(b) Article 72b, with the exception of point (d) of paragraph 2; and

- **the liabilities are directly issued or raised**, as applicable, by an institution and **are fully paid up**;
- the liabilities are **not owned** by any of the following:
  - (i) **the institution or an entity included in the same resolution group**;
  - (ii) an undertaking in which the institution has a direct or indirect participation in the form of ownership, direct or by way of control, of 20 % or more of the voting rights or capital of that undertaking

(c) Article 72c

- **Eligible liabilities instruments with a residual maturity of at least one year shall fully qualify as eligible liabilities items.**

3. EU Resolution Framework

MREL as part of bail-in and resolution framework – eligibility criteria (2/2)

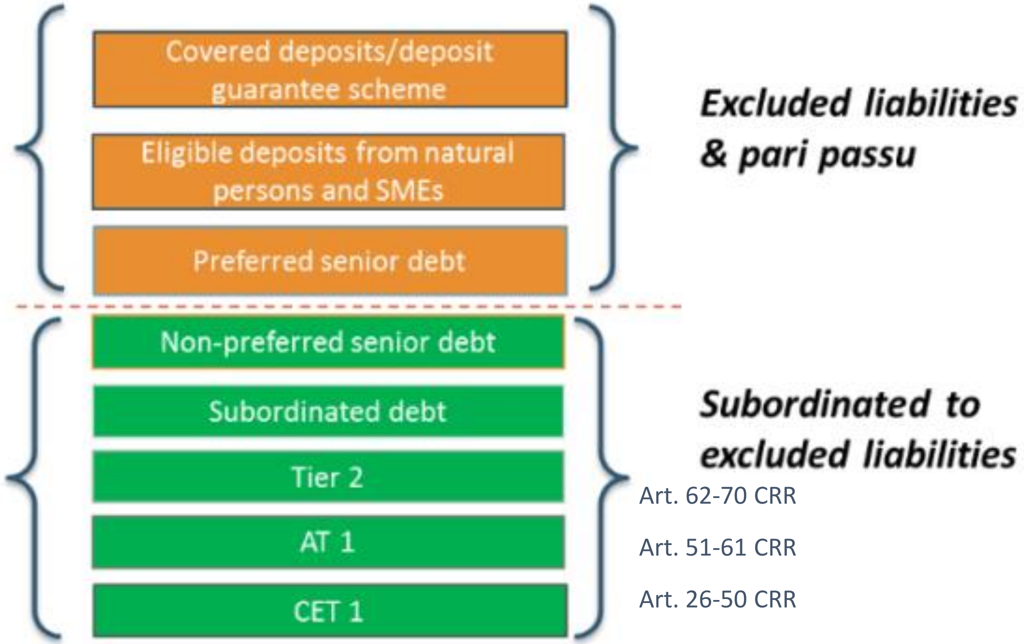


Figure 1: Simplified stack - statutory subordination for the purpose of MREL

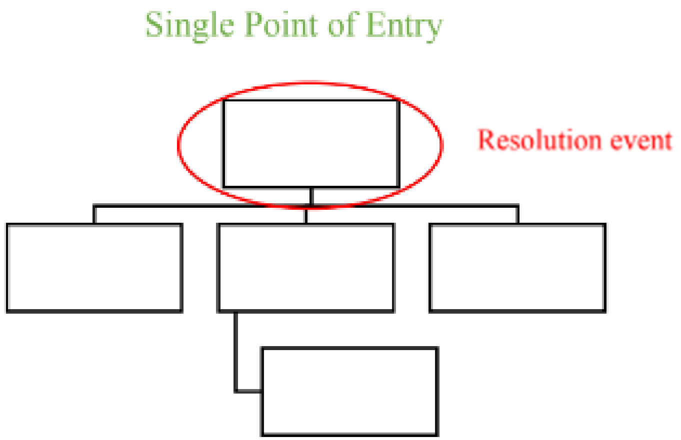
Source: EBA report on the monitoring of TLAC/MREL-eligible liabilities instruments of European union institutions – update EBA/REP/2022/23

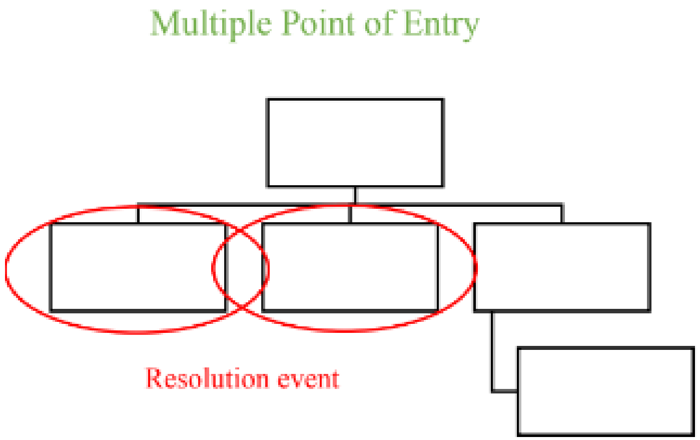
- not covered or secured,
- not sight and not short-term deposit,
- original maturity >1Y,
- not part of eligible deposits from natural persons and micro, small and medium-sized enterprises which exceeds the coverage level referred to in Article 6 of Directive 2014/49/EU of the European Parliament and of the Council (EUR 100.000),
- the liability is not arising from a derivative,
- the liability is not against the institute or is not guaranteed by the institute,
- the liability is not direct or indirect financed by the institution,
- the liability is issued and paid in fully,
- the liability is not to tax and social security authorities, provided that those liabilities are preferred under the applicable law,

Deposits, not covered and not preferential >= 1 year
Structured notes >= 1 year
Senior unsecured liabilities >= 1 year
Senior non-preferred liabilities >= 1 year
Subordinated liabilities (not recognised as own funds) >= 1 year
Other Eligible Liabilities >= 1 year
Eligible Liabilities

3. EU Resolution Framework

Resolution strategies





In case of **Single Point of Entry**, the resolution powers are applied by a single authority at the level of a single parent company disrespectful of the place (parent or subsidiary) of the event origination. In this case the parent company takes responsibility for the losses in sense that the losses are upstreamed to the parent company. Such scenarios is usually applied and is more favorable for groups with high level of interconnections where the operations are very tied in financial and legally sense. This would also mean that such scenario is less favorable in case there are some subsidiaries outside of European union for example. In such strategy the MREL eligible instruments can be raised and provided to the subsidiaries on the resolution group level. The targets in such strategy are defined by the regulator on a resolution group level, but also internal MREL targets on a subsidiary level.

In case of the **Multiple Point of Entry**, the resolution is carried in the place of the event occurrence. As one can tell, in contrary to the first strategy, this one is more applicable to rather decentralized groups and/or the ones where subsidiaries are more self-sustainable in terms of capital, liquidity and funding structures. The parent company is in such case exposed to reputational losses and losses coming from the impairment of the subsidiary. Also, in case of such preferred strategy the specific MREL targets are defined for each company and the MREL eligible instruments would need to be issued to third parties.

3. EU Resolution Framework

Resolution policy in practice – the case of Banco Popular Espanol S.A.

June 2016

- Higher capital requirements expected as a result of EU Stress-test,
- Announcement of capital increase of EUR 2.5bn,
- Provisioning of real estate portfolio.

Q4/2016-Q1/2017

- Replacement of Executive Chairman,
- Reported EUR 2.5bn of loss as a result of real estate portfolio impairment,
- Need to raise further capital.

Early 2017

- CEO quits after an audit finds out that there was under provisioning of bad loans in amount of EUR 600mn.

April 2017

- The new Chairman announced that the bank would need a further capital increase and that the selling of the bank would be considered,
- Moody's decreased the rating of bank's senior unsecured debt by two notches,
- **Deposit outflow triggered**, mainly driven by corporate clients.

5-6th of June 2017

- No bid from potential buyers,
- Chair of SRB, Elke König, warned the public and officials that the bank may go down of it doesn't find buyers (Reuters, 2017),
- Emergency Liquidity Assistance was requested two times, in amount of €2.0bn and €1.6bn.

6-7th of June

- The bank was announced by ECB to be failing or likely to fail,
- **For the first time in history a resolution was triggered by SRB,**
- **The SRB concluded that the resolution action would be required, as it was in the public interest,**
- The resolution was required due to tow reasons:
  1. Banco Popular was providing **deposit taking from households and non-financial corporations** and had **lending activities to SMEs**, therefore it was considered critical in the scope of fulfillment of the first resolution objective that is **continuity of the critical functions,**
  2. **Bank's size:** sixth biggest on the Spanish market with around €150bn in total assets, not taking a resolution action would endanger the second principle of **avoidance of significant adverse effects on the financial stability,**
- SRB decided to put in action the sale of business and the bail-in tools.

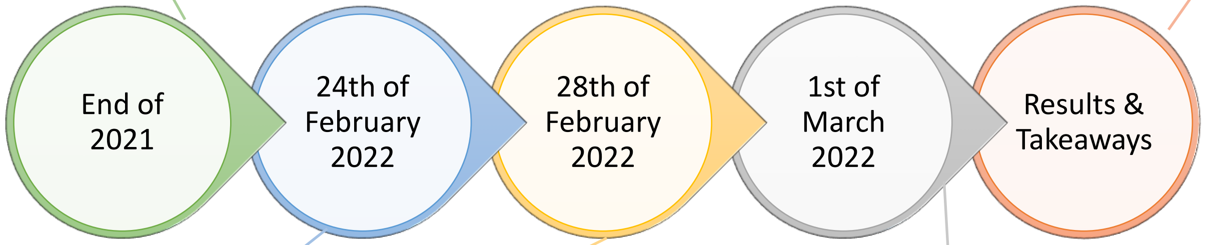
Results

- Additional tier one and common equity tier 1 were written down and the tier two were converted into shares,
- The bank was sold to Banco Santander S.A. for symbolic price of EUR 1,
- Need to raise further capital.

3. EU Resolution Framework

Resolution policy in practice – the case of Sberbank d.d. and Sberbank bank d.d.

- Fitch Rating affirms Sberbank's rating and reports about bank's readiness to comply with binding MREL requirement as of 1.1.2022
- Sberbank Europe AG published on its webpage a press release that a Share Purchase Agreement was signed to sell certain subsidiaries in CEE region



- Russian invasion of Ukraine,
- Major deposit outflow

- On the 28th of February ECB announced its assessment of Sberbank Europe AG and the Croatian and Slovenian subsidiaries to be failing or likely to fail

- SRD decision to take resolution action with regards to Croatian and Slovenian subsidiary – sale of business to Hrvatska Postanska Banka d.d. and Nova Ljubljanska banka d.d. respectively
- No resolution deemed required for the Austrian parent undertaking,
- it was assessed that there is no public interest for the Austrian undertaking and that carrying it through normal insolvency proceeding wouldn't hurt the financial stability of Austria
- On the 2nd of March those two banks opened again. The depositors were protected as the result of this decision in Austria up to €100.000 and with no limitation in other two countries.

- SRB Chair, Elke König at the SRB Annual Press Breakfast on the 30th of March (Elke König, 2022) said, 'As our experience has shown, we see that the better a bank is prepared for resolution, the more MREL it has built up and so on, the less likely it is they will go into resolution.'
- Elke König fairly supplemented her point as follows 'However, resolution decisions are required from time to time. And we saw that recently in the case of Sberbank. It is a good example of putting policy into practice at very short notice. The crisis in this case unfolded with great speed because of the current political situation and resulting loss of trust in this specific bank.'

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4. Research methodology

Data

An empirical study was conducted to analyze the impact of MREL on the value of European Union banks. Following data was aggregated:

1. **News about the implementation of MREL, source: largest news sources**
2. Share prices of selected major European banks, source: Bloomberg

- **News 1 - EBA Final Draft Regulatory Technical Standards on criteria for determining the minimum requirement for MREL (July 3, 2015).**
  This document details the mechanism for implementing the MREL requirements for European banks. Researchers from Deloitte argued in 2015 that the publication of these standards would have a significant impact on the business of European banks.
- **News 2 - European Commission specifies criteria for banks to hold easily 'bailinable' instruments in case of resolution (May 23, 2016).**
  These clarifications could reduce the level of uncertainty about the future regulation of European banks. Also, this news is of a significant importance for the investors and other stakeholders to have better understanding whether the instruments they have or plan to issue, raise fulfill the eligibility criteria and can be used to meet MREL requirements.
- **News 3 - MREL assessment for Austrian banks and selected subsidiaries in the EU (July 31, 2016).**
  The study was aiming to pure more light and understanding on how much of MREL eligible capital and liabilities base the Austrian banking sector possesses, are the instruments “bailinabe” in case of resolution, what is the decomposition of MREL base and what are the estimated shortfalls. As the survey and assessment was one of the first studies in the field, it may have impact also on other European banks valuation and investor perceptions
- **News 4 - Publication of new MREL policy (December 20, 2017).**
  The regulator noted that if the previous documents concerned, first of all, systemically important financial institutions, then the new standards are also applicable to other European banks
- **News 5 - MREL reporting: checklist on reported liabilities and sign-off form (December 17, 2021)**
  Although this news is not expected to have significant impact on the expectations of the investors, as there were no new requirements or methodologies introduced, but in this paper the news is assessed as it is a rather fresh release, and it would be interesting to compare its impact with the news mentioned before.

4. Research methodology

Data

An empirical study was conducted to analyze the impact of MREL on the value of European Union banks. Following data was aggregated:

1. News about the implementation of MREL, source: largest news sources
2. **Share prices of selected major European banks, source: Bloomberg**

Among the largest banks are the following: BNP Paribas (France), Société Générale (France), Crédit Agricole Group (France), Banco de Sabadell (Spain), Banco Santander (Spain), Raiffeisen Bank International (Austria), Deutsche Bank (Germany).

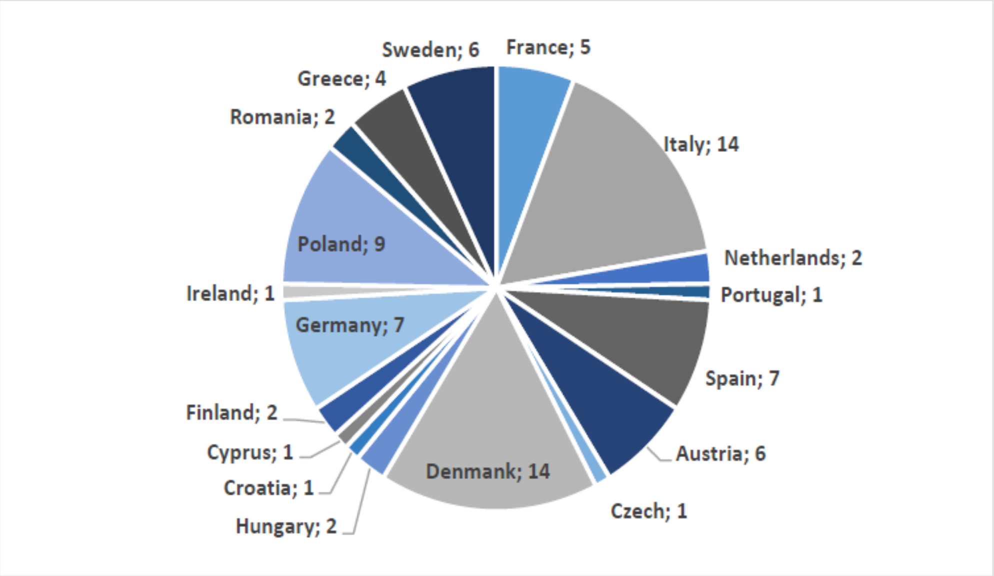
Data were collected for 85 banks according to the following criteria:
- the analysis period for most events is in the timeframe of 2016 to 2021,
- 2015 is also included in the sample to enhance event analysis,
- the sample included data on quotations of bank shares in the analyzed period,
- data was collected for each business day. For the period 2016-2021 the number of days is 1537.

For each company, the stock returns were calculated using the following formula:

$$R_i = \frac{P_{it} - P_{it-1}}{P_{it-1}}$$

where Ri – profitability of the share for a company i;
Pi –share price of the company i.

The decomposition of the sample by country is shown in the figure below



4. Research methodology

Event Study - H1: news about the introduction of MREL regulation had a negative impact on the value of European banks

To achieve the research goal, an econometric research method was used - an event study. This method implies that cumulative abnormal returns are calculated, which is based on an assessment of the deviations of the company's stock return from the average market return for a certain period before and after any news.

Event Study algorithm:

1. Selection of an event
2. Selection of an event window
3. Choice of criteria for selecting companies
4. Selection of the estimation window
5. Calculation of abnnormal returns and accumulated abnormal returns for the entire sample

Relevant and common approach is the comparison period mean adjusted model, based on the calculation of the average returns on company stocks over the period of the evaluation window. According to this model, abnormal returns are calculated using the following formula:

$$AR_{i,t} = R_{i,t} - \bar{R}_i$$

- where $R_{i,t}$ – the actual returns on shares of company i in period t;
- $\bar{R}_i$ – mathematical expectation of the returns on shares of company i.

The cumulative abnormal returns of the company for the period within the event window forms the total abnormal returns. The cumulative abnormal returns demonstrate the total cumulative effect of the event on the event window.

$$CAR_i(t_1, t_2) = \sum_{t=t1}^{t2} AR_{it}$$

From the point of view of event analysis, the main interest is the indicator of the average abnormal return:

$$AAR_{i,t} = \frac{1}{N}\sum_{i=t1}^{T} AR_{it}$$

4. Research methodology

Regression Analysis – H2: country differences significantly affect the reaction of the value of shares of European banks to the introduction of MREL requirements.

The purpose of the regression analysis in this research is to identify the impact of country differences on the company's abnormal profitability, thus this is the case when the regression analysis is an appropriate tool to be used. To do this, a regression based on the least squares method is calculated.

The regression equation with which this hypothesis was tested is as follows:

$$CAR_i = \alpha + \beta_1 Country_i + e$$

- a – constant.
- $Country_i$ – dummy-variable, which is equal to 1 if the company belongs to a certain country, and is equal to 0 if not.
- e – error term.

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5. Empirical results

Event Study results

Date	News	AAR
July 3, 2015	EBA Final Draft Regulatory Technical Standards on criteria for determining the minimum requirement for MREL	**-1.9%**
May 23, 2016	European Commission specifies criteria for banks to hold easily 'bailinable' instruments in case of resolution	3.3%
July 31, 2016	MREL assessment for Austrian banks and selected subsidiaries in the EU	**-2.9%**
December 20, 2017	Publication of new MREL policy	0.8%
December 17, 2021	MREL reporting: checklist on reported liabilities and sign-off form	**-1.3%**

- **News 1** - **AAR for the sample is -1.89%.** Consequently, there has been a generally negative investor reaction to the publication of MREL standards by regulators. Investors viewed this news as negative in terms of the long-term development of European banks. This may be connected to **costs as regards to issuance and interest payments on the coupons**. The impact may appear to be even more severe for mid-size banks, as it would impact their profitability, squeeze the margins and impact the lending potential.

- **News 2** - AAR for an event window of 7 days is 3.3%. Consequently, investors reacted positively to the publication of clarifications regarding MREL requirements and 'bailinable' instruments. This may be largely due to the fact that **investors have adapted their expectations** regarding the future regulation and because the **published standards** corresponded to optimistic forecasts and **did not contain too stringent requirements.**

- **News 3** - **AAR for the sample is -2.92%.** Therefore, it can be concluded that the publication of the MREL assessment for Austrian banks and selected subsidiaries was **negatively received by investors in European banks**. The significance of this reaction is difficult to assess, as in contrast to other news, which were regulatory publications, this publication involved mostly Austrian banks, nevertheless, the results of the seven-day window speak in favor of the fact that the publication was impactful and that the other European banks also had reaction to it.

- **News 4** - AAR for an event window of 7 days is 0.78%. The positive perception of the news and publication can be related to two factors. Firstly, and most importantly, is that **the policy specified a gradual approach for MREL targets and transitional period of couple of years.** This would mean that the banks would have better planning capabilities and clearer view on the requirements they would have to cope with. The second factor would directly stem from the previous factor, namely that the **clarity is usually perceived with more positive reaction**, rather than the unknown perspectives.

- **News 5** - **AAR for the sample is -1.27%. T**his publication is not of as a high importance as the ones before in the sense that the requirements and criteria were already know. On the other hand, a compressed checklist would give another kick for the understanding and a clearer view. This news carries more interest in sense of investors reactions due to the fact of its timing. It was released shortly before first binding target coming into force.

5. Empirical results

Regression Analysis results

Date	News	AAR	Significant country differences
July 3, 2015	EBA Final Draft Regulatory Technical Standards on criteria for determining the minimum requirement for MREL	**-1.9%**	Austria (10%), Croatia (5%), Greece (1%), Germany (10%)
May 23, 2016	European Commission specifies criteria for banks to hold easily 'bailinable' instruments in case of resolution	3.3%	Netherlands (10%), Austria (5%), Denmark (5%), Cyprus (5%), Romania (5%)
July 31, 2016	MREL assessment for Austrian banks and selected subsidiaries in the EU	**-2.9%**	Italy (10%), Poland (1%), Greece (1%)
December 20, 2017	Publication of new MREL policy	0.8%	Greece (1%)
December 17, 2021	MREL reporting: checklist on reported liabilities and sign-off form	**-1.3%**	Greece (10%)

- **News 1 -** According to the F-test, the regression equation is significant at the 1% level. The coefficient of R-squared is 0.46. According to t-tests, the variables for following countries are significant: Austria (10%), Croatia (5%), Greece (1%), Germany (10%). The strong reaction in Greece may be explained by the fact that at the time Greece was going through government debt crisis and in 2015 had to require another round of bailout loans from the IMF. Reactions in Austria is in line with the indication made that this is one of the first countries to be adopting the MREL, therefore the more advanced the process is the stronger the reaction may appear to be.
- **News 2 -** According to t-tests, the following variables are significant: the Netherlands (10%), Austria (5%), Denmark (5%), Cyprus (5%), Romania (5%).
- **News 3 -** According to t-tests, the following variables are significant: Italy (10%), Poland (1%), Greece (1%). Unexpectedly from the first sight, the Austrian is not among the countries whose coefficient is significant. But in practice this may be related to the factor that the banks in the process of collecting and providing information had a chance to assess better their MREL positions on their own and thus the reaction may would have been somewhat smeared.
- **News 4 -** According to t-tests, only the variable for Greece (1%) is significant.
- **News 5 -** According to t-tests, only the variable for Greece is also significant (10%).

Regression equations for news 1, 2 and 3 showed that there are quite strong differences between countries in terms of CAR. No such differences were observed for news 4 and 5. In general, hypothesis 2 is confirmed: country differences significantly affect the reaction of European bank stock prices to the introduction of MREL requirements.

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6. Conclusion

Conclusions / Findings

1. Most of the important events related to the MREL standards had a negative impact on the share prices of European banks,

2. Investors reacted negatively to the first news but were prepared for the fact that there would be news about the launch of a new regulatory system in European countries such as MREL.

3. The earlier news about the publication of MREL standards received a strong reaction in many countries of the European Union. In particular, the coefficients for such countries as Austria, Croatia, Greece, and Germany were significant.

4. The process of implementing MREL is quite complex and controversial. Investors adjust their expectations as new standards, requirements, clarifications appear.

5. Burden falls on European banks. The profitability of the banks that are having difficulties to generate margins could be even more squeezed if they fail to successfully digest to new regulatory requirements.

6. Practical examples show, the liquidity issues, that arise in most cases in hand with solvency, remain unsolved, and they are not less important for the smooth process of resolution.

7. One of priorities, on the way to completing the Banking Union, remains the topic of building a solution for liquidity issues in resolution and building a common deposit guarantee system.

Final Q&A

Useful materials

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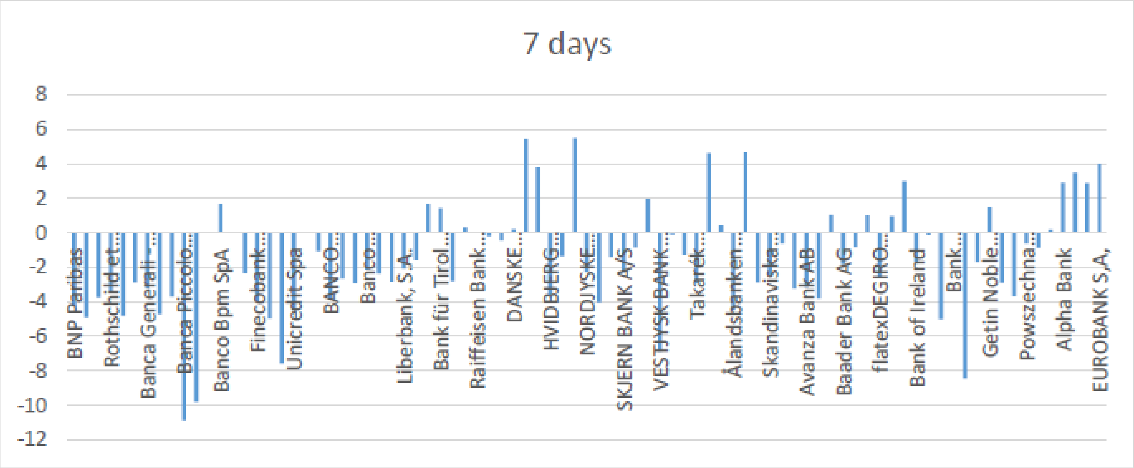
List of Abbreviations

AAR	Average Abnormal Returns
BCBS	Basel Committee on Banking Supervision
BRRD	Bank Recovery and Resolution Directive
CBR	Combined Buffer Requirement
CCB	Capital Conservation Buffer
CET1	Common Equity Tier 1
CRD	Capital Requirements Directive
CRR	Capital Requirements Regulation
EBA	European Banking Authority
ECB	European Central Bank
EU	European Union
FSB	Financial Stability Board
G-SII	Global Systemically Important Institutions
IMF	International Monetary Fund
LCR	Liquidity Coverage Ratio
M-MDA	MREL Maximum Distributable Amount
MDA	Maximum Distributable Amount
MPE	Multiple Point of Entry
MREL	Minimum Requirement for own funds and Eligible Liabilities
NSFR	Net Stable Funding Ratio
O-SII	Other Systemically Important Institutions
P1R	Pillar 1 Requirement
P2G	Pillar 2 Guidance
P2R	Pillar 2 Requirement
RWA	Risk-Weighted Assets
SPE	Single Point of Entry
SRB	Single Resolution Board
SREP	Supervisory Review and Evaluation Process
SRM	Single Resolution Mechanism
SRMR	Single Resolution Mechanism Regulation
SSM	Single Supervisory Mechanism
T1	Tier 1

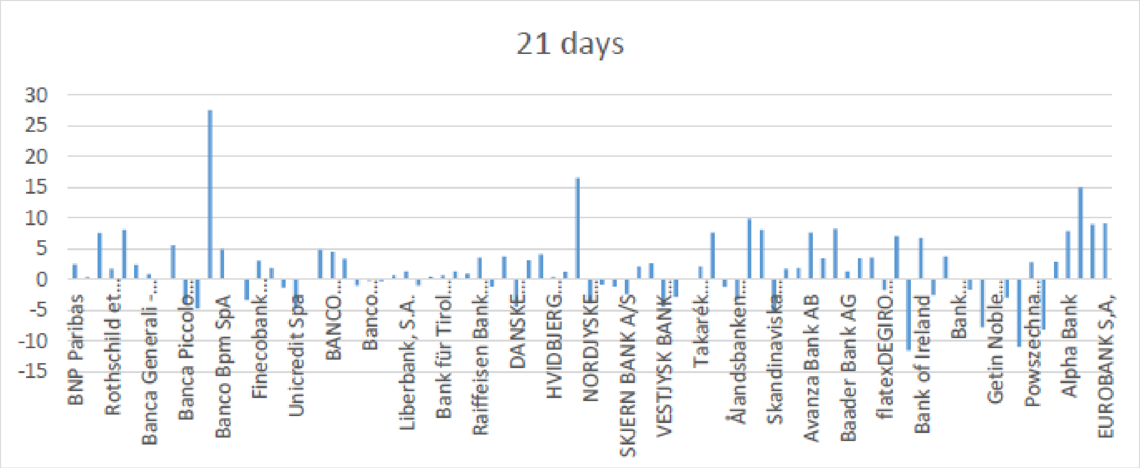
Annexes

Event Study results

News 1 - EBA Final Draft Regulatory Technical Standards on criteria for determining the minimum requirement for MREL (July 3, 2015).



AAR = -1.89%

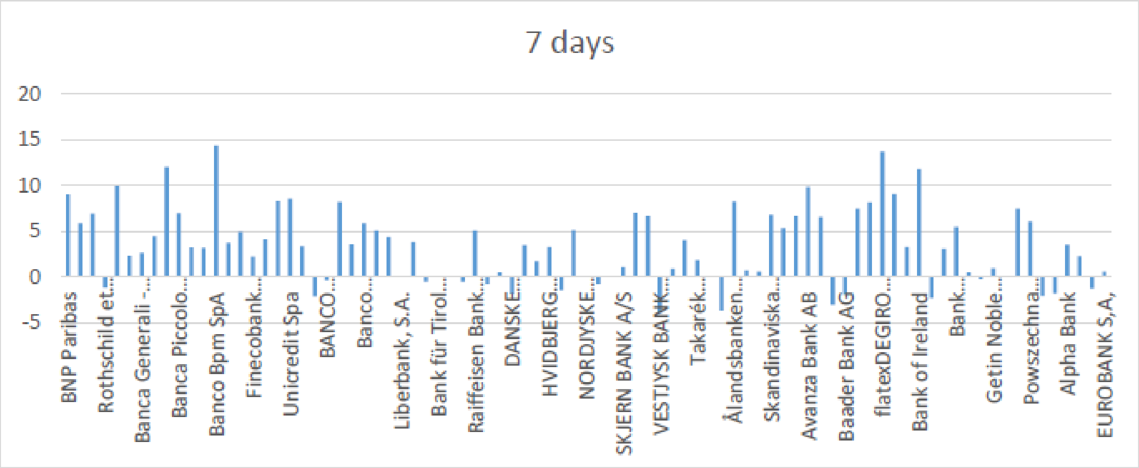


AAR = 1.7%

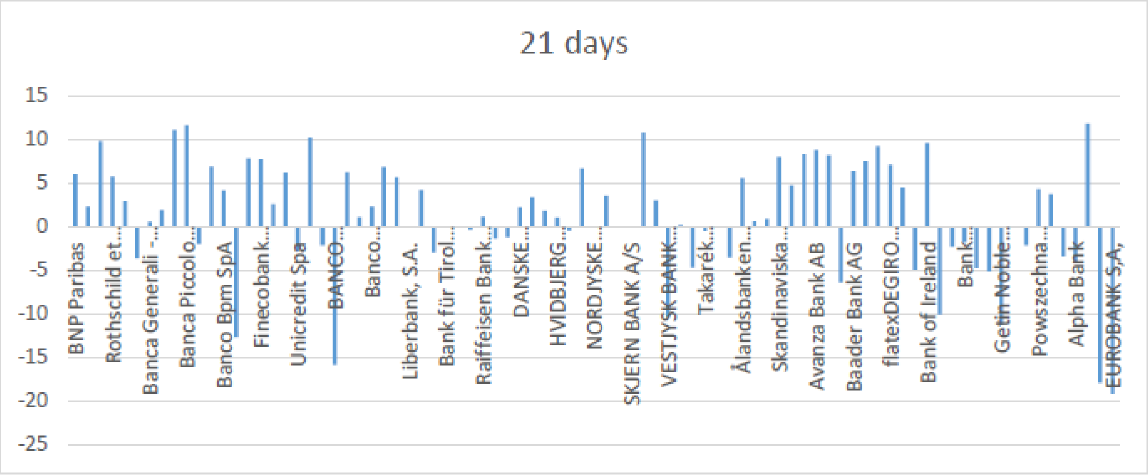
Annexes

Event Study results

News 2 - European Commission specifies criteria for banks to hold easily 'bailinable' instruments in case of resolution (May 23, 2016).



AAR = 3.3%

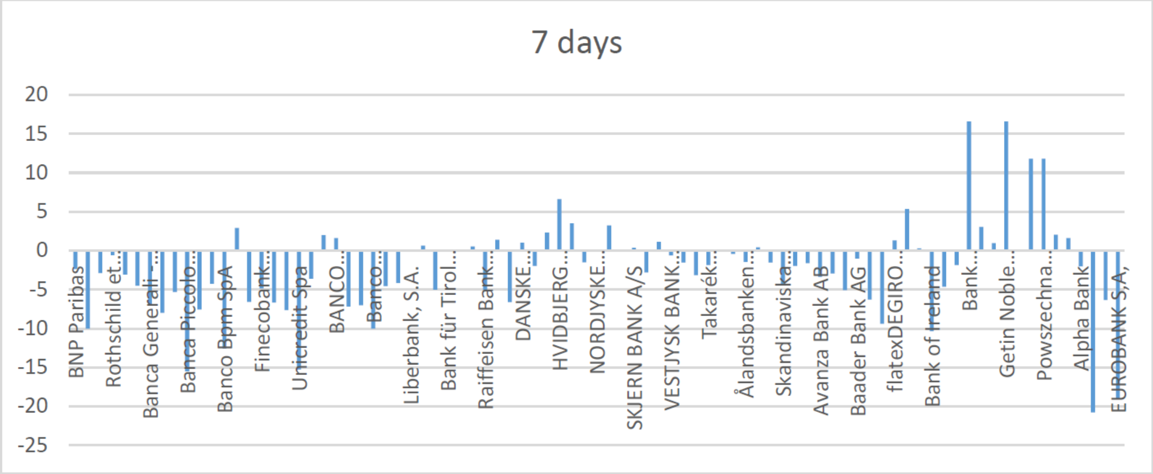


AAR = 1.29%

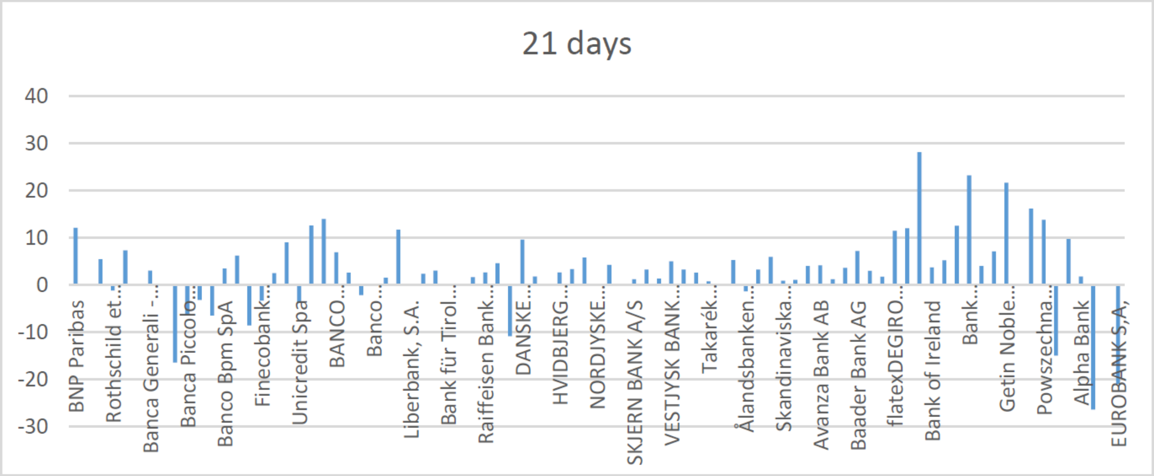
Annexes

Event Study results

News 3 - MREL assessment for Austrian banks and selected subsidiaries in the EU (July 31, 2016).



AAR = -2.92%



AAR = 2.8%

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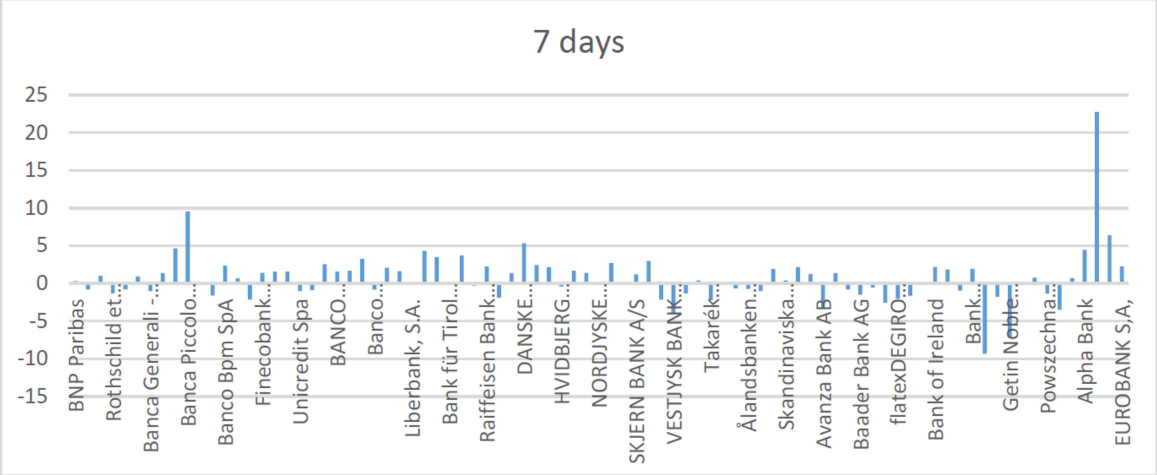
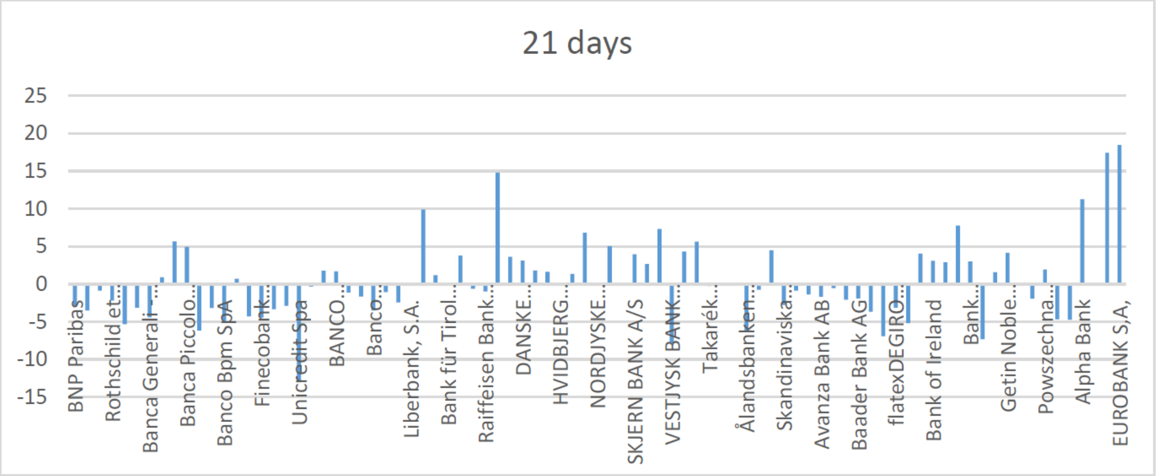
Event Study results

News 4 - Publication of new MREL policy (December 20, 2017).



AAR = 0.78%

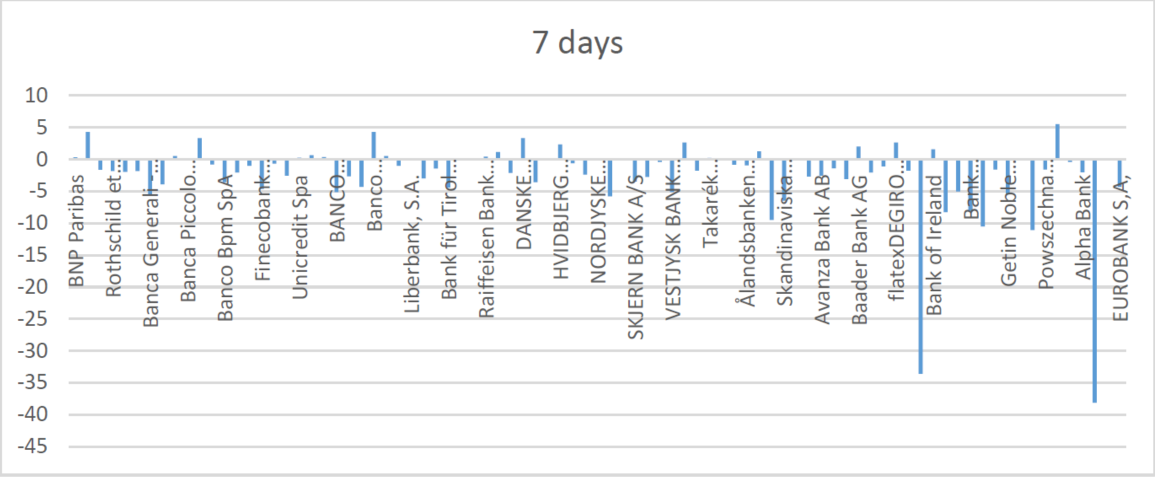


AAR = 0.38%

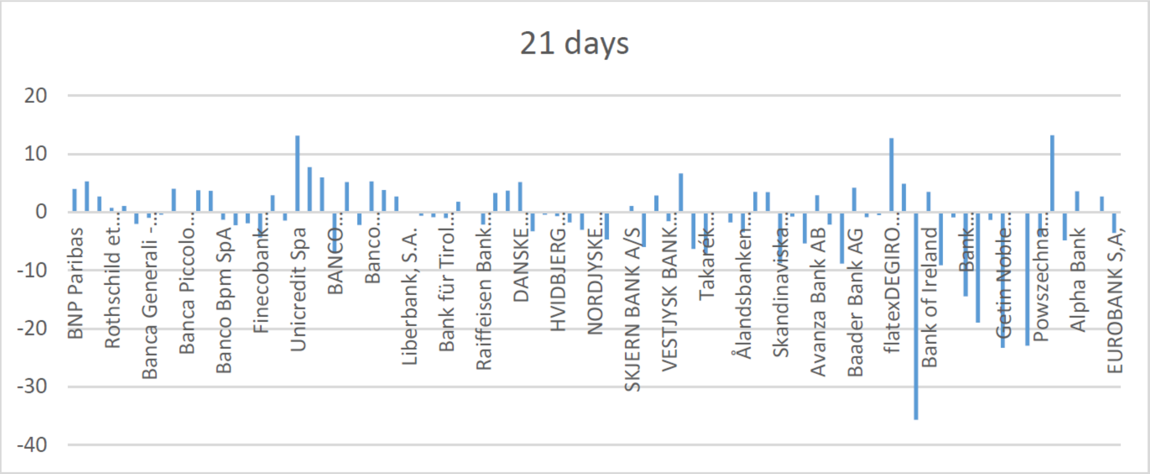
Annexes

Event Study results

News 5 - MREL reporting: checklist on reported liabilities and sign-off form (December 17, 2021)



AAR = -1.27%



AAR = -0.98%

Annexes

Regression Analysis results

Source	SS	df	MS		
Model	383.850903	17	22.5794649	Number of obs =	81
Residual	449.716821	63	7.13836224	F(17, 63) =	3.16
				Prob > F =	0.0005
Total	833.567725	80	10.4195966	R-squared =	0.4605
				Adj R-squared =	0.3149
				Root MSE =	2.6718

CAR1	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
France	-1.544727	1.617838	-0.95	0.343	-4.777718	1.688265
Italy	-2.04621	1.335886	-1.53	0.131	-4.715764	.6233447
Netherlands	1.631438	2.885843	0.57	0.574	-4.135459	7.398335
Portugal	-1.197442	2.885843	-0.41	0.680	-6.964339	4.569455
Spain	.3327117	1.486436	0.22	0.824	-2.637694	3.303118
Austria	2.757758	1.542548	1.79	0.079	-.3247778	5.840294
Czech	2.265965	2.885843	0.79	0.435	-3.500932	8.032862
Denmank	2.266504	1.303691	1.74	0.087	-.3387144	4.871723
Hungary	.5862806	2.181492	0.27	0.789	-3.773084	4.945645
Croatia	7.307644	2.885843	2.53	0.014	1.540747	13.07454
Cyprus	3.110337	2.885843	1.08	0.285	-2.656559	8.877234
Finland	2.791443	2.181492	1.28	0.205	-1.567921	7.150807
Germany	2.789945	1.486436	1.88	0.065	-.1804611	5.760351
Ireland	.9883364	2.885843	0.34	0.733	-4.778561	6.755233
Poland	.06552	1.442921	0.05	0.964	-2.817928	2.948968
Romania	2.333676	2.181492	1.07	0.289	-2.025689	6.69304
Greece	5.994816	1.724621	3.48	0.001	2.548436	9.441196
_cons	-2.688358	1.090746	-2.46	0.016	-4.86804	-.5086762

News 1 - EBA Final Draft Regulatory Technical Standards on criteria for determining the minimum requirement for MREL (July 3, 2015).

Source	SS	df	MS		
Model	492.928782	16	30.8080489	Number of obs =	78
Residual	845.880393	61	13.8668917	F(16, 61) =	2.22
				Prob > F =	0.0133
Total	1338.80918	77	17.3871321	R-squared =	0.3682
				Adj R-squared =	0.2025
				Root MSE =	3.7238

CAR2	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
France	.1564192	2.25489	0.07	0.945	-4.352511	4.66535
Italy	-.1903994	1.817042	-0.10	0.917	-3.823799	3.443
Netherlands	-5.373434	3.040492	-1.77	0.082	-11.45327	.7064067
Portugal	-6.328978	4.022193	-1.57	0.121	-14.37185	1.713895
Spain	-.8315542	2.149953	-0.39	0.700	-5.130651	3.467542
Austria	-5.163307	2.40372	-2.15	0.036	-9.969843	-.3567714
Czech	-5.498037	4.022193	-1.37	0.177	-13.54091	2.544836
Denmank	-4.199469	1.861914	-2.26	0.028	-7.922596	-.4763423
Hungary	-3.022495	3.040492	-0.99	0.324	-9.102336	3.057345
Croatia	0	(omitted)				
Cyprus	-9.650592	4.022193	-2.40	0.019	-17.69346	-1.607719
Finland	-1.486368	3.040492	-0.49	0.627	-7.566208	4.593473
Germany	-.7393815	2.071746	-0.36	0.722	-4.882094	3.403331
Ireland	5.838756	4.022193	1.45	0.152	-2.204117	13.88163
Poland	-3.348266	2.011097	-1.66	0.101	-7.369703	.6731701
Romania	-7.919064	3.040492	-2.60	0.012	-13.9989	-1.839223
Greece	-4.682737	2.40372	-1.95	0.056	-9.489273	.123799
_cons	5.984592	1.520246	3.94	0.000	2.944672	9.024512

News 2 - European Commission specifies criteria for banks to hold easily 'bailinable' instruments in case of resolution (May 23, 2016).

Source	SS	df	MS		
Model	1721.06248	16	107.566405	Number of obs =	78
Residual	1458.4532	61	23.9090688	F(16, 61) =	4.50
				Prob > F =	0.0000
Total	3179.51568	77	41.2924114	R-squared =	0.5413
				Adj R-squared =	0.4210
				Root MSE =	4.8897

CAR3	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
France	-1.154096	2.960854	-0.39	0.698	-7.07469	4.766498
Italy	-4.703184	2.385924	-1.97	0.053	-9.474135	.0677671
Netherlands	1.836256	3.992415	0.46	0.647	-6.147072	9.819584
Portugal	4.232783	5.281469	0.80	0.426	-6.328167	14.79373
Spain	-2.749284	2.823064	-0.97	0.334	-8.394349	2.895781
Austria	.5919448	3.156281	0.19	0.852	-5.71943	6.903319
Czech	-3.96914	5.281469	-0.75	0.455	-14.53009	6.59181
Denmank	3.439029	2.444845	1.41	0.165	-1.449741	8.327798
Hungary	.1395757	3.992415	0.03	0.972	-7.843752	8.122903
Croatia	0	(omitted)				
Cyprus	2.227174	5.281469	0.42	0.675	-8.333776	12.78812
Finland	2.110243	3.992415	0.53	0.599	-5.873085	10.09357
Germany	.523463	2.720372	0.19	0.848	-4.916258	5.963184
Ireland	-7.710826	5.281469	-1.46	0.149	-18.27178	2.850124
Poland	9.417585	2.640734	3.57	0.001	4.13711	14.69806
Romania	4.447418	3.992415	1.11	0.270	-3.53591	12.43075
Greece	-9.38441	3.156281	-2.97	0.004	-15.69578	-3.073035
_cons	-2.632903	1.996208	-1.32	0.192	-6.624567	1.358761

News 3 - MREL assessment for Austrian banks and selected subsidiaries in the EU (July 31, 2016).

Annexes

Regression Analysis results

Source	SS	df	MS
Model	406.714149	16	25.4196343
Residual	651.286526	62	10.5046214
Total	1058.00067	78	13.5641112

Number of obs	79
F(16, 62)	2.42
Prob > F	0.0068
R-squared	0.3844
Adj R-squared	0.2256
Root MSE	3.2411

CAR4	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
France	-.9587094	1.962573	-0.49	0.627	-4.881838	2.964419
Italy	.6469555	1.581487	0.41	0.684	-2.514391	3.808303
Netherlands	.2028166	2.646333	0.08	0.939	-5.087129	5.492762
Portugal	.9399508	3.50077	0.27	0.789	-6.057989	7.937891
Spain	1.384155	1.87124	0.74	0.462	-2.356401	5.124711
Austria	.8089012	1.962573	0.41	0.682	-3.114227	4.73203
Czech	.7390922	3.50077	0.21	0.833	-6.258848	7.737032
Denmank	.3612962	1.620542	0.22	0.824	-2.87812	3.600713
Hungary	-1.551744	2.646333	-0.59	0.560	-6.84169	3.738201
Croatia	0	(omitted)				
Cyprus	-1.290199	3.50077	-0.37	0.714	-8.288138	5.707741
Finland	-1.509143	2.646333	-0.57	0.571	-6.799088	3.780803
Germany	-1.901684	1.803172	-1.05	0.296	-5.506174	1.702806
Ireland	1.531939	3.50077	0.44	0.663	-5.466001	8.529879
Poland	-2.639911	1.750385	-1.51	0.137	-6.138881	.8590593
Romania	-2.044661	2.646333	-0.77	0.443	-7.334607	3.245284
Greece	8.327783	2.09211	3.98	0.000	4.145714	12.50985
_cons	.6421328	1.323167	0.49	0.629	-2.00284	3.287105

News 4 - Publication of new MREL policy (December 20, 2017).

Source	SS	df	MS
Model	685.293187	16	42.8308242
Residual	2389.55606	62	38.5412268
Total	3074.84925	78	39.4211442

Number of obs	79
F(16, 62)	1.11
Prob > F	0.3650
R-squared	0.2229
Adj R-squared	0.0223
Root MSE	6.2082

CAR5	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
France	3.593631	3.759226	0.96	0.343	-3.920956	11.10822
Italy	2.02843	3.064025	0.66	0.510	-4.096468	8.153328
Netherlands	4.250342	5.06894	0.84	0.405	-5.882324	14.38301
Portugal	-1.36037	6.705577	-0.20	0.840	-14.76463	12.04389
Spain	2.72932	3.584282	0.76	0.449	-4.435557	9.894198
Austria	2.998668	3.584282	0.84	0.406	-4.166209	10.16355
Czech	1.621778	6.705577	0.24	0.810	-11.78248	15.02604
Denmank	2.43544	3.104079	0.78	0.436	-3.769525	8.640406
Hungary	2.965835	5.06894	0.59	0.561	-7.166831	13.0985
Croatia	0	(omitted)				
Cyprus	2.920606	6.705577	0.44	0.665	-10.48365	16.32486
Finland	3.90275	5.06894	0.77	0.444	-6.229917	14.03542
Germany	-1.542953	3.4539	-0.45	0.657	-8.447202	5.361295
Ireland	5.321793	6.705577	0.79	0.430	-8.082464	18.72605
Poland	-2.700733	3.352789	-0.81	0.424	-9.402862	4.001395
Romania	6.290803	5.06894	1.24	0.219	-3.841864	16.42347
Greece	-7.392833	4.007349	-1.84	0.070	-15.40341	.6177432
_cons	-3.740676	2.53447	-1.48	0.145	-8.807009	1.325657

News 5 - MREL reporting: checklist on reported liabilities and sign-off form (December 17, 2021)

Annexes

List of companies for event study and regression analysis

Company	Country
BNP Paribas	France
Natixis	France
Société générale	France
Rothschild et compagnie banque	France
Crédit Agricole Group	France
Banca Finnat Euramerica S,p,a,	Italy
Banca Generali - SpA	Italy
Banca Mediolanum S,p,a,	Italy
Banca Monte dei Paschi di Siena S,p,a,	Italy
Banca Piccolo Credito Valtellinese, SpA	Italy
Banca Popolare di Sondrio, SCpA	Italy
Banca Profilo S,p,a,	Italy
Banco Bpm SpA	Italy
Banco di Desio e della Brianza - SpA	Italy
Credito Emiliano S,p,a,	Italy
Finecobank Banca Fineco S,p,a,	Italy
Intesa Sanpaolo S,p,a,	Italy
Mediobanca - Banca di Credito Finanziario S,p,a,	Italy
Unicredit Spa	Italy
AEGON Bank NV	Netherlands
Van Lanschot Kempen NV	Netherlands
BANCO COMERCIAL PORTUGUÊS, SA	Portugal
Banco Bilbao Vizcaya Argentaria, S,A,	Spain
Banco de Sabadell, S,A,	Spain
Banco Santander, S,A,	Spain
Bankinter, S,A,	Spain
Caixabank, S,A,	Spain
Liberbank, S.A.	Spain
Renta 4 Banco, S,A,	Spain
Erste Group Bank AG	Austria
Bank für Tirol und Vorarlberg AG	Austria
BAWAG P,S,K,	Austria
Oberbank AG	Austria
Raiffeisen Bank International AG	Austria
Wiener Privatbank SE	Austria
Komerční banka, a,s,	Czech
DANSKE ANDELSKASSERS BANK A/S	Denmank
DANSKE BANK A/S	Denmank
DJURSLANDS BANK A/S	Denmank
HVIDBJERG BANK, A/S	Denmank

JUTLANDER BANK A/S	Denmank
JYSKE BANK A/S	Denmank
NORDJYSKE BANK A/S	Denmank
RINGKJØBING LANDBOBANK, A/S	Denmank
SALLING BANK A/S	Denmank
SKJERN BANK A/S	Denmank
SYDBANK A/S	Denmank
TOTALBANKEN A/S	Denmank
VESTJYSK BANK A/S	Denmank
ALM, BRAND BANK A/S	Denmank
OTP Bank Nyrt	Hungary
Takarek Jelzalogbank Nyrt	Hungary
Slatinska banka d.d.	Croatia
Hellenic Bank Public Company Ltd	Cyprus
Ålandsbanken Abp	Finland
Aktia Bank Plc	Finland
Hoist Finance AB (publ)	Sweden
Skandinaviska Enskilda Banken AB	Sweden
Svenska Handelsbanken AB	Sweden
Swedbank AB	Sweden
Avanza Bank AB	Sweden
Nordea Bank AB	Sweden
Aareal Bank AG	Germany
Baader Bank AG	Germany
Commerzbank AG	Germany
Deutsche Bank AG	Germany
flatexDEGIRO Bank AG	Germany
GRENKE BANK AG	Germany
Norddeutsche Landesbank Girozentrale	Germany
Bank of Ireland	Ireland
Alior Bank S,A,	Poland
Bank Handlowy w Warszawie S,A,	Poland
Bank Millennium S,A,	Poland
Bank Ochrony Środowiska S,A,	Poland
Bank Polska Kasa Opieki S,A,	Poland
Getin Noble Bank S,A,	Poland
Idea Bank S.A.	Poland
mBank S,A,	Poland
Powszechna Kasa Oszczędności Bank Polski S,A,	Poland
BANCA TRANSILVANIA S,A,	Romania
PATRIA BANK S,A,	Romania
Alpha Bank	Greece
Attica Bank S,A,	Greece
National Bank of Greece	Greece
EUROBANK S,A,	Greece