Council of the European Union

Brussels, 7 December 2016
(OR. en)

14775/16
ADD 2 REV 1

Interinstitutional File:
2016/0360 (COD)

EF 351
ECOFIN 1096
CCG 12

COVER NOTE

No. Cion doc.:	SWD(2016) 377 final/2
Subject:	COMMISSION STAFF WORKING DOCUMENT IMPACT ASSESSMENT Accompanying the document Proposal amending: - Regulation (EU) No 575/2013 on prudential requirements for credit institutions and investment firms; - Directive 2013/36/EU on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms; - Directive 2014/59/EU establishing a framework for the recovery and resolution of credit institutions and investment firms; - Regulation (EU) No 806/2014 of the European Parliament and of the Council of 15 July 2014 establishing uniform rules and a uniform procedure for the resolution of credit institutions and certain investment firms in the framework of a Single Resolution Mechanism and a Single Resolution Fund

Delegations will find attached a **new version** of document SWD(2016) 377 final/2.

Encl.: SWD(2016) 377 final/2

EUROPEAN
COMMISSION

Brussels, 24.11.2016
SWD(2016) 377 final/2

CORRIGENDUM
This document replaces SWD(2016) 377 final of 23.11.2016.
Insertion of cross-references

COMMISSION STAFF WORKING DOCUMENT

IMPACT ASSESSMENT

Accompanying the document

Proposal amending: - Regulation (EU) No 575/2013 on prudential requirements for credit institutions and investment firms; - Directive 2013/36/EU on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms; - Directive 2014/59/EU establishing a framework for the recovery and resolution of credit institutions and investment firms; - Regulation (EU) No 806/2014 of the European Parliament and of the Council of 15 July 2014 establishing uniform rules and a uniform procedure for the resolution of credit institutions and certain investment firms in the framework of a Single Resolution Mechanism and a Single Resolution Fund

{COM(2016) 850 final}
{COM(2016) 851 final}
{COM(2016) 852 final}
{COM(2016) 853 final}
{COM(2016) 854 final}
{SWD(2016) 378 final}

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1. INTRODUCTION

Financial crises, particularly when they involve the banking sector, can result in huge costs, both in terms of direct fiscal costs and associated costs for the real economy. The 2007-2008 financial crisis was a case in point. Between the years 2008 and 2014 EU governments used almost €2 trillion in State aid (an amount equal to almost 14% of the 2014 EU GDP) to rescue the financial sector[1]. The losses to economic activity due to the crisis were also significant. Some estimates[2] show that the present value of cumulative output losses across the EU may amount to 50-100 % of annual pre-crisis EU GDP (about €6-12.5 trillion), if not more. For the euro area alone, output is now 20% below the level it would have achieved had the trend growth in the previous 15 years continued after 2007. Furthermore, according to some estimates, the present value of the total loss of output until 2030 would represent more than three times the whole economic output of the euro area in 20083.

In response to the crisis the EU implemented a substantial reform of the financial services regulatory framework in order to enhance the resilience of EU institutions (the term institution is used to refer to both credit institutions (i.e. banks) and investment firms, as both are subject to the requirements of the CRR and the CRD IV) and thus increase EU financial stability. Two legislative initiatives targeted institutions, in particular:

- Regulation (EU) No 575/2013, also known as the Capital Requirements Regulation (CRR)4 and Directive 2013/36/EU, also known as the fourth revision of the Capital Requirements Directive (CRD IV)[5] enhanced prudential requirements for institutions by implementing

[1] See http://ec.europa.eu/competition/state_aid/scoreboard/financial_economic_crisis_aid_en.html.

[2] Economic Review of the Financial Regulation Agenda, Commission Staff Working Document, 2014, p. 42.

[3] Lecture by Vítor Constâncio, Vice-President of the ECB, at the Conference on "European Banking Industry: what's next?", organised by the University of Navarra, Madrid, 7 July 2016

[4] Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012 (OJ L 321, 26.6.2013, p. 6)

[5] Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC (OJ L 176, 27.6.2013, p. 338).

global standards adopted by the Basel Committee on Banking Supervision (BCBS)[6] in December 2010;

- Directive 2014/59/EU, also known as the Bank Recovery and Resolution Directive (BRRD)7 and Regulation (EU) No 806/2014[8] on the Single Resolution Mechanism introduced a new recovery and resolution framework for dealing with institutions that are failing or likely to fail, including a minimum requirement for own funds and eligible liabilities (MREL). The main objectives of the Directive are to maintain financial stability and minimise losses for society in general and tax payers in particular in case an institution fails.

The new EU regulatory framework has contributed to reinforcing financial stability, restoring investor confidence and allowing institutions to play their fundamental role in supporting economic recovery. The adoption of the Basel III framework at international level, and of the legislative initiatives mentioned above at EU level, did not mark the end of the post-crisis reform. Work continued on several elements which were left outstanding at the time. For example, while Basel III introduced a requirement to calculate and disclose a leverage ratio, it did not introduce a capital requirement based on that leverage ratio; that was to be introduced in 2018. Similarly, although the BCBS had agreed on the necessity of introducing liquidity requirements, the Basel III framework actually did not provide detailed rules for those requirements; those were published later. Moreover, the BCBS has carried out a fundamental review of the trading book framework to address the flaws of the existing rules unveiled by the financial crisis.

The BCBS was not the only international body involved in the post-crisis reform. Following a call from G20 Leaders, the Financial Stability Board (FSB) in November 2015 issued standards[9] aimed at ensuring that global systemically important banks (G-SIBs) have sufficient loss-absorbing capacity to be recapitalised in case they fail. This work has led to the introduction of standards on total loss-absorbing capacity (TLAC).

At EU level, the Commission carried out various initiatives in order to assess whether the existing prudential framework and the upcoming reviews of global standards were the most adequate instruments to ensure that EU institutions would continue to provide the necessary funding to the EU economy.

In particular, the Commission launched in July 2015 a public consultation on the possible impact of the CRR and the CRD IV on bank financing of the EU economy with a particular focus on the financing of micro, small and medium-sized enterprises (SMEs) and of infrastructure and in September 2015 a Call for Evidence (CfE)[10] covering EU financial legislation as a whole. The

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6 Those standards are known as the Basel III framework or Basel III.

7 Directive 2014/59/EU of the European Parliament and of the Council of 15 May 2014 establishing a framework for the recovery and resolution of credit institutions and investment firms and amending Council Directive 82/891/EEC, and Directives 2001/24/EC, 2002/47/EC, 2004/25/EC, 2005/56/EC, 2007/36/EC, 2011/35/EU, 2012/30/EU and 2013/36/EU, and Regulations (EU) No 1093/2010 and (EU) No 648/2012, of the European Parliament and of the Council (OJ L 173, 12.6.2014, p. 190)

8 Regulation (EU) No 806/2014 of the European Parliament and of the Council of 15 July 2014 establishing uniform rules and a uniform procedure for the resolution of credit institutions and certain investment firms in the framework of a Single Resolution Mechanism and a Single Resolution Fund and amending Regulation (EU) No 1093/2010

9 November 2015 by the Financial Stability Board: http://www.fsb.org/wp-content/uploads/20151106-TLAC-Press-Release.pdf

10 See http://ec.europa.eu/finance/consultations/2015/long-term-finance/docs/consultation-document_en.pdf and http://ec.europa.eu/finance/consultations/2015/financial-regulatory-framework-review/docs/consultation-document_en.pdf.

two initiatives sought empirical evidence and concrete feedback on i) rules affecting the ability of the economy to finance itself and growth, ii) unnecessary regulatory burdens, iii) interactions, inconsistencies and gaps in the rules, and iv) rules giving rise to unintended consequences. In addition, the Commission carried out specific analysis on rules relating to remuneration[11] and on the proportionality of the rules contained in the CRR and the CRD IV.[12] Finally, the Commission contracted a study to assess the impact of CRR on the bank financing of the economy[13].

All the initiatives mentioned above have provided clear evidence of the need to update and complete the current rules in order i) to reduce further the risks in the banking sector and thereby reduce the reliance on State aid and taxpayers' money in case of a crisis, and ii) to enhance the ability of institutions to channel adequate funding to the economy. More specifically, the evidence that was collected demonstrates that the existing EU rules:[14]

- are not able to cover all risks that institutions face;
- are not always sufficiently risk-sensitive and able to take into account adequately all relevant risk drivers;
- are too complex or too burdensome and create excessive compliance costs for smaller institutions;
- are not always formulated in a sufficiently clear way and can give rise, in places, to different interpretations and applications; and
- do not always support economic growth.

In order to enhance the resilience of EU institutions and thereby increase financial stability, this impact assessment considers various options for incorporating the remaining elements of the regulatory framework recently agreed by the BCBS and for enhancing legal certainty, especially in the area of resolution. The options considered in this impact assessment aim at:

- better addressing the long-term funding risk;
- reducing excessive leverage;
- increasing the loss absorption and recapitalisation capacity of global systemically important institutions (G-SIIs);
- better addressing market risks by increasing the risk sensitivity of the existing rules; and
- increasing legal certainty and enhancing convergence among Member States (MS) in the area of insolvency law and restructuring proceedings, particularly in the area of creditor hierarchy and the use of the moratorium tool.

Many of the measures considered in this impact assessment are included in the roadmap developed by the Commission in response to a request from the Council to complete the Banking

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[11] Commission Report COM(2016)510 Report from the Commission to the European Parliament and the Council of 28 July 2016 – Assessment of the remuneration rules under Directive 2013/36/EU and Regulation (EU) No 575/2013.

[12] The Call for Evidence was intended to cover the entire spectrum of the financial services regulation. The impact assessment address issues limited to the areas of banking only. Other issues involving other segments of the EU financial legislation will be dealt with separately.

[13] Insert the link to the study

[14] Respondents to the CfE also argued that rules agreed by the BCBS but not yet included in the CRR and the CRD IV would have a disproportionate impact on certain activities and business models.

Union. These measures are seen as flanking measures in the context of the establishment of the European Deposit Insurance Scheme (EDIS).[15]

When contemplating the introduction of the above measures, a number of options contained in this impact assessment explore the possibility of adjusting the calibration of some of the new/revised Basel standards (e.g. the leverage ratio, the market risk rules) to reflect better the specificities of EU institutions and the EU economy. The aim of those adjustments is to avoid situations in which the strengthening of prudential requirements could lead to insufficient lending to the economy.

Furthermore, some of the other options related to the above measures explore potential adjustment aimed at mitigating potential disincentives for certain activities carried out by institutions which are important for the efficient functioning of capital markets. This is necessary because, in addition to their fundamental role of providing finance to the economy, institutions are also important actors on capital markets, as issuers of or investors in securities and other financial instruments (e.g. covered bonds, securitisations). They also play an important role in facilitating the efficient functioning of those markets by providing essential services, such as underwriting or market making. The Commission has already tabled a proposal[16] to increase the efficiency and soundness of the EU securitisation market including measures to enhance the role of institutions in this market, both as investors and as issuers. The abovementioned options consider additional ways in which to foster the creation of a Capital Markets Union (CMU). Specifically, they are looking at how the measures would need to be adjusted in order to:

- avoid disproportionate capital requirements for trading book positions, including those related to market making activities;
- reduce the costs of issuing/holding certain instruments (covered bonds, high quality securitisation instruments, sovereign debt instruments, derivatives for hedging purposes);
- avoid an increase in the costs of providing services to clients for trades cleared by central counterparties (CCPs).

Lastly, some of the options related to the abovementioned measures contemplate adjustments aimed at preventing any potential unfavourable treatment for business areas which are particularly important for cross-border trade. Specifically, they explore the possibility of introducing a more risk-sensitive treatment for trade finance instruments within the contemplated rules on the net stable funding ratio (NSFR) and on the leverage ratio.

In addition to the abovementioned measures aimed at enhancing the resilience of EU institutions, this impact assessment also contemplates measures aimed at:

- enhancing the risk-sensitivity of capital requirements for exposures to SMEs;
- reducing the administrative costs linked to some rules in the area of remuneration (namely those on deferral and pay-out in instruments); and
- making the rules contained in the CRR and CRD IV more proportionate and hence less burdensome for smaller and less complex institutions.

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[15] Communication from the Commission to the European Parliament, the Council, the European Central Bank, the European Economic and Social Committee and the Committee of the Regions "Towards the completion of the Banking Union", COM/2015/0587 final. See also the Council conclusions on a roadmap to complete the Banking Union of 17/6/2016.

[16] See http://ec.europa.eu/finance/securities/securitisation/index_en.htm for more details.

Finally, in addition to all the measures described above, which would constitute the main building blocks of a potential proposal by the Commission and which are expected to have the largest impact on EU institutions in case they would be introduced, this impact assessment also considers the possibility of introducing several other measures. These measures are included in the impact assessment for reasons of completeness, as their introduction is seen as largely uncontroversial and straightforward and would generally have a limited impact. These measures would:

- implement a number of changes, most of them agreed at international level, to better specify the technical aspects of certain existing rules (calculation of the exposure value of derivatives in the counterparty credit risk framework, disclosure requirements, capital requirements for equity investments in funds, large exposures limits, rules on exposures to CCPs, changes to MREL, application of International Financial Reporting Standard 9 (IFRS 9));
- clarify existing rules on the basis of the outcomes of the CfE or other consultations with stakeholders (Pillar 2 requirements, exemptions from large exposures limits, supervisory reporting, contractual recognition of bail-in); or
- enhance the overall consistency of the treatment of investments in infrastructure projects between the CRR and CRD IV on one side and Solvency II on the other. This would increase the contribution of the banking sector to the goal of mobilising additional private finance in the context of the Commission's **Investment Plan for Europe**[17].

For all the measures listed above the review at global or EU level has been already completed. In addition, there is widespread acceptance among stakeholders about the need to introduce those measures. In view of this, it is imperative to introduce these measures now in the interest of legal certainty and for the creation of a robust financial sector. This would allow the EU to meet the deadline agreed at global level for certain standards (e.g. on TLAC[18], leverage ratio[19], NSFR[20]) and fulfil the timeline requested by the Council for the risk-reduction measures included in the roadmap for the completion of the Banking Union[21]. Continuing work on risk-reduction in the Banking Union remains a top priority for the Commission[22].

In order to give institutions sufficient time to adapt to the new regulatory framework it is of the outmost importance to provide them with the necessary legal certainty regarding the exact shape of the new rules as quickly as possible. Institutions should also benefit without delay from the alleviations of the compliance burden envisaged by some of the measures, especially given the current economic context in the EU.

The list of preferred options responding to the problems analysed in the impact assessment as well as the indicative list of legislative amendments is presented in annex 6.

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17 Communication "An Investment Plan for Europe", COM(2014) 903 final

18 1 January 2019, agreed in November 2015 by the Financial Stability Board: http://www.fsb.org/wp-content/uploads/20151106-TLAC-Press-Release.pdf

19 1 January 2018, agreed in January 2016 by members of the Basel Committee's oversight body, the Group of Governors and Heads of Supervision (GHOS): http://www.bis.org/press/p160111.htm

20 1 January 2018, agreed in October 2016 by members of the Basel Committee: http://www.bis.org/bcbs/publ/d295.pdf

21 Council conclusions of 17 June 2016 on a roadmap to complete the Banking Union: http://www.consilium.europa.eu/press-releases-pdf/2016/6/47244642837_en.pdf

22 State of the Union 2016, page 28, priority 5.

This impact assessment does not include measures stemming from a strategic review of Basel III on the methods used to calculate the risk-based capital requirements for credit risk and operational risk as those changes are still under discussion at the BCBS level. The review is expected to be completed by the end of 2016. The Commission will consider whether and how to implement those measures once they are adopted at international level.

2. PROBLEM DEFINITION

Given the limited time elapsed since its entry into force, a fully-fledged evaluation of the CRR, the CRD IV and the BRRD could not be carried out yet. Nevertheless, the need of amending these instruments in order either to introduce new provisions or to review the existing ones has emerged as a result of the work carried out by the BCBS, obtaining evidence on the national implementation of the Directives or as an outcome of specific consultations and studies, solicited by the Commission (for more details see annexes 2 and 6).

The following issues have been identified in relation to the existing rules contained in the CRR and the CRD IV:

- they do not cover all risks that institutions face (e.g. the CRR currently does not foresee specific capital requirements to limit the leverage of institutions or specific funding requirements to limit the maturity mismatches between assets and liabilities);
- they are not always sufficiently risk sensitive (e.g. one of the simpler approaches used by institutions to calculate the size of their derivatives exposures does not fully take into account the risk reduction benefits of netting agreements);
- some of them are too complex or too burdensome for institutions (e.g. reporting and calculation methods), create in some cases excessive compliance costs (remuneration rules on deferral and pay-out in instruments), or may disproportionately affect certain activities or business models (including for new measures introduced to cover existing risks such as the leverage ratio);
- some of them are not formulated in a sufficiently clear way and give rise to different interpretations (e.g. there are different interpretations on the way in which the capital requirements in the CRR and the institution-specific capital and buffer requirements in the CRD IV interact).

As regards the BRRD existing rules, the following issues have been identified:

- certain MREL eligibility criteria are loosely defined, leaving room for interpretation (e.g. inclusion of large corporate deposits and certain types of structured notes);
- the adoption of the FSB's TLAC standard for global systemically important banks (G-SIBs) would create a misalignment with the existing MREL calibration conditions and a parallel standard for G-SIBs in the EU;
- regarding the insolvency ranking of unsecured debt, the requirement for subordination of certain unsecured senior claims is missing from the current text;
- Lack of clarity on supervisory reporting and public disclosure of items that meet MREL eligibility criteria;
- implementation issues with Article 55 BRRD on recognition of bail-in in third countries which was too prescriptive and led to the withdrawal of EU banks from business contracts with certain third countries;

on moratorium powers, BRRD already contains provisions allowing the suspension of payment obligations but these have been implemented in very different ways at national level and may not provide a sufficiently consistent application with respect to important elements such as the scope, phase of application, trigger conditions and duration of the suspension.

Sections 2.1 to 2.9 present the most important problems addressed by this impact assessment and concern the following areas:

- stable funding of institutions;
- capital requirements for risk of excessive leverage;
- capital requirements for exposures to SMEs;
- remuneration;
- insolvency ranking and moratorium in relation to the BRRD;
- proportionality.

For areas for which the solution to the identified problem is seen as largely straightforward and uncontroversial and as having limited impact, are presented in annex 3. They concern:

- capital requirements for derivative exposures;
- disclosure and supervisory reporting to primarily address proportionality issues;
- institution-specific (Pillar 2) capital requirements;
- equity investments into funds;
- capital requirements for specialised lending exposures (infrastructure);
- large exposure limits;
- capital requirements for exposures CCPs;
- contractual recognition of bail-in and changes to MREL;
- application of IFRS 9 by EU institutions.

2.1. Excessive reliance on short-term funding

When an institution takes decision regarding its balance sheet structure, it does not take into account all the impacts of its choice on the rest of the economy. In addition, private incentives to limit excessive reliance on unstable funding of core (often illiquid) assets are weak. Institutions may have private incentives to expand their balance sheets, often very quickly, relying on relatively cheap and abundant short-term wholesale funding. Rapid balance sheet growth increases the likelihood that individual institutions will face funding problems in case of liquidity shocks, and weakens their ability to respond to these shocks when they occur. As shown by the examples below, this fragility can have systemic implications when institutions fail to internalise the costs associated with large funding gaps. This can have negative consequences on financial stability in case of economic shocks.

During the financial crisis, institutions made use of excessive amounts of short-term wholesale funding to finance their long term activities. When short-term funding became unavailable, institutions were either forced to request emergency liquidity assistance from central banks or engage in 'fire sales' of assets, triggering a downward spiral in prices and eroding their liquidity

positions, with the ultimate consequence of driving a number of them into insolvency. Some credit institutions also had to be bailed-out by their governments. For example Hypo Real Estate Holding AG (HRE) had - through a subsidiary (Depfa Bank Plc) - funded its long term public sector and infrastructure loans either on the interbank market or through other short-term wholesale funding. Following the Lehman Brothers bankruptcy, it was unable to refinance itself on the wholesale market and requested State support. Ultimately, the state guaranteed more than €120 billion of HRE's liabilities and had to inject around €10 billion of capital to nationalise it[23]. Similarly, Northern Rock faced in the second half of 2007 substantial outflows of wholesale funds as maturing short-term loans and deposits used to fund its long-term assets were not renewed. This combined with the inability to tap the securitisation and covered bond markets led to a request for liquidity support from the Bank of England. The public announcement of this request led to a run on Northern Rock. The full year net outflow of wholesale funding amounted to £11.7 billion and by end-2007 a loan from the Bank of England amounted to approximately £28.5 billion[24]. Ultimately, in 2008, Northern Rock was nationalised. In both cases these crisis periods were preceded by years of extensive long-term assets growth without a similar increase in stable funding sources.

The CRR introduced a reporting requirement and a general requirement that long-term assets have to be adequately met with a diversity of stable funding instruments (liabilities) under both normal and stressed conditions. More detailed requirements to cover funding risk were not set at that time at EU level given that the BCBS was still in the process of completing its work to specify the NSFR requirement. Therefore, the current European regime does not provide an adequate framework to ensure that institutions' assets are sufficiently stably funded by their liabilities. The BCBS completed its work and published the NSFR standard in October 2014. In December 2015, the EBA submitted a report to the Commission on whether and how it would be appropriate to ensure that institutions use stable sources of funding and on the impact of such a requirement.

2.2. Excessive leverage

The financial crisis has shown that institutions' leverage can increase to unsustainable levels and have a pro-cyclical effect on the financial system. In the run up to the crisis, many investors, including institutions, actively sought higher yields as high levels of available liquidity resulted in risk premium falling to historically low levels. Low interest rates, combined with issues of moral hazard, pushed them to search for higher returns, whether through an increase in leverage or investment in more risky financial products. This caused a high level of financial fragility of individual institutions as well as the financial system as a whole. When prices of financial assets started to fall, institutions had to mark those assets to market thus recognising the losses incurred. This in turn forced institutions to de-leverage by selling assets in order to minimise regulatory capital requirements and meet margin calls from their counterparties. This prompted further decreases in asset prices. In short, institutions' leverage showed a pro-cyclical pattern: significant increase of leverage in financial booms and strong de-leveraging in financial downturns[25].

[23] Source: European Commission

[24] See Song (2009): *Reflections on Northern Rock: The Bank Run that Heralded the Global Financial Crisis,* Journal of Economic Perspectives, Volume 23, Number 1,Winter 2009, Pages 101–119

[25] See, for example, Haldane, A (2015): *Multi-polar regulation, International Journal of Central Banking*, Volume 11(3); Kalemli-Ozcan, Sorensen and Yesiltas (2011): *Leverage across firms, banks, and countries*, NBER working paper No. 17354; Altunbas, Manganelli and Marquez-Ibanez (2011): *Bank risk during the financial crisis: Do business models matter?*, ECB Working Paper No. 1394; Beltratti

Equally important, it was observed that institutions that were severely affected by this mechanism showed strong risk-based capital ratios before the crisis. This is due to the fact that risk-based capital requirements tend to vary over the economic cycle: they decrease as borrowers' creditworthiness improves during economic expansions and increase during economic downturns as borrowers' creditworthiness deteriorates. The combination of incentives for higher leverage before the crisis on one side and the irresponsiveness of regulatory capital requirements to the build-up of risk at the macro level on the other side enabled institutions to grow their balance sheets. While the countercyclical capital buffer introduced by the CRD IV aims at addressing this pro-cyclicality to a certain extent, it is not considered sufficient as it leaves certain discretion in setting the buffer rates.

Moreover, as shown by the recent crisis it is difficult to quantify systemic risk as well as to model accurately the different types of risks, in particular at the micro-level (i.e. at the level of the single institution). This makes risk-based capital measures less reliable and calls for the introduction of a simpler and non-risk-sensitive back-stop measure. The misperception of risk may be exacerbated by a strong industry-wide drive for profit, bonuses and moral hazard due to implicit safety nets. Hence during favourable macro-economic conditions, institutions would be prone to engage in a rapid expansion of their balance sheets without due consideration about implications for system-wide financial stability. As the ex-ante identification of systemic risks and formation of asset-bubbles is a very complex exercise, the introduction of a 'hard' leverage ratio would also help alleviate an excessive expansion of leverage.

Figures 1 and 2 provide an indication of how leverage has evolved for a selected number of credit institutions in the years prior to the financial crisis compared to risk based capital requirements. As can be seen the leverage of European credit institutions had increased roughly by half since 1995. Had the leverage ratio requirement been in place before the onset of the financial crisis there would have been fewer failures during the crisis[26].

Figure 1. Total assets to total equity

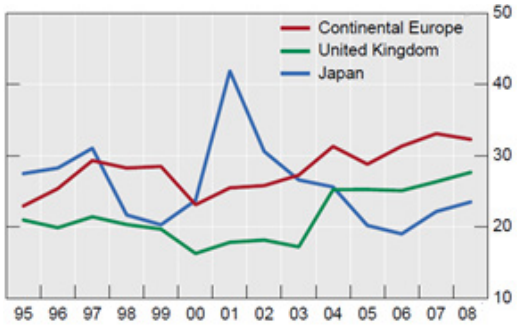
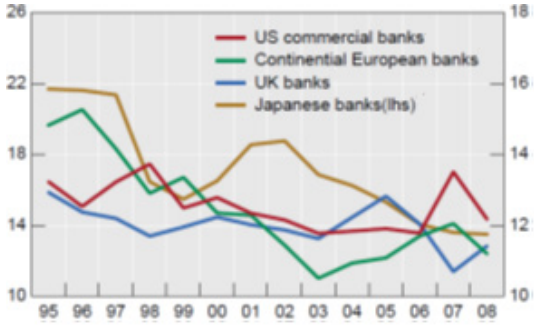


Figure 2. Risk weighted assets to Tier 1 capital



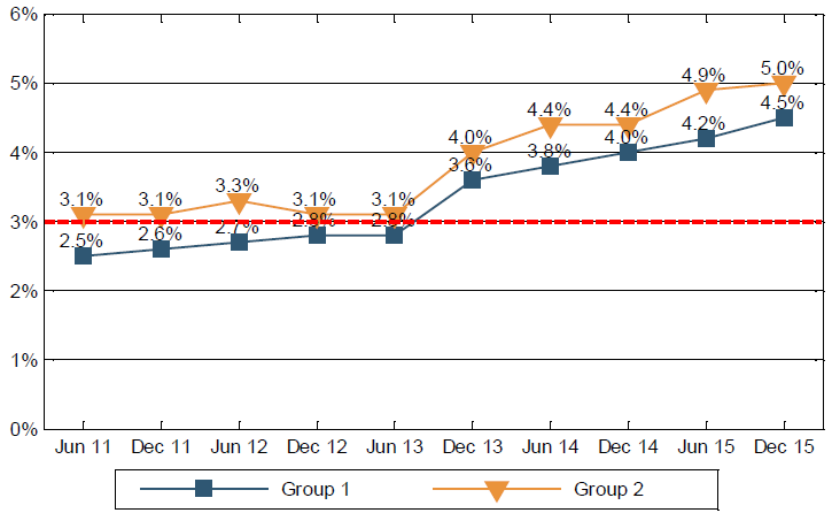
and Stulz (2012): *The credit crisis around the globe: Why did some bank perform better?*, Journal of Financial Economics 105, 1-17; Blundell-Wignall and Roulet (2012): *Business models of banks, leverage and the distance-to-default*, OECD Journal: Financial Market Trends 2012/2

[26] See Haldane, A. G., & Madouros, V. (2012). *The dog and the frisbee*. Federal Reserve Bank of Kansas City's 36th Economic Policy Symposium, p. 1–36.

Sources: CGFS (2009) Sources: CGFS (2009)

The leverage ratio framework was introduced in December 2010 by the BCBS in order to: i) restrict the build-up of leverage in the banking sector (and hence avoid destabilising deleveraging processes that can damage the broader financial system and the economy) and ii) reinforce the risk-based requirements with a simple, non-risk based "backstop" measure. The framework did not foresee an immediate introduction of a capital requirement based on the leverage ratio. Instead, it set out an expectation that such requirement would enter into force in 2018. In the EU, the leverage ratio was introduced in the prudential framework in 2013. In line with the BCBS decision, it was not introduced as a capital requirement that institutions must meet. Rather, the CRD IV included it in the Pillar 2 framework, while the CRR introduced requirements to compute it, report it to supervisors and, from January 2015, to disclose it publicly. This has set regulatory expectations for institutions which has already had a positive impact on the evolution of the leverage ratio in the EU: the average level of the leverage ratio for Group 1 and Group 2 credit institutions[27] was above 5% and 4.5% respectively as of December 2015 (see figure 3).

Figure 3. Evolution of the leverage ratio for Group 1 and Group 2 credit institutions



Source: CRD IV – CRR / Basel III monitoring exercise – results based on data as of 31 December 2015, EBA, p. 19, Figure 4.

In January 2016, members of the Basel Committee's oversight body, the Group of Governors and Heads of Supervision (GHOS)[28] agreed on a Tier 1 definition of capital and a minimum level of 3% for the leverage ratio with the view of making it a Pillar 1 requirement by 1 January 2018. This international agreement confirmed the market and industry expectations of a binding 3% leverage ratio. However, only when imposed as a hard capital requirement which must be met at all times the leverage ratio will be an effective measure requiring institutions to constantly manage their balance sheet in a way that will prevent excessive de-leveraging during downturns. A non-binding measure can simply not bring about the same prudential rigour. Furthermore, given the scope for discretion allowed by the current measures for Member States and supervisors in their application of the leverage ratio to institutions, the introduction of harmonised minimum binding requirements across the EU is deemed beneficial in terms of consistency, effectiveness and promoting coherence in the regulation of institutions as in principle all would have to meet the 3% requirement.

[27] Group 1 banks are banks with Tier 1 capital in excess of EUR 3 billion and internationally active. All other banks are categorised as Group 2 banks.

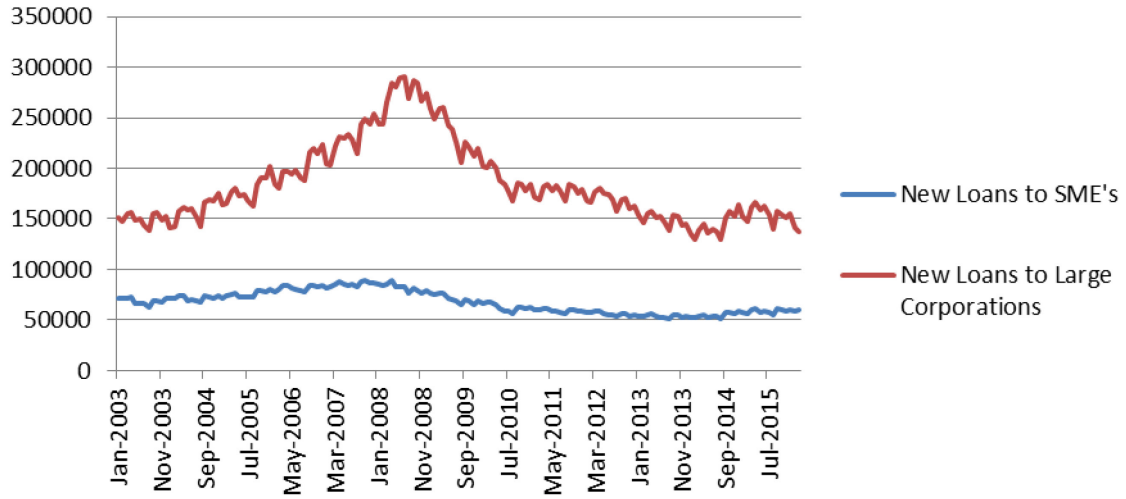
[28] Available at http://www.bis.org/press/p160111.htm.

2.3. Inadequate calibration of risk weights for exposures to SMEs

SMEs are the backbone of the EU economy and an important source of employment and growth for the EU economy. They remain largely reliant on bank lending (e.g., credit lines, leasing) to finance their activities. In fact, other sources of financing, such as equity finance and debt issuance (e.g. bonds), although available, are not as widely used, or are only used through special public support schemes.

Following the financial crisis, bank lending to SMEs has suffered a significant drop in volumes, from a peak of €95 billion in mid-2008 to approximately €54 billion in 2013/2014 and currently hovers around €60 billion, which is still almost 20% below the level observed in 2003. Lending to larger corporates, on the other hand, after reaching a higher peak before the crisis and after experiencing a sharper drop thereafter, is roughly back to the volumes observed in 2003 – 2004 (see figure 4).

Figure 4. New bank lending to SMEs and larger corporates (EUR million; three-month moving average)

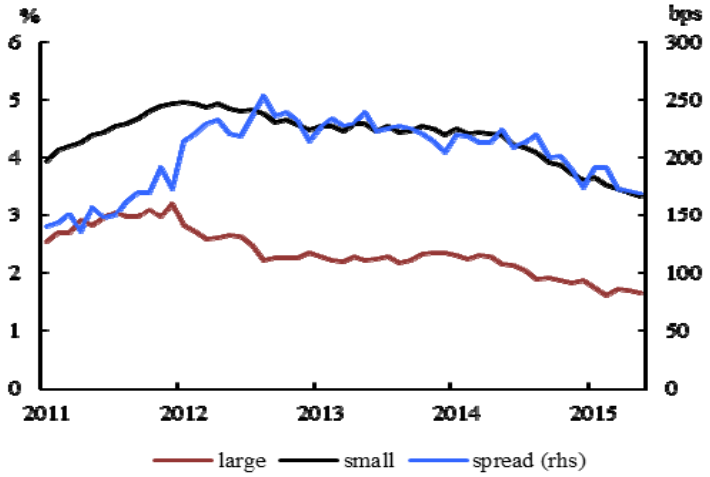


Note: SME loans proxied by loans up to and including €1 million; loans to large corporates proxied by loans over €1 million.
Source: ECB MFI interest rate statistics.

SME are more constrained in receiving external funding also because of their high sensitivity to economic cycles and shocks, which due to their greater sectorial and geographical specialisation. Moreover, the asymmetry of information which exists between SMEs and potential lenders, is particularly acute, and further limits SMEs' ability to switch sources of funding quickly. This disadvantage is reflected in higher interest rates on small loans when compared to large loans as well as in other forms of credit constraints. A comparison of the average cost of loans in the EU shows a significant gap between lending to SMEs and to large firms (see figure 5).

In addition, unlike large corporations, small companies have limited access to capital markets and thus remain disproportionally reliant on banks. The smaller a firm, the more restricted the spectrum of potential non-bank funding options (see table 1). Alternative sources of financing are shown to be accessible only to larger firms, firms having high credit ratings, and firms located in countries with better developed financial markets. Ensuring that SMEs have adequate access to finance is therefore a main consideration when setting out policies.

Figure 5. Yields of and spread between small and large loans, euro area



Source: ECB

Table 1. Use of financing instruments by non-financial corporations (percentage averages out of total sample over 2009-2014)

	Micro	Small	Medium	Large
Retained earnings	24	30	38	46
Grants/subsidised loans	12	16	20	22
Bank overdrafts	38	43	40	42
Bank loans	28	39	43	48
Trade credit	26	30	35	38
Other loans	9	12	19	28
Leasing	19	40	50	56
Debt securities	1	1	1	4
Mezzanine	1	2	4	6
Equity	4	6	8	9

Sources: ECB and European Commission Survey on the access to finance of enterprises; European Central Bank (2015c), Non-bank financing for euro area NFCs during the crisis, Box 6 in Economic Bulletin, Issue 4.

In the light of the overall increase in capital requirements and in order to avoid disruptions to lending to SMEs in the aftermath of the financial crisis, Article 501 of the CRR introduced a 24% discount to capital requirements for exposures to SMEs, the so-called SME supporting factor, but also included a review clause and asked EBA to provide a report on the issue by June 2016. EBA published the report in March 2016[29]. It provided evidence that the capital requirements, including the SME supporting factor, have overall been consistent with the riskiness of SMEs. The report also indicated that the €1.5 million exposure cap for the application of the SME supporting factor was not indicative of a change in riskiness of SMEs. This implies that SME exposures beyond €1.5 million exposure threshold have been subject to too high minimum capital requirements in comparison to other bank exposures classes and could have likely resulted in insufficient lending to SMEs[30]. The issue is heightened by the current

[29] EBA report on SMEs, March 2016

[30] The main estimate of the transitional effect, taken from the study of May 2016 conducted by London Economics using data for the period 1985-2014, shows that for a one percentage point increase in the

environment of low economic growth and high unemployment and thus requires to be promptly addressed.

The issue is also underpinned by the views expressed in the responses to the CRR consultation and the Call for Evidence. Some stakeholders, particularly banks, claimed that the overall increase in capital requirements had negatively affected their willingness to provide sustainable financing to the economy. They also claimed that the systematic risk stemming from exposures to SMEs was lower than for exposures to larger corporates, and asked that the SME supporting factor should be at least maintained, if not expanded.

2.4. Weaknesses to the regulatory framework for loss absorption and recapitalisation capacity

The absence of adequate crisis management and resolution frameworks forced governments around the world to rescue banks following the financial crisis. The subsequent impacts on public finances as well as the undesirable incentive effects of socialising the costs of bank failures have underscored the need for a different approach. The G20 leaders have publicly committed not to use public funds anymore to bail out banks[31].

Significant steps have been taken in international fora and at the EU level in order to reduce the systemic risks of failing banks, through – among others – effective resolution frameworks. A cornerstone tool of a robust resolution framework is the “bail-in”: a system which consists of, writing down debt or converting debt claims or other liabilities into equity according to a pre-defined hierarchy. The tool can be used to internally recapitalise an institution that is failing or likely to fail, so that its viability is restored. Therefore, shareholders and certain creditors, rather than taxpayers, will have to bear the burden of an institution's failure.

In the EU, these objectives are already covered by the BRRD. The latter harmonises and improves the tools for dealing with financial crises across the EU and requires all EU institutions to meet a Minimum Requirement for own funds and Eligible Liabilities (MREL). The policy objective of MREL is to ensure that institutions have a sufficient amount of bail in-able liabilities to allow for smooth and quick absorption of losses and recapitalisation in resolution. After the agreement of the BRRD in the EU, the Financial Stability Board (FSB) has developed, in consultation with the Basel Committee on Banking Supervision (BCBS), a new international standard for G-SIBs[32]. The standard is intended to end "too-big-to-fail" problem by ensuring the adequacy of G-SIBs' total loss-absorbency capacity (TLAC), should they fail. Indeed, absent sufficient amounts of readily bail-in-able liabilities, a failure of a G-SIB may either impose large costs on the global financial system or necessitate fiscal intervention, which is to be avoided. The possible systemic effects, in particular the possible large costs to other market players and the economy at large through the contagious effects of interbank exposures, asset fire-sales and uncertainty among holders of operating liabilities (e.g. derivative counterparties) are illustrated by the Lehman Brothers case. The MREL requirement and TLAC share the objective of ensuring that banks have sufficient loss absorption and recapitalisation capacity. TLAC addresses the particular global systemic problems posed by G-SIBs worldwide, whereas MREL is part of an

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Total Capital Ratio the impact on lending by credit institutions in the EU is -0.8% over one year with the implied impact over a three-year period being -1.5%.

[31] 1 January 2019, agreed in November 2015 by the Financial Stability Board: http://www.fsb.org/wp-content/uploads/20151106-TLAC-Press-Release.pdf

[32] Basel Committee's methodology for assessing and identifying global systemically important banks (G-SIBs)

EU framework to promote an orderly and feasible resolution or winding down for every bank. The BRRD framework cannot protect the EU from contagion of the collapse of a third country G-SIB. The particular global contagion risk and world-wide social costs of a G-SIB's failure by contrast require a backstop[33] on the minimum requirement on loss absorption and recapitalisation capacity to ensure that these G-SIBs hold a sufficient amount of bail in-able liabilities so that they can absorb losses internally without worldwide societal implications or a fiscal intervention in their favour. As the MREL was designed to be applicable for all types of institutions regardless of the global systemic implications of their failure, there is no harmonised minimum requirement but the requirement is to be tailored to each institution by the resolution authority.

As the failure of a third country G-SIB would impose significant costs on the EU economy through contagion effects, a global minimum standard is very much in the EU's interest. Other jurisdictions have not implemented frameworks ensuring minimum requirements for bail-in-able liabilities like the EU did in the BRRD. Even if this were the case, it would be difficult for the EU to have confidence in the practical application of a framework comparable to the MREL requirement in third countries absent a clearly quantified minimum standard. Finally, as third country G-SIBs are by definition active worldwide and compete with EU banks, from a level playing field perspective it is also desirable to hold them to a clearly quantified minimum standard in order to avoid competitive disadvantages that could result from the unilateral introduction of the EU's sound MREL requirement. However, the EU can only credibly expect third countries to implement the TLAC standard if it holds its own G-SIBs to the same requirements.

2.5. Inappropriate level of capital requirements against trading activities

Financial instruments held by institutions for trading purposes (e.g. shares, bonds, derivatives), are subject to the risk of movements in their market prices, which has a daily impact on institutions' profits and losses. These market price movements can be large and sudden; sudden large drops in market prices can damage the solvency position of institutions. Because of the idiosyncrasy of this risk, the prudential framework embedded in Council Directive 93/6/EEC[34] contains a specific regime for these financial instruments (they are often referred to as trading book exposures), which is different from that applicable to other types of exposures, such as loans (those are usually referred to as banking book exposures).

During the financial crisis, the level of capital required against trading book exposures proved insufficient to absorb losses. Trading book losses in EU institutions were very substantial and some of those institutions had to be injected State aid and/or resolved as a result (e.g. Dexia, Royal Bank of Scotland). This revealed a number of weaknesses in the design of the prudential framework for the trading book, which needed to be addressed.

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[33] In the context of the development of the TLAC standard, the FSB conducted an analysis of the historical losses and recapitalisation needs for 13 large banks that failed or received official support. This report shows that losses and recapitalisation needs vary significantly across banks. Total losses and recapitalisation needs in terms of total assets are mostly in the range of 4-6 percent, with outliers around 9 percent. In terms of RWAs total losses and recapitalisation needs are mainly in the range of 5-15 percent with outliers around 25 percent. Moreover the report concludes that the full extent of the losses would have even been higher since a number of banks ceased to report separately either because they failed or were taken over. The FSB used these results as an input for the TLAC standard, including the calibration of a minimum requirement.

[34] Council Directive 93/6/EEC of 15 March 1993 on the capital adequacy of investment firms and credit institutions (OJ L 141, 11.6.1993, p. 1).

In 2009, a first set of reforms were finalised at international level (known as the 'Basel 2.5' package of reforms) and transposed in the EU via Directive 2010/76/EU (CRD III).[35] These reforms, subsequently retained under the CRR, sought as a main objective to increase the overall market risk capital requirements to addresses the most pressing deficiencies of the standards on market risk. However, the 2009 reform did not address the design flaws present in those standards, such as:

- a scope of application of the market risk capital requirements which is not sufficiently clearly defined. This allows institutions to engage in regulatory arbitrage, i.e. they can allocate some of their instruments to the regulatory book that generates the lower capital requirements. As an example, prior to the crisis, securitisation instruments were usually allocated to the trading book because of the low volatility of the securitisation markets (leading to low capital requirements under the market risk rules) even if there was no evidence of regular trading in these instruments (implying that they had little chances to be traded);

- lack of risk-capture. Many features of market risk are not reflected in the capital requirements. As a consequence, the amount of capital required for certain instruments is not aligned with the real risks that institutions face for these instruments. As an example, the risk of holding more illiquid instruments is not recognised since the current market risk capital requirements assume that all trading positions can be extinguished within two weeks;

- high variation of modelling outcomes. Internal models used by institutions to calculate capital requirements for market risk may generate very different estimates of the amount of capital required for similar portfolios. A comparative study performed by the BCBS[36] across a sample of 15 large banks worldwide (half of them Europeans) with permission to use internal model showed that, for the same hypothetical diversified portfolio of trading assets, the bank with the highest capital requirements generated for this portfolio had capital requirements that were roughly three times higher than those of the bank with the lowest capital requirements.

Consequently, the BCBS initiated the fundamental review of the trading book (FRTB) to tackle those flaws. This work was concluded in January 2016, following three public consultations in May 2012[37], October 2013[38] and December 2014[39].

A more comprehensive overview of what went wrong during the 2007-2008 financial crisis with the trading book framework and of why the Basel 2.5 reforms did not sufficiently improve the capture of market risk was provided in the BCBS consultation paper of May 2012.

2.6. Problems on remuneration rules

CRD IV contains a number of detailed rules on how institutions should determine and pay out variable remuneration of staff whose activities have a material impact on the institutions' risk profile.

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[35] Directive 2010/76/EU of the European Parliament and of the Council of 24 November 2010 amending Directives 2006/48/EC and 2006/49/EC as regards capital requirements for the trading book and for re-securitisations, and the supervisory review of remuneration policies.

[36] Available at http://www.bis.org/publ/bcbs240.pdf.

[37] Available at http://www.bis.org/publ/bcbs219.htm.

[38] Available at http://www.bis.org/publ/bcbs265.htm.

[39] Available at http://www.bis.org/bcbs/publ/d305.htm.

Problem 1: Excessive compliance costs arising from the rules on deferral and pay-out in instruments

Under CRD IV rules, institutions are not allowed to immediately pay out the full amount of variable remuneration or to pay it entirely in cash. Instead, CRD IV requires that at least 40% (or in some cases at least 60% of the variable remuneration) be paid out only after a number of years[40]. It moreover requires that at least 50% of the variable remuneration be paid out in instruments instead of cash[41]. These rules are applicable to all institutions, regardless of their size and complexity, and to all identified staff, regardless of the level of their variable remuneration.

Because of this broad scope of application, compliance with the above requirements entails high costs outweighing prudential benefits in the following cases:

(i) small and non-complex institutions[42] (for instance local cooperative and savings banks) need to make considerable investments in human resources (HR), information technology (IT) and advisory services and are faced with difficulties in creating instruments appropriate for remuneration purposes. According to EBA estimates[43], the average one-off costs for these institutions would range from €100 000 to €500 000 per institution, and ongoing costs from €50 000 to €200 000.

(ii) other institutions also incur important costs resulting from the fact that they need to apply the rules to all of their identified staff, which will often include a high number of individuals with only non-material levels of variable remuneration. For instance, according to EBA estimates[44], a full compliance by large institutions with the above requirements in respect of all staff, even that with non-material levels of variable remuneration, would imply one-off costs ranging from €1 to 5 million, and ongoing costs ranging from €400 000 to €1.5 million.

At the same time, the prudential benefits of applying the requirements on deferral and pay-out in instruments in the above cases are low. If a staff member receives only a non-material level of variable remuneration, then such variable remuneration is unlikely to provide him/her with incentives to engage in excessively risky behaviour, which would need correction through deferral and pay-out in instruments. Given that small and non-complex institutions are typically not among the institutions paying the larger portions of variable remuneration, and mostly pose lesser risks to financial stability, the prudential benefit of deferral and pay-out in instruments in their case would be limited.

Problem 2: Excessive compliance costs arising from the requirement for listed institutions to pay out part of the variable remuneration in shares

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[40] "Deferral", see Article 94(1)(m) of the CRD.

[41] "Pay-out in instruments", see Article 94(1)(l) and the second subparagraph of Article 94(1)(o) of the CRD.

[42] By way of illustration, based on a sample of about 3,200 credit institutions in the EU extracted from the SNL database, there are around 2,722 credit institutions with total assets of no more than €5bn, compared to around 303 credit institutions with total assets between €5 and €30bn, and 156 credit institutions with total assets above €30bn. At EU level, the around 2,722 credit institutions with total assets below €5bn represent 5.12% of total assets of credit institutions in the sample (however, when calculated at country level, this percentage differs significantly between Member States).

[43] EBA *Opinion on proportionality*

[44] EBA *Opinion on proportionality*

Under the CRD IV rules, listed institutions are always required to pay out part of the variable remuneration in shares; on the other hand, non-listed institutions have the possibility to use, in addition to or instead of shares, share-linked instruments (Article 94(1)(l)(i)).

Compliance with the pay-out in shares requirement entails important difficulties and burdens for the approximately 200 institutions that are listed. They would need to either create new shares or buy them on the market. Both are cumbersome procedures for the institution. The creation of new shares would risk negatively affecting the shareholders by diluting their voting rights. The purchase of shares could trigger speculation and force the institution to pay a premium. Acquiring shares would moreover lead to reducing the own funds of the institution.

Furthermore, staff remunerated in shares may not be able to sell them because of problems of insider dealing which is criminally sanctioned, lowering the perceived value of such remuneration for staff. Moreover, payment in shares in different countries can be subject to legal, accounting or tax constrains. For example, some institutions with subsidiaries in non-EU jurisdictions (Russia, US) have signalled problems they encounter with shares to remunerate staff in their non-EU subsidiaries. While these are arguably significant difficulties and burdens, it is not possible to precisely quantify the absolute costs resulting from them for listed institutions.

At the same time, an equally effective yet less difficult and burdensome alternative for shares exists, namely share-linked instruments.

This means that, in the case of listed institutions, the requirement to pay out part of the variable remuneration exclusively in shares entails unnecessary compliance costs compared to other available alternatives with similar prudential benefits.

2.7. Problems on insolvency ranking of unsecured bank debt instruments

One of the key objectives of the BRRD is to facilitate private sector loss absorbency in the event of a bank crisis. To achieve this objective, all banks are required to meet a Minimum Requirement for Own Funds and Eligible Liabilities (MREL) to ensure that sufficient financial resources are available for write down or conversion into equity. Under the BRRD, MREL does not generally require mandatory subordination of eligible instruments for MREL. This means, in practical terms, that a liability eligible for MREL may rank in insolvency at the same level (pari passu) with certain other liabilities which are not bail-inable in accordance with the BRRD (e.g. operational liabilities, such as short-term inter-bank loans), or certain other liabilities which are bail-inable, but could be excluded from bail-in on a discretionary basis (as allowed under the BRRD) if the resolution authority can justify they are difficult to bail-in for reasons of operational execution or systemic contagion risk (e.g. derivatives, structured notes). This could lead to situations where bailed-in bondholders may claim they have been treated worse under resolution than under a hypothetical insolvency. In such case, they would need to be compensated by financial means of the resolution fund. To avoid this risk, resolution authorities may decide that the MREL requirement should be met with instruments that rank in insolvency or resolution below other liabilities that are either not bail-inable by law or difficult to bail-in ("subordination requirement"). Harmonising the ranking of unsecured bank debt holders in insolvency and resolution would provide the means to ensure an effective and transparent bail-in, especially in cross-border cases and would provide certainty and clarity to investors and resolution authorities.

In addition to the MREL standard for which subordination of debt instruments could be required by resolution authorities to the extent it is needed to facilitate the application of the bail-in tool in a given case, the minimum TLAC requirement for G-SIBs, as clearly stated by the FSB Term Sheet[45], should be met using a certain amount of subordinated debt instruments.

The results of international negotiations and the consensus among Member States indicate that the future EU TLAC standard applicable to G-SIIs will stay aligned with the FSB TLAC Term Sheet as regards the subordination condition. This means that G-SIIs will have to satisfy the TLAC level with instruments that are subordinated to other excluded TLAC instruments (e.g. operational liabilities) with the aim to enhance the operational execution and robustness of bail-in powers and to avoid legal uncertainty.

The TLAC requirement to hold subordinated instruments combined with the potential discretionary request by the resolution authority to meet MREL also with subordinated instruments have driven some Member States to re-assess national insolvency ranking.

A number of Member States have amended (or are in the process of amending) the insolvency ranking of certain banks' creditors under their national insolvency law to operationalise the possible application of the bail-in tool and to ensure that banks comply with the "subordination requirement" of the international FSB standards on TLAC for G-SIBs.

As the national rules adopted so far diverge significantly, they can create competitive distortions in the single market and complicate the operationalization of the bail-in tool, in particular for cross-border banks. Moreover, the national approaches have very different effects on G-SIIs' ability to address potential shortfalls in meeting TLAC standards. Under some approaches TLAC shortfalls were addressed with immediate effect through statutory retroactive subordination of the existing stock of unsecured senior debt, possibly without the issuance of new debt instruments, meaning a limited additional cost of funding was incurred to become TLAC compliant. Under other approaches banks would likely need to issue new debt, which meets the subordination criterion, at a higher marginal cost than senior debt for the period running to and after the TLAC compliance date. The effects ultimately depend on a bank's shortfall of TLAC eligible instruments and its liability structure, but two banks with comparable shortfalls and liability structures could face significantly different treatment depending on the insolvency ranking of unsecured debt in their respective jurisdictions. Additionally, the creditors of banks under such divergent national insolvency regimes would be treated very differently when buying the claims of banks falling under different national hierarchy of creditor regimes.

There is a broad agreement among stakeholders that having divergent approaches to the statutory insolvency ranking of bank creditors provides uncertainty for issuers and investors alike and makes more difficult the application of the bail-in tool for cross-border institutions. This uncertainty could also result in competitive distortions in the sense that unsecured debt holders could be treated differently in different jurisdictions and the costs to comply with the TLAC and MREL requirement for banks may be different from jurisdiction to jurisdiction.

In its conclusions of 17 June 2016[46], the Council invited the Commission to put forward a proposal on a common approach to the bank creditors' hierarchy. During the meeting of the

[45] Total Loss-Absorbing Capacity (TLAC) Principles and Term Sheet, FSB, 9 November 2015

[46] Council conclusions of 17 June 2016 on a roadmap to complete the Banking Union: http://www.consilium.europa.eu/press-releases-pdf/2016/6/47244642837_en.pdf

experts of the European Parliament and of the Member States of 23 of June 2016, a large number of Member States communicated that they were clearly in favour of harmonisation and endorsed partially harmonised EU approach to subordination. They insisted, however, that any EU approach should provide sufficient flexibility to take account of different bank business models across the EU and reduce at minimum impacts on bank funding costs.

2.8. Lack of effectiveness of the current rules on moratorium

A moratorium tool can be broadly defined as the power to temporarily suspend payments or performance of obligations and / or temporarily prohibit contracting new obligations.

Use of moratorium in a supervisory/resolution context can be useful in several scenarios:

- for liquidity stabilisation: in case of severe liquidity outflows, an institution could have to sell assets at a discount ("fire sale"). This creates losses which are bound to be borne by creditors and particularly those "left behind". Even in the absence of fire sales, there might be a first mover advantage that sparks a bank run: the first creditors to redeem their claims would be repaid fully, while those who act late will face losses (due, for example, to asset discounts in an insolvency procedure). A moratorium could ensure a stabilization of the liquidity position and equal treatment of creditors and foster financial stability by eliminating the first mover advantage. Potentially this may, depending on the circumstances, also address the contagion issue;
- to ensure stability in the pre-resolution phase: a moratorium can help ensure the stability of an institution in the days leading up to resolution, provide ample time for the resolution authority to conduct a prudent valuation and determine, for example, the appropriate amounts for bail-in;
- to restore the capital position of the institution: the use of a moratorium tool in a supervisory context can be a useful tool to address temporary issues with respect to, for example, the composition of a bank's capital;
- to prevent increases in secured funding: an institution that is experiencing distress may not be able to issue unsecured (term) debt. Such an institution would need to attract secured funding, which may require that in order to provide safety to the new secured creditors the secured claim might have to be over-collateralised. If over-collateralised funding increases significantly, this effectively increases the loss rate for unsecured creditors as well as possibly depositors / the DGS in case of default. Stabilizing the liquidity situation through a moratorium could prevent such an effect, while ensuring the equal treatment of creditors.

The issue of the harmonisation of moratorium tools was raised in the meetings of the Council Ad-hoc Working Party on strengthening the Banking Union. In that context a questionnaire was submitted to the Member States and the ECB, and the Dutch Presidency produced two non-papers on the topic, mainly summarising Member States replies to the survey. The Council conclusions of 17 June 2016 invited the Commission to conduct further work on whether and how further harmonisation of the rules and application of moratorium tools can contribute to the stabilisation of an institution in the period before, and possibly after, an intervention. Further to that, DG FISMA carried out internal analysis and consultations – including a questionnaire – with national experts to assess the most appropriate way forward.

An uneven playing field resulting from the identified differences listed below would lead to detrimental consequences and could hamper the effectiveness of resolution tools in a cross-border scenario. For example, the very different duration of the suspension from one Member State

would make it more difficult for a resolution authority to devise a consistent resolution strategy cross-border. Also, it would in certain cases impair the effectiveness of the moratorium tool altogether because it would create an incentive for creditors to move their investments in the bank to countries where the duration of the suspension is shorter.

Similarly, the possibility allowed by certain national legislations to use the moratorium as an early intervention tool, which would allow supervisors/resolution authorities to intervene more effectively at an earlier stage when the specific situation of the bank requires, may be impaired by the different approaches at national level in this respect. An effective application of the tool in a cross-border scenario would be greatly reduced if supervisors / resolution authorities were not in a position to apply the same tools across the board at the same time.

Existing provisions in CRD IV and BRRD already provide some basis for competent authorities to exercise certain moratorium powers. In particular, Member States transposed provisions on moratorium in very different manners[47]. This can negatively impact the practical application of a moratorium and create an uneven level playing field. Therefore these provisions may be improved and further harmonised to make existing tools more effective by enhancing legal clarity and providing further certainty in a cross-border scenario.

All Member States have some type of moratorium tools available in their jurisdiction. Most introduced these tools in their legislative framework as a result of the transposition of BRRD or CRD IV[48]. The relevant national provisions however vary in terms of scope of the liabilities covered (particularly with respect to covered deposits and payment systems), means of activation (supervisory / resolution / both), and duration.

With respect to the scope, in several Member States moratorium powers extend also to *covered deposits* (12 MS). In most Member States a moratorium intervention on covered deposits would be considered as a pay-out event and would therefore trigger the application of the Deposit

[47] Information provided below on existing moratorium tools at national level was provided by Member States' experts in response to a questionnaire circulated by the Dutch Presidency in the context of technical meetings with Member States. These were followed-up by the Commission with direct exchanges with the relevant MS on specific issues.

[48] 24 MSs responded to the questionnaire (EE, DK, BG, ES, FI, SE, HR, LU, FR, PT, SK, BE, PL, AT, IE, EL, CZ, RO, LV, HU, LT, DE, UK, MT). The only ones who indicated that they do not have any type of moratorium tool are DK and SE (while MT indicated that the concept of a moratorium tool does not exist in national law but underlined the general scope of the powers of national competent authorities). BE does not have a full-fledged moratorium in place but a similar tool to be used as an extraordinary recovery measure.

Guarantee Scheme.[49] Payment obligations to *CCPs or payment settlement systems* are on the other hand excluded from the scope of moratorium powers in most MS (9).[50]

Marked differences in transposition can be encountered also with respect to the duration of the payment suspension in case of moratorium. Most national legislations (16 MS) provide a predetermined maximum duration. The duration can however range widely (from one working day to twelve months). Some Member States have comparatively short durations of twenty days or one month, while the most frequent indicated maximum duration is six months. Several Member States indicated that an extension of the suspension period would be possible (although these extensions are sometimes also subject to a predetermined maximum).[51]

Moreover, with respect to the intervention phase for moratorium tools, legislative provisions at national level do not appear consistent. While more consistency can be observed with regards to moratorium powers applied under resolution, national legislative frameworks seem to follow different approaches with respect to the use of such tools in the early intervention phase. In several countries moratorium powers can be activated during the early intervention phase and in this context the precautionary powers provided by the CRD IV framework can usually be exercised. In other countries, however, a moratorium power seems to be considered eminently a resolution-related tool and can only be activated once a bank is deemed to be failing or likely to fail or put under resolution.[52]

Finally, some of the consulted stakeholders highlighted possible means to improve this tool, such as on the duration of the suspension and its scope.

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[49] The Deposit Guarantee Scheme Directive (Directive 2014/49/EU) provides the rules and principles for the protection of covered deposits (deposits below 100.000 Euros). According to the Directive, in presence of a pay-ut event – an event which indicates that the bank is not in a position to repay the deposit for reasons connected to its financial circumstances activates the use of the DGS to protect such deposits. EE, BG, FI, LU, SK, BE, AT, IE, EL, HU, LT, DE indicated that covered deposits fall in the scope while ES, HR, PL, CZ, LV, FR and UK indicated that such deposits are not subject to moratorium powers. PT indicated that while the national provision transposing Article 63 BRRD does not apply to covered deposits, for other moratorium tools existing at national level an exemption of such liabilities is not foreseen. Out of those MSs who include covered deposits in the scope, BG, LU, PT, BE and AT indicated that this would constitute a pay-out event under DGSD transposition laws.

[50] BG, FI, LU, SK, BE, AT, IE, LV, DE provided a positive answer to the question. EE, ES, HR, FR, PT, PL, EL, CZ, HU, LT,UK and MT do not apply moratorium tool to payment obligations owed to CCP or payment settlement systems

[51] EE, BG, ES, FI, HR, LU, PT, SK, PL, AT, IE, EL, CZ, HU, LT, UK indicated that the suspension has a maximum duration. The most common indicated maximum duration is six months (EE, LU, AT, IE, CZ, LT). Others indicated one month (BG), 20 working days (EL), 90 days (HU) or a longer period of 12 months (SK). Finally, some referred to the very short duration indicated in Art. 69 BRRD (midnight of the following day - UK). It seems that most MSs were referring to the moratorium tool as per Article 63 BRRD (since Article 69 contains a precise duration of the suspension). However, responses to the questionnaire were not very clear in this respect and of course the reading depends to an extent on how MSs transposed the relevant BRRD provisions in national law.

[52] 12 MSs, namely EE, ES, FR, PT, BE, EL, LV, HU, LT, UK, MT provided positive answer to the question and indicated that moratorium tools are or seem to be intended also as early intervention tools (or in the case of LT, simply that the tool is not attached to any specific phase in the supervision/resolution process). Out of these, FR and ES indicated that the power derives from the transposition of CRD provisions. Other respondents, an particularly IE and CZ, gave more nuanced answers, highlighting that the criteria to apply moratorium tools are different than those that justify early intervention but that a moratorium could have effects also towards a bank that is subject to early intervention measures.

2.9. Insufficient proportionality of the current rules

It can be argued that the CRR and the CRD IV are already "proportionate" to a large extent, insofar as they take into account the size, complexity and business model of institutions for various purposes. The framework as a whole is formulated in a modular manner, such that institutions must only apply those requirements which are relevant to the risks they incur. Furthermore, the framework provides for specific exemptions and preferential treatments for various purposes (e.g. own funds, liquidity, covered bonds), thus reflecting the relative complexity and riskiness of institutions and the activities they undertake.

Nevertheless, several Member States and Members of the European Parliament have raised the concern that the current EU regulatory framework does not sufficiently differentiate between the very large systemic institutions and very small local institutions. Moreover a sizable number of respondents to the CRR consultation and the Call for Evidence submitted that, in their view, some of the prudential requirements in the CRR and CRD IV may impose a disproportionate burden on smaller and less complex institutions.

Respondents to the Call for Evidence singled out complexity of rules, administrative burden and compliance costs as the most pressing concern for smaller institutions. They argued that costs resulting from complex prudential rules create a competitive advantange for larger institutions insofar as these can benefit from economies of scale to allocate more resources to compliance functions. In particular, respondents pointed to costs resulting from current CRR and CRD IV requirements on:

- EU harmonised (Pillar 1) reporting, whose volume and frequency was regarded as disproportionate for smaller institutions, as well as reporting required by supervisors under Pillar 2 on an ad hoc basis, over and above Pillar 1 reporting;
- disclosure of capital and liquidity requirements, which applies to all institutions in largely the same fashion, as a result of which it was regarded as too detailed and frequent for smaller institutions and of little practical use for institutions with no publicly traded securities; and
- the complexity and large volume of rules that respondents have to deal with and the inability to keep up with all the changes in the legislation.

Section 4.9 below discusses various potential policy options to address undue burden on smaller institutions resulting from reporting and disclosure requirements.

Whilst these measures address proportionality issues related to the size of a credit institution, other measures proposed in the impact assessment address proportionality concerns related to credit institutions' business model (e.g. the types of activities carried out).

More precisely, where relevant, each section in this impact assessment discusses specific policy options and limited exceptions tailored to simpler or less risky business models or activities undertaken by any institution, including for these purposes smaller institutions (see sections on TLAC, lending to SMEs, trading book, leverage ratio, NSFR and remuneration).

This approach has been chosen taking into account the specificities of the banking sector in the EU, where the market is highly polarised (i.e. there is a very large gap between the biggest and the smallest banks) and the composition (i.e. size and type of business models of banks) of the banking sector across Member States is highly different. The possibility of developing a 'lighter regime' across the board for small/less complex EU credit institutions would be very complex since solutions that could work for a certain type of credit institutions might not work for others.

Instead, the introduction of tailored measures for different metrics (e.g. TLAC, lending to SMEs, trading book, leverage ratio, NSFR and remuneration) ensure a degree of flexibility able to cover credit institutions with different sizes and business models in all Member States.

2.10. Consequences from the baseline scenario

Not dealing with the problems described above would have several broad potential consequences:

- from the **safety** point of view they include mispricing of risk, inadequately capitalised or funded individual institutions and too-big-to-fail institutions. All of these would ultimately lead to a higher probability of financial crises in the future and to higher economic and social costs of those crises, both in terms of foregone output and unemployment;
- from the point of view of **smaller institutions**, they include a continued high level of administrative costs;
- from the point of view of the services provided by institutions to the **EU economy** - to the extent that the current regulatory framework imposes capital requirements which are disproportionate to the actual risks faced by those institutions - they include an insufficient supply of those services (e.g. lending to SMEs or client clearing services).

Looking at the individual areas, more detailed consequences would likely materialise.

On stable funding of banks, while the LCR ensures that banks will be able to withstand a severe stress on a short-term basis it does not ensure that they will have a sustainable stable funding structure on a longer-term horizon. General requirements on stable funding and market discipline would likely mitigate some of risks related to insufficiently stable funding, but are unlikely to prevent banks from relying on too-high amounts of short-term funding. Banks would therefore be more prone to liquidity problems in situations where markets for short-term funding were disrupted. This would likely lead to the failure of those banks and potentially even to a new financial crisis.

On the loss absorption of systemically important institutions, there would be no backstop on the minimum loss absorption and recapitalisation capacity in G-SIIs, the level playing field between G-SIIs could be difficult to assess and there would be no incentive for other jurisdictions to impose a similar framework on third country G-SII. Each of these elements would impose significant costs on the EU economy in case of failure of a G-SII.

On the leverage ratio, not implementing a capital requirement based on this ratio would mean that the risk of excessive leverage would continue to be monitored by supervisors during the supervisory review process and institutions would have to calculate, report and disclose the leverage ratio. However, the combination of market discipline and supervisory review would not serve as an effective deterrent against excessive leverage of institutions compared to a binding leverage requirement and thus risks to financial stability would remain. Furthermore, there would be no backstop to risk-based capital requirements calculated using institutions' internal models (as the existing backstops expire will expire at the end of 2017). Finally, the effects of economic cycles would not be addressed properly as risk-based capital requirements alone are insufficient to deal with this issue.

On market risks, the weaknesses and design flaws of the current prudential framework for trading book transactions will remain unaddressed. As the result, the allocation of capital requirements across those transactions may still be inadequate as compared to the true risks faced by the institutions. For certain transactions in the trading book, institutions subject to the CRR would therefore not have sufficient amounts of capital to absorb the potential losses that may arise from adverse changes to the market conditions for those transactions. Institutions with very concentrated portfolios in those transactions would suffer significant losses, potentially requiring State aid and/or be resolved as a result. Other transactions of the trading book may suffer from an excess of capital requirements which would continue negatively affecting the market liquidity and transactions costs.

On **the SME supporting factor**, leaving the existing rules unchanged would ensure the continuity of the current regulatory framework with no new compliance burden. Maintaining the status quo would be also in line with EBA's findings, which demonstrated that the SME SF had been found to be consistent with actual systematic riskiness of EU SMEs[53], except for retail exposures of banks using the Internal Ratings-Based (IRB) approach. This option would also address numerous calls from banks to the CRR consultation[54] and the Call for Evidence for retaining the SME SF in the CRR. The stability of the regulatory framework would ensure the consistency in monitoring of the use of the SME SF in accordance with Article 501(3).

Moreover, the EBA report provides evidence showing that additional capital reduction for SME exposures above the current €1.5 million exposure threshold could still be consistent with the riskiness of these exposures. Not providing further capital reduction for SME exposures above €1.5 million would thus likely result in a sub-optimal level of bank financing of these SMEs.

On **remuneration,** the application of the rules on deferral and pay-out in instruments to small and non-complex institutions, as well as towards staff with low, non-material levels of variable remuneration would trigger for the institutions concerned important compliance costs and burdens. This would also translate into non-negligible supervisory burden for competent authorities. At the same time, the prudential benefits of applying those requirements to small and non-complex institutions and towards staff with non-material levels of variable remuneration would be low.

Moreover, listed institutions would have to sustain important compliance difficulties resulting from the requirement to use shares in fulfilment of the requirement under Article 94(1)(l)(i) of the CRD IV, while the prudential benefit would not be any higher than in case of the use of share-linked instruments.

On **insolvency ranking**, the current heterogeneity of approaches would lead to a confusing and unclear situation for investors and create an uneven playing field for both banks and investors which could be detrimental for the European debt market or even lead to regulatory arbitrage. This fragmentation would likely lead in some countries, to a less liquid and more expensive

[53] EBA report shows that this was indeed the case in Germany, France and Ireland, whereby additional capital relief banks obtained from the SF was consistent with the systematic riskiness of SME loans, except for retail exposures (i.e. less than 1 million euros) of banks using IRB approach. See paragraph on Option 3 for further details.

[54] http://ec.europa.eu/finance/consultations/2015/long-term-finance/index_en.htm

market for European TLAC eligible debt which could have a negative impact on banks' funding costs and their ability to roll-over debt. This could arise for instance in cases where creditors, who have been statutorily subordinated by law, could be incentivised to limit their exposures to that particular market potentially impacting liquidity and driving funding costs up. Along a similar line, banks whose unsecured debt has been statutorily subordinated would be potentially incentivised to move into riskier funding (e.g. derivatives, structured products) rather than roll-over subordinated debt that is in excess of their TLAC holding.

With regards to transparency and clarity, it is expected that investors would be able and willing to evaluate the insolvency laws of Member States with sizable capital markets, but might be reluctant to do so for 28 different regimes. This could be to the detriment of Member States with less developed capital markets.

Furthermore, the heterogeneity of approaches would increase the complexity for resolution authorities to set the minimum requirements for bail-inable liabilities and might impede the effectiveness of the bail-in tool, especially for cross-border groups.

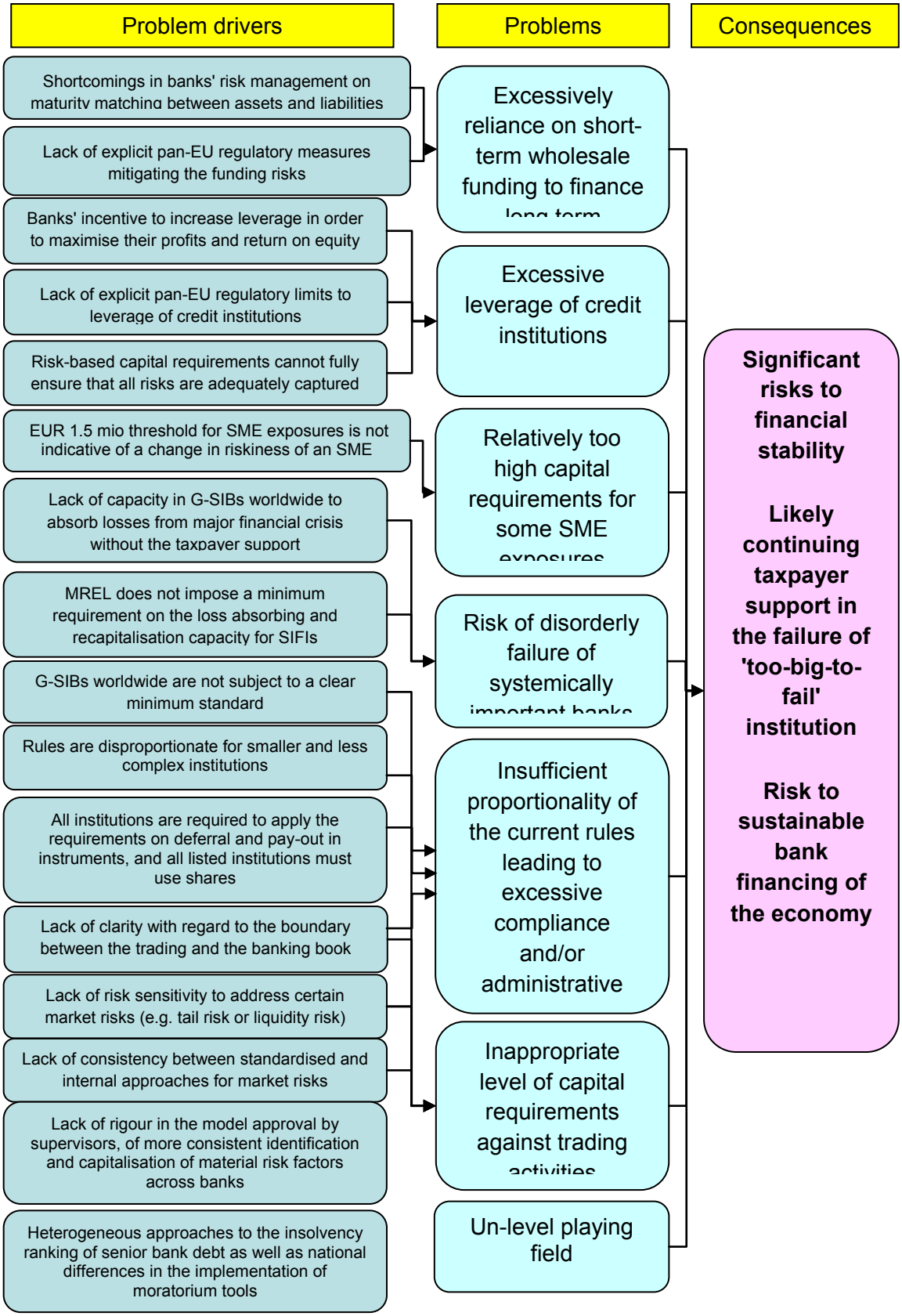
Most Member States and stakeholder groups acknowledge these risks associated with divergent national insolvency regimes and are clearly in favour of a partial harmonisation of creditor claims on unsecured liabilities.

On **moratorium,** the diversity of national approaches to the implementation of the tool as well as the lack of clarity of certain elements may reduce the effectiveness of this tool and result in undesired consequences such as bank runs or reduction of liquidity in a supervisory/resolution context.

On **proportionality**, costs resulting from complex prudential rules and high administrative burden would maintain the current competitive advantange of larger institutions insofar as these can benefit from economies of scale to allocate more resources to compliance functions. Failure to embed more proportionality in the prudential rules in an adequate fashion would result in excessive compliance costs for institutions, an uneven playing field for smaller institutions and barriers to entry for potential new market players.

The transmission mechanism is shown in the problem tree below.

Figure 6. Problem tree



3. OBJECTIVES

3.1. General, specific and operational objectives

There are three broad general objectives behind the initiative: contributing to **financial stability**, **reducing the likelihood and the extent of taxpayers' support in bank resolution** as well as contributing to **sustainable financing of the economy**.

These can be broken down in the following, more **specific objectives**:

- enhance risk-capturing (incl. risk-sensitivity) of the prudential framework so that it better reflects all the different risks embedded in the banking activity (S-1);
- increase proportionality of rules that lead to unnecessary administrative burden and compliance costs (S-2);
- enhance the level playing field and reduce risk arbitrage opportunities (S-3);
- enhance capacity of loss-absorption and recapitalisation of G-SIBs worldwide (S-4);
- enhance legal certainty and coherence (S-5).

Table 2. Mapping of problems and objectives

Field	Problems	Problem Drivers	Operational Objectives	Specific Objectives				
				S-1	S-2	S-3	S-4	S-5
Funding risk	Fragility of banks which excessively use short-term wholesale funding to finance long term activities Un-level playing field	Shortcomings in banks' risk management on maturity matching between assets and liabilities Lack of explicit pan-EU regulatory measures mitigating the funding risks	Introduce regulatory measures ensuring a more stable funding structure for EU banks	√	√	√		√
		Inadequacy of the current regulatory framework to address funding risks over the long term and to ensure that banks finance their long term activities with stable sources of funding	Develop and implement appropriate methodology/metrics to measure the degree of stability of liabilities and of liquidity of assets over a one-year horizon	√	√	√		√

Field	Problems	Problem Drivers	Operational Objectives	Specific Objectives				
				S-1	S-2	S-3	S-4	S-5
Excessive leverage	Overextension of credit in the economic upturn resulting in excessive de-leveraging spiral during the economic downturn Generous discretionary distributions during periods of stress, when capital should be conserved A too favourable picture of the financial robustness of the financial institutions leading to further leverage and reduced the resilience of the financial sector to future shocks	Banks' incentive to increase leverage in order to maximise their return on equity without taking into account externalities Limitations in risk measurement, information asymmetries and inappropriate responses to risk and changes in economic conditions Risk-based capital requirements cannot fully ensure that all risks are adequately captured. Lack of explicit regulatory limits to leverage of credit institutions	Provide a backstop to the risk sensitive capital requirement	√	√	√		√
SME exposures	Banks' ability to provide adequate funding to EU SMEs could be hampered, particularly by the most capital-constrained banks	Capital requirements for SME exposures beyond €1.5 mio threshold do not reflect sufficiently systematic risk stemming from SMEs and consequently are too high in comparison to other exposures classes	Re-calibrate Risk Weights for exposures to SME loans so that they better reflect risks of SME exposures	√	√	√		√
Loss absorption and recapitalisation capacity	Distress or disorderly failure of a G-SIB anywhere in the world would create significant disruption to the wider financial system and economic activity	Lack of G-SIBs' capacity to absorb losses from major financial crisis without the taxpayer support	Introduce a minimum requirement on the loss absorbing and recapitalisation capacity of systemically important institutions				√	√
	Un-level playing field	G-SIBs worldwide are not subject to a clear minimum standard	Introduce a minimum requirement on the loss absorbing and recapitalisation capacity of systemically important institutions			√		√
Market Risk	Possible bank failures resulting from: -inadequately captured risks inherent to banks' trading book resulting from: -regulatory arbitrage between banking and trading books -high risk of a sudden and severe impairment of market liquidity across asset markets Lack of consistency and comparability among banks using models to calculate their capital requirements for some trading book positions	Lack of clarity with regard to the boundary between the trading and the banking book	Establish a more objective boundary between the trading and the banking book	√	√	√		√
		Lack of risk sensitivity of the whole framework to addressee certain risks (e.g. tail risk or liquidity risk)	Provide a more prudent capture of "tail risk" and capital adequacy; Incorporate varying liquidity horizons into the revised SA and IMA	√	√	√		√
		Lack of consistency between standardised and internal approaches	Make a standardised approach more risk-sensitive to serve as a credible fall-back for, as well as a floor to, the Internal Models Approach	√	√	√		√

Field	Problems	Problem Drivers	Operational Objectives	Specific Objectives				
				S-1	S-2	S-3	S-4	S-5
Insolvency ranking		Lack of rigour in the model approval by supervisors, of more consistent identification and capitalisation of material risk factors across banks Constraints on the capital-reducing effects of hedging and diversification	Introduce a revised internal models-approach (IMA)	√	√	√		√
	Fragmented framework for insolvency ranking for unsecured bank debt: Possible competitive distortions due to differences in cost of funding and different treatment for investors, as well as investor uncertainty and asymmetry of information costs. Probability that claims arise due to a breach of the no-creditor-worse off principle differs from MS to MS. Bank's ability to use unsecured debt to meet TLAC and MREL may also differ. This could lead to possible competitive distortions in the EU debt markets.	Divergent approaches for ranking unsecured debt holders in insolvency creating debt market fragmentation and uneven playing field. Different investor treatment and cost of funding impact for banks which need to issue TLAC eligible instruments to satisfy shortfalls. Pari passu ranking of unsecured bank debt with liabilities that are more likely to be excluded from bail-in for operational reasons, increasing the risk of legal challenge and likely to hinder the operational execution of bail-in.	Enhance clarity for investors and issuers, by partially harmonising the hierarchy of unsecured claims in insolvency. Enable banks to meet TLAC/MREL shortfalls in due time, with a tailor-made solution and more clarity on costs, under fairer competitive conditions, Enable banks to maintain flexibility in adequately choosing the funding mix. Avoid competitive distortions that result from different treatment of unsecured bank debt holders under various national insolvency laws. Increase the robustness of the bail-in tool.			√	√	√
Moratorium	Lack of a level playing field in the application and implementation of moratorium tools Potential lack of clarity with respect to important issues such as duration, intervention phase, scope	Variety of approaches at national level	Enhance consistency across EU Member States and improve clarity for supervisors and resolutions authorities as well as creditors and provide an effective tool to be used when assessing banks' liquidity in a supervisory/resolution tool			√		√
Remuneration	Excessive compliance costs arising from the rules on deferral and pay-out in instruments	The existing CRD IV rules on deferral and pay-out in instruments are applicable to all institutions, regardless of their size or complexity, and to all of their identified staff, regardless of the level of their individual variable remuneration	Eliminate excessive costs related to compliance with the rules on deferral and pay-out in instruments, without posing risks to financial stability		√			
	Excessive compliance costs arising from the requirement for listed institutions to pay out part of the variable remuneration in shares	The existing CRD IV rules require listed institutions to pay out a part of the variable remuneration in shares	Eliminate excessive costs for listed institutions related to compliance with the rules on payment in shares, without posing risks to financial stability		√			

Field	Problems	Problem Drivers	Operational Objectives	Specific Objectives				
				S-1	S-2	S-3	S-4	S-5
Proportionality	Disproportionate compliance and administrative costs Overall framework too complex and burdensome	Disclosure and reporting requirements are burdensome and disproportionate for smaller institutions Prudential requirements need to take into account the risk profile and complexity of institutions and the activitities they undertake	Reduce administrative burden and compliance costs for smaller institutions Enhance the modular approach of the CRR/CRD IV to take into account risk profile and complexity of institutions and the activitities they undertake Maintain overall consistency of the prudential framework for all institutions	√	√	√		√

3.2. Consistency of the objectives with other EU policies

Four years after the European Heads of State and Governments agreed to create a Banking Union, two pillars of the Banking Union – single supervision and resolution – are in place, resting on the solid foundation of a single rulebook for all EU banks. While important progress has been made, further steps are needed to complete the Banking Union.

The CRR/CRD IV review is part of this effort and the overall objective of this initiative, as described above, are fully consistent and coherent with the EU's fundamental goals of promoting **financial stability**, **reducing the likelihood and the extent of taxpayers' support in bank resolution** as well as contributing to a harmonious and **sustainable financing of economic activity,** which is conducive to a high level of competitiveness and consumer protection (Article 169 TFEU).

These overall objectives are also in line with the objectives set by major EU initiatives such as the Juncker investment plan (EFSI), a proposal for European Deposit Insurance Scheme (EDIS) and its focus on risk reduction as well as with the objective of moving towards a Financial Union, with the completion of the Economic and Monetary Union and the creation of a Capital Markets Union. Some of the proposed provisions on leverage, liquidity and loss-absorbance capacity in particular are also consistent with internationally agreed standards (Basel Committee and FSB) to which the EU has actively contributed and committed to implement.

3.3. Consistency of the objectives with fundamental rights

The EU is committed to high standards of protection of fundamental rights and is signatory to a broad set of conventions on human rights. In this context, the proposed measures as discussed above are not likely to have a direct impact on these rights, as listed in the main UN conventions on human rights, the Charter of Fundamental Rights of the European Union which is an integral part of the EU Treaties, and the European Convention on Human Rights (ECHR).

3.4. Subsidiarity

Following the liberalisation of international capital flows in the 1970s and 1980s, banks have provided an increasing amount of cross-border services. To ensure that banking regulation remains effective, regulators have developed internationally agreed principles and standards that large cross-border banks have to respect irrespective of their location. Those standards are developed by the Basel Committee on Banking Supervision (BCBS). Several EU Member States and the European Commission take part in those discussions and the Basel standards form the backbone of the prudential requirements set out in EU banking legislation. Following the financial crisis, the BCBS fundamentally revised the international standards leading to the Basel III regulatory framework, which sought to improve banks' ability to absorb shocks, improve risk management and governance; and, strengthen transparency and disclosures. These were incorporated into EU law by means of the CRR and the CRD IV.

The prudential requirements for institutions are accordingly already dealt with at EU level. The legal bases are Article 114 TFEU for the CRR, BRRD and SRMR, and Article 53(1) TFEU for the CRD IV.

The BCBS has since the adoption of the CRRIV and CRD IV finalised a number of additional standards, including a binding leverage ratio; a NSFR requirement to ensure that banks have adequate funding structures on a long-term horizon; and following a fundamental review, revised capital requirements for the trading book.

The objectives pursued by these measures as discussed above can be better achieved at EU level rather than by different national initiatives. National measures aimed at e.g. reducing bank's leverage, strengthening bank's stable funding and trading book capital requirements would not be as effective in ensuring financial stability as EU rules, given the freedom of banks to establish and provide services in other Member States and the resulting degree of cross-border service provision, capital flows and market integration. On the contrary, national measures could distort competition and affect capital flows. Moreover, adopting national measures would be legally challenging, given that the CRR already regulates banking matters, including leverage requirements (reporting), liquidity (LCR) and trading book requirements.

The amendment of existing CRR and CRDIV legal instruments is thus considered to be the best alternative striking the right balance between the single rules for banks and maintaining national flexibility, such as on some macro prudential measures, for competent authorities to address risks to financial stability[55]. Therefore the amendments would further promote a uniform application of banking regulatory standards, the convergence of supervisory practices and ensure a level playing field throughout the EU banking system (see annex 6 for the indicative list of parts of legislation to be amended). These objectives cannot be sufficiently achieved by Member States alone. This is particularly important in the banking sector where many banks operate across the EU single market. Full cooperation and trust within the single supervisory mechanism (SSM) but also within the colleges of supervisors and competent authorities outside the SSM is essential for banks to be effectively supervised on a consolidated basis. National rules would not achieve these objectives.

[55] National flexibility, such as in the field of macro-prudential policy, has not been reviewed and is out of scope of this impact assessment.

4. POLICY OPTIONS AND ANALYSIS OF IMPACTS

4.1. On excessive reliance on short-term funding

Policy options
1. No policy change
2. A single NSFR requirement as per Basel for all banks
3. A single NSFR requirement as per Basel with some adjustments for all banks

Option 1: No policy change

The Basel III framework, implemented through the CRR and the CRD IV, already comprises minimum capital requirements and a liquidity requirement, the LCR. As mentioned in the problem definition, capital requirements are useful to ensure the solvency of banks but they do not capture the liquidity and maturity of off- and on-balance sheet items. Furthermore, the LCR takes account of the liquidity of assets, liabilities and off-balance sheet items but focuses on a 30 days horizon in stressed conditions. As such, the LCR increases the resilience of banks in case of severe short-term liquidity stresses but does not capture the risk of excessive maturity mismatches on a longer term horizon. As a consequence, the LCR ensures that banks will be able to withstand a severe stress on a short-term basis but does not ensure that banks will have a sustainable stable funding structure on a longer term horizon. Banks would then continue to be prone to funding risks and, if short-term bank funding dries-up, they will not be able to maintain their funding structure on a longer term horizon, which could lead to a new banking crisis.

A fast-growing body of literature[56] has developed in the past few years, which assesses for a sample of banks considered in various countries and time periods, whether the existence of a stable funding requirement would have significantly diminished the number of failures relative to what happened in the absence of such a requirement. E.g. the IMF working paper "Bank Funding Structures and Risk: Evidence from the Global Financial Crisis" finds a significant impact of the stable funding ratio: higher levels of the stable funding ratio decrease the probability that a bank will subsequently fail.

The most recent EBA Basel III monitoring exercise report of 13 September 2016, based on a different sample of EU banks than the sample of the EBA NSFR report, shows that during 2015 these banks in aggregate terms have already reduced their NSFR shortfall[57]. This is likely to be a result of supervisory monitoring, market discipline, implementation of other prudential requirements that help improving the NSFR and anticipation of EU implementation of international rules. However, only when imposed as hard requirements which shall be met at all times, stable funding requirements will be effective in preventing excessive maturity mismatches between assets and liabilities and overreliance on short-term wholesale funding. This would advocate for the introduction of a detailed stable funding requirement at EU level.

[56] See for example, International Monetary Fund (IMF) - Francisco Vazquez and Pablo Federico: Bank Funding Structures and Risk: Evidence from the Global Financial Crisis (2012); Huang and Ratnovski (2011); Bologna (2011), Dagher and Kazimov (2013); Haman et al.; (2013), Lallour and Mio (2015); Hahm et al. (2011).

[57] CRD IV – CRR / Basel III monitoring exercise – results based on data as of 31 December 2015, EBA, p. 40, figure 19

Option 2: A single NSFR requirement as per Basel for all banks

A complementary binding detailed NSFR would ensure that banks adequatly fund their activities with more stable sources of funding on an ongoing structural basis. It would provide an effective requirement of more stable longer term funding sources for banks' obligations on a one-year horizon in normal and stressed conditions compared to the current situation where banks have to ensure that long term obligations are adequately met with a diversity of stable funding instruments without it being a detailed requirement. The advantage of this option would also be the full compliance with the Basel NSFR for all banks established in the EU.

However, this approach may unduly penalize some activities or specific business models that are not or not adequately recognised by the Basel NSFR framework. This could lead to difficult adjustments for some banks that could have important unintended consequences on the European economy.

Indeed, as of end-December 2014, 30% of the banks participating in the data collection for the EBA Report on NSFR, representing 75% of total assets in the EU, did not meet the Basel NSFR requirements. The stable funding shortfall[58] for these non-compliant banks was estimated at 595 billion EUR, representing 3,5% of the available stable funding amount for all the banks in the sample. As the way to comply with the NSFR requires deep restructuration of the balance sheet's structure, the adjustments to the shortfall could be difficult to implement for non-compliant banks. This NSFR shortfall could mean that non-compliant banks have to find additional stable funding (equity, medium/long term bonds/loans or retail deposits), which would typically incur some compliance costs[59], or to restructure their activities (the exact amount would depend on the RSF factor applied to the banks' assets) or to undertake a combination of both.

Table 3. NSFR shortfalls

NSFR shortfall (as of end-December 2014):	**No. of banks**	**Number of compliant banks**	**NSFR**	**NSFR shortfall (bn. Euro)**	**NSFR shortfall (% available funding)**
Total banks in the sample	279	196 (70%)	103.6	594.7	3.5
Consolidated results (removing identified subsidiaries of banks included in the sample)	234	169 (72%)	103.6	522.7	3.2

Source: EBA report on the NSFR, data as of end-December 2014

Option 3: A single NSFR requirement as per Basel with some adjustments for all banks

[58] The NSFR funding shortfall corresponds to the difference between weighted assets and off-balance sheet items after application of the corresponding required stable funding - RSF - factors (denominator) and weighted liabilities after application of the corresponding available stable funding - ASF - factor (numerator)

[59] Under current market condition replacement of 3m debt with 5y debt could results in marginal costs of around 30bps.

Using the Basel framework as a basis for the definition of a European NSFR would ensure a level playing field for European banks, especially for the ones undertaking cross-border activities. Moreover, as the Basel NSFR has been subject to an extensive observation period and public consultation (apart from the treatment of derivative transactions) and has been thoroughly discussed, its calibration is broadly satisfactory.

However, the necessity to take specific account of some European specificities in order to ensure that the NSFR does not hinder the financing of the European real economy would justify adopting some adjustments to the Basel NSFR for the definition of the European NSFR.

This mirrors the feedbacks received from the industry through the NSFR targeted public consultation and the call for evidence. The industry indeed widely accepts the introduction of the NSFR which is deemed as being a useful complementary supervisory measure but criticizes the miscalibration of some specific banking activities that could have an important impact on these activities and on the real economy.

These adjustments to the European context are recommended by the EBA NSFR report and relate mainly to specific treatments for:

- pass-through models in general and covered bonds issuance in particular, whose funding risk can be considered as low when assets and liabilities are matched funded;
- trade finance and factoring activities, whose short-term transactions are less likely to be rolled-over than other type of loans to non-financial counterparties;
- centralised regulated savings, whose scheme of transfer renders the client deposits (liabilities) and claims on the state-controlled fund (assets) interdependent;
- residential guaranteed loans, whose specific characteristics make them similar to mortgage loans;
- credit unions, whose statutory constraints on investment of their excess of liquidity entail a funding risk similar to that of non-financial institutions for the institution receiving the deposits.

These proposed specific treatments reflect the preferential treatment granted to these activities in the European LCR compared to the Basel LCR. Such treatment was widely supported by Member States during the expert group meeting and by the industry during the NSFR targeted consultation.

Beyond these European specificities, the EBA NSFR report does not advocate for other adjustments to the Basel NSFR for its implementation at EU level. However, the conclusions of the EBA NSFR report should be taken with caution, mainly because of the limitation of data underlined in the report (data only cover a single point in time (data as of end-December 2014) representing 75% of total assets held by credit institutions in the EU; 40% of credit institutions in the sample are from DE and IT).

The stringent treatment of derivative transactions in the Basel NSFR could have an important impact on banks' derivatives activities and on the access to some operations (e.g. hedging of currency risk, interest risk, exposure to a commodity etc.) for end-users (e.g. corporates, pension funds, public sector entities, insurance companies, retail banks etc.).

Additional data gathered from the EBA show that the stable funding requirement linked to derivatives transactions for banks included in the sample of the EBA NSFR report amounts to

more than €615bn (data as of end-December 2014), with €260 billion due only to the 20% stable funding requirement on gross derivatives liabilities.

The disproportionate impact the NSFR could have on derivatives activities and, consequently, on European financial markets and on the European economy is one of the main concern expressed quite unanimously by the industry, including end-users, through the call for evidence and the NSFR targeted consultation.. The treatment of derivative transactions and of some interlinked transactions (e.g. clearing activities) could be unduly and disproportionately impacted by the introduction of the NSFR without having been subject to extensive quantitative impact studies and public consultation. The additional requirement to hold 20% of stable funding against gross derivatives liabilities is very widely seen as a rough measure that overestimates additional funding risks related to the potential increase of derivative liabilities over a one year horizon. The rules underpinning the calculation of NSFR derivative assets and liabilities and in particular the asymmetric treatment between variation/ initial margins received and posted is also cited as detrimental to derivatives markets. According to a first impact study of the industry, the treatment of derivatives liabilities and variation and initial margins in the NSFR could lead to an additional funding requirement of €750 billion for the entire world-wide industry (not limited to the European industry).

On the basis of available data and of Member States' opinions expressed during the expert group meeting, it seems reasonable to slightly adjust the Basel treatment of derivatives, in particular the 20% RSF factor that applies to gross derivatives liabilities, not to hinder the good functioning of EU financial markets and the provision of risk hedging tools to credit institutions and end-users, including corporates, to ensure their financing as an objective of the Capital Market Union.

Furthermore, regarding short term transactions with financial institutions, a Sub-Committee of the Economic and Financial Committee on EU Sovereign Debt Markets (ESDM) raised concerns that the asymmetric treatment of short term (less than 6 months) transactions with financial counterparties60 may further affect the market-making ability of financial institutions on EU sovereign debt bonds.

During the expert group meeting, some Member States also raised the issue of the potential impact of this asymmetry on sovereign debt's market making.

According to the EBA NSFR report, the estimated impact of this asymmetric treatment in terms of additional required stable funding is of more than €250 billion[61] for EU banks participating in the sample of the EBA NSFR report.

Finally, the vast majority of respondents to the call for evidence and the NSFR targeted consultation expressed concerns on this asymmetry that could be very detrimental to market making activities and, as a consequence, to the liquidity of repo market and of the underlying collateral. Repo markets are presented as essential for the smooth functioning of both banks' liquidity management and market makers' inventory management. This treatment also raises some concerns regarding the impact on the interbank markets, in particular for liquidity

[60] The treatment of short term (less than 6 months) transactions with financial counterparties is asymmetric as the funding, including repos, received from a financial counterparty is not recognised as a source of stable funding (0% available stable funding - ASF) while the lending, including reverse repos, granted to a financial counterparty is subject to a stable funding requirement (10% or 15% required stable funding - RSF - depending on the quality of the underlying collateral for secured transactions).

[61] Data as of 31 December 2014 on the sample of 279 banks (representing 75% of total assets in the EU) included in the EBA NSFR report

management purposes. It may then affect the liquidity of interbank markets, of the securities (including sovereign bonds) and undermine market-making activities, thereby contradicting the objectives of the CMU. The estimated impact of this asymmetric treatment in terms of additional required stable funding is of €300 billion[62] in Europe according to the industry.

The ESDM also expressed concerns on the 5% RSF factor which applies to Level 1 high quality liquid assets - HQLA - as defined in the LCR, including sovereign bonds, and that would imply that banks would need to hold ready available long-term unsecured funding in such percentage regardless of the time during which they expect to hold such EU sovereign debt bonds. This could potentially further incentivise credit institutions to deposit cash at central banks rather than to act as primary dealers and provide liquidity in sovereign bond markets.

During the expert group meeting, several Member States favoured the alignment of the RSF applied to HQLA Level 1 for the calculation of the NSFR with the haircut applied for the LCR (0%) to ensure consistency between the LCR and NSFR.

The banking industry also expressed its concerns regarding the 5% RSF factor applied to Level 1 HQLA through the call for evidence and the NSFR targeted consultation. This RSF factor is deemed as being too high and not consistent with the LCR that recognizes the full liquidity of these assets even in time of severe stress.

On the basis of available data and of Member States' opinions expressed during the expert group meeting, it seems reasonable to bring limited changes to the treatment of both short-term transactions with financial institutions, and of HQLA Level 1 not to hinder the good functioning of EU financial and repo markets.

The possible minor changes of some limited Basel provisions to take into account the specificities of the EU economy as well as to limit disproportionate and unjustified impact on certain activities will apply to all banks.

The analysis performed in the EBA NSFR report does not show any correlation between the size of the bank and its compliance with the NSFR or the impact of lending to the economy and underlines the issue of the "too many to fail" which could impact financial stability if small banks were exempted from the NSFR requirement. Therefore, the EBA report does not recommend introducing a different stable funding requirement for small banks but recommends applying the same requirement to all banks on individual and consolidated basis. Answering to a call for advice of the Commission, the EBA issued a report on the assessment of the introduction of a possible core funding ratio for banks having a low funding risk profile in the EU. The EBA defined the core funding ratio as followed: (retail deposits + wholesale funding>1 year + equity instruments)/ (total liabilities + equity instruments) and used the sample of the EBA NSFR report. They do not support the introduction of a core funding ratio for a subset of European banks because of the weaknesses of this metric and because of the significant and costly reporting burden for supervisors triggered by the potential implementation of two different metrics for different banks.

The Member States through the expert group meeting and the industry through the NSFR targeted consultation supported the analysis of the EBA report not to introduce an alternative funding requirement for a subset of European credit institutions, in particular due to the implicit

[62] European Banking Federation estimate on a sample of 65 EU banks, February 2016.

proportionality of the NSFR which is simple to calculate for banks having simple funding structures.

There is hence lack of support and evidence to introduce a differentiated NSFR requirement for small banks. Simpler reporting and disclosure requirements could however be introduced for a subset of European banks to alleviate the administrative costs related to the implementation of the NSFR.

Comparison of policy options

The summary of the analysis of different options to achieve the specific objective of providing a requirement promoting funding stability and limiting over-reliance on short-term funding at a reasonable cost is presented in the table below. This analysis leads to the conclusion that option 3 is the preferred option.

Table 4. Comparison of policy options against effectiveness and efficiency criteria

Objectives / Policy options	**EFFECTIVENESS Specific objectives**					**EFFICIENCY (cost-effectiveness)**
	S-1	**S-2**	**S-3**	**S-4**	**S-5**	
Option 1: No policy change	0	0	0	0	0	0
Option 2: A single NSFR requirement as per Basel for all banks	+	-	+	0	+	+
Option 3: A single NSFR requirement as per Basel with some adjustments for all banks	++	++	++	0	++	++

Table 5. Comparison of the impact of policy options on stakeholders

Stakeholders / Policy options	**Banks**	**Companies and households**	**Supervisors**
Option 1: No policy change	0	0	0
Option 2: A single NSFR requirement as per Basel for all banks	+	+	+
Option 3: A single NSFR requirement as per Basel with some adjustments for all banks	++	++	+

Magnitude of impact as compared with the baseline scenario (the baseline is indicated as 0): ++ strongly positive; + positive; – – strongly negative; – negative; ≈ marginal/neutral; ? uncertain; n.a. not applicable

4.2. On excessive leverage

Policy options
1. No policy change
2. A single leverage ratio requirement as per Basel for all institutions

3. A leverage ratio requirement differentiated for business models or adjusted for exposure types

Option 1: No policy change

As mentioned in the problem definition risk sensitive capital requirements do not dampen the cyclical effects of economic upswings and are good as they deliver capital requirements proportionate to risks but they may not always capture the risk fully. Under current Union law the risk of excessive leverage is monitored by supervisors during the supervisory review process and institutions have to calculate report and disclose the leverage ratio. The approach so far based on supervisory monitoring, market discipline and anticipation of EU implementation of international rules has led to a situation where most European banks currently have a leverage ratio of more than 3%. However, only when imposed as a hard capital requirement which must be met at all times the leverage ratio will be effective in requiring banks to constantly manage their balance sheet in a way that will prevent distortive de-leveraging during economic downturns. A non-binding capital measure can simply not bring about the same prudential rigour to prevent the building up of excessive leverage.

Option 2: A single leverage ratio requirement as per Basel for all institutions

A binding requirement would add trust in the overall financial stability of the institutions established in the EU. A complementary binding leverage ratio requirement of 3% of Tier1 capital could provide an effective backstop compared to the current situation in Union law where banks have to calculate, report and disclose the leverage ratio subject to supervisory review. The advantage of this option would be to have in the Union a common measure against the building up of excessive leverage and as a hard backstop against model risk irrespective the type of business. This option would ensure also full compliance with the Basel leverage ratio for all banks established in the EU is so far as the international agreed calibration would apply.

Option 3: A leverage ratio requirement differentiated for business models or adjusted for exposure types

The one size fits all leverage ratio under option 2 has relatively more impact on banks which have business models with overall low risk sensitive capital requirements than banks with across the board higher risk weighted assets. In particular when banks with low risk weighted business models are subject to legal constraints on their business models such as public development banks' lending to the public sector, the leverage ratio may have an undesirable adverse impact on the availability or pricing of public sector lending. The leverage ratio requirement should therefore be adjusted by excluding from the leverage ratio exposure measure public development loans and pass-through promotional loans provided by public development banks set up by a Member State, central or regional government or municipality.

Moreover, export credits, which are guaranteed by sovereigns or export credit agencies receive a considerably lower risk weight. In these instances the leverage ratio would be constraining capital requirement leading to higher capital charges. Since export credits are important for jobs and growth, guaranteed export credits deserve to be excluded from the leverage ratio exposure measure.

More detailed analysis of the possible adjustment of the leverage ratio to a business model or exposure type is presented in annex 3.14.

Based on the analysis, the options 2 and 3 score better than the baseline option. Option 3 would be more proportional and hence be beneficial for certain types of institutions but would arguably have reduced benefits for investors.

Table 6. Comparison of policy options against effectiveness and efficiency criteria

Objectives / Policy option	EFFECTIVENESS					EFFICIENCY (cost-effectiveness)
	S-1	**S-2**	**S-3**	**S-4**	**S-5**	
Option 1: No policy change	0	0	0	0	0	*0*
Option 2: A single leverage ratio requirement as per Basel for all institutions	– –	+	+	– –	++	≈
Option 3: A leverage ratio requirement differentiated for business models or adjusted for exposure types	+	++	–	+	+	–

Table 7. Comparison of the impact of policy options on stakeholders

Stakeholder / Policy option	**Institutions using SA**	**Institutions using IRB**	**Companies and households**	**Regulators/ supervisors**
Option 1: No policy change	0	0	0	*0*
Option 2: A single leverage ratio requirement as per Basel for all institutions	+	–	≈	–
Option 3: A leverage ratio requirement differentiated for business models or adjusted for exposure types	+	+	+	–

Magnitude of impact as compared with the baseline scenario (the baseline is indicated as 0): ++ strongly positive; + positive; – – strongly negative; – negative; ≈ marginal/neutral; ? uncertain; n.a. not applicable

4.3. On inadequate calibration of risk weights on SME exposures

Policy options
1. No policy change
2. Removal of the SME Supporting Factor
3. Introducing additional capital reduction for SME exposures above €1.5 million

Option 1 – No policy change

The continuity of the current regulatory framework would imply no compliance burden. The current framework for SME exposures would largely be coherent with EBA findings, which demonstrated that the SME SF had been found to be consistent with actual systematic riskiness of EU SMEs[63], except for retail exposures of banks using Internal Rating-Based (IRB) approach (see also annex 2.2, which provides an overview of key conclusions from the EBA report on SMEs relevant for the SME SF).

[63] EBA report on SMEs, p.88

Table 8.

Exposures: Approach:	Retail (<=€1 mio)	Corporate (<=€1.5 mio)	Corporate (>€1.5 mio)
SA	SF of 24%	SF of 24%	N.A.
IRB	SF of 24%	SF of 24%	N.A.

This option would respond to numerous calls from banks and most supervisors and ministries to the CRR consultation[64] and the Call for Evidence for retaining the SME Supporting Factor in the CRR. Moreover, the stability of the regulatory framework would facilitate EBA's continuing monitoring of the use of the SME Supporting. No policy change in the use of the SME SF might also increase confidence on the sustainability of the measure and contribute to its more extensive use by banks.

However, the application of the SME SF to SME exposures of up to €1.5 million would not be consistent with the findings of the EBA report stating that the threshold does not indicate a change in the riskiness of SME exposures (see annex 2.2). This means that SME exposures above €1.5 million would not benefit from the SME SF. Given the negative association between the level of capital requirements and bank financing of the economy, too high capital requirements for SME exposures beyond €1.5 million is expected to result in a suboptimal level of bank financing of these SMEs[65].

Option 2: Alignment with the Basel rules

This option would make the capital calibration for SME exposures internationally consistent. BCBS is currently reflecting on reducing capital charges for some SME exposures due their lower systematic risk. The second BCBS consultative document on the review of the Standardised Approach (SA) of 10 December 2015[66] includes a lower risk weight (85% instead of 100%) for all exposures of SMEs falling in the corporate exposure class (i.e. above 1 million euros) under the Basel SA. Capital charges applicable to retail exposures under the Basel SA would probably remain unchanged (75% risk weight), implying that SF of 24% currently applied for retail exposures of up to € 1 million under SA and all SME exposures under IRBA would be removed from the current CRR framework.

Table 9.

Exposures: Approach:	Retail (<=€1 mio)	Corporate (<=€1.5 mio)	Corporate (>1.5 € mio)
SA	N.A.	Reducing baseline risk weight from 100% to 85% to all corporate exposures if BCBS adopts the approach currently consulted (**equivalent to a SF of 15%**)	

[64] http://ec.europa.eu/finance/consultations/2015/long-term-finance/index_en.htm

[65] Main estimate of the transitional effect, derived in from the study of May 2016 conducted by London Economics using data for the period 1985-2014, shows that for a one percentage point increase in the Total Capital Ratio the impact on lending flows of banks in the EU is -0.8% over one year with the implied impact over a three-year period being -1.5%.

[66] http://www.bis.org/bcbs/publ/d347.htm

IRB	N.A.	N.A.	N.A.

Alignment with the Basel rules would imply that the average reported capital ratios of banks would diminish by up to 0.16% points on average[67] with a significantly varying impact between individual banks and Member States[68] (see annex 2.2). The decrease of capital ratios would at the same time lead to compliance costs, which on average would be marginal, but could however be significant for individual institutions depending on their capital position. Moreover, as observed by the EBA[69], the increased capital requirements could lead to a reduction in lending, primarily by the most capital-constrained banks.

Except a few think tanks, respondents to the CRR consultation overall did not support alignment with the Basel rules. Few supervisors and ministries to CRR consultation noted that the SME supporting factor might distort the risk-based framework for capital requirements, but invited the Commission not to change the current calibration of risk weights before more evidence on the effectiveness of the SME SF is obtained. EBA in its report on SMEs also underlined that it might be too early to draw conclusions on the effectiveness of SME SF, given the limitations of the data available and the relatively recent introduction of the SME SF[70].

Option 3: Introducing additional capital reduction for SME exposures above €1.5 million

This option would imply maintaining the SF for exposures in its current form as presented in option 1 (i.e. up to €1.5 million for SA and IRB banks) and complementing it with a discount of 15% in capital charges for loans to SMEs above €1.5 million euros. This option reflects calls from banks, corporate buyers and SMEs to consider further extension of the SME supporting factor to cover more SME loans.

15% capital reduction for SME exposures above €1.5 million would be consistent with the EBA findings, which state that "*the limit of €1.5 million for the amount owed set in the Article 501 of the CRR does not seem to be indicative of any change in riskiness for firms*".[71] At the same time, the EBA analysis suggests that the systematic risk may increase for SME exposures above €2.5 million[72].

Based on the EBA analysis on the riskiness of SME exposures in France and Germany over the whole economic cycle, a 15% reduction would likely remain prudentially sound for the EU banks. Relatively low capital requirements currently observed for the retail asset class of IRB banks would likely be outweighed by relatively more prudent requirements in the corporate asset class for exposures above €1.5 million[73].

[67] EBA report on SMEs, March 2016, figure 37, page 69.
[68] EBA report on SMEs, March 2016, figure 41, p. 73
[69] EBA report on SMEs, March 2016, figure 23, p. 55
[70] EBA report on SMEs, March 2016, p. 11
[71] EBA report on SMEs, March 2016, p. 92
[72] EBA report on SMEs, March 2016, figure 50, p. 93
[73] EBA report on SMEs, March 2016, figures 47-48, p. 90-91

15% capital reduction for SME exposures above €1.5 million would also be aligned with the second BCBS consultative document on the review of the Standardised Approach (SA) of 10 December 2015[74], which proposes 15% capital discount for all SME exposures falling in the corporate exposure class (i.e. above 1 million euros) under the SA.

As compared to the current CRR framework, this option would provide additional capital relief for banks and thus would provide incentives for banks to increase lending to the economy as a whole, and SMEs particularly. The most effect is likely to be seen in the most capital-constraint banks.

Table 10.

Exposures: Approach:	Retail (<=€1 mio)	Corporate (<=€1.5 mio)	Corporate (>€1.5 mio)
SA	SF of 24%	SF of 24%	Reducing baseline risk weight from 100% to 85% (equivalent to SF of 15%)
IRB	SF of 24%	SF of 24%	SF of 15%

Comparison of policy options

Table 11. Comparison of policy options against effectiveness and efficiency criteria

	EFFECTIVENESS					**EFFICIENCY**
Objectives / Policy option	**S-1**	**S-2**	**S-3**	**S-4**	**S-5**	**(cost-effective-ness)**
Option 1: No policy change	0	0	0	0	0	*0*
Option 2: Alignment with the Basel rules	–	–	≈	0	+	-
Option 3: Introducing additional capital reduction for SME exposures above €1.5 million	+	++	≈	0	+	+

Table 12. Comparison of the impact of policy options on stakeholders

Stakeholder / Policy option	**Banks using SA**	**Banks using IRB**	**Companies and households**	**Regulators/ supervisors**
Option 1: No policy change	0	0	0	*0*
Option 2: Alignment with the Basel rules	–	– –	≈	≈
Option 3: Introducing additional capital reduction for SME exposures above €1.5 million	+	+	+/≈	≈

Magnitude of impact as compared with the baseline scenario (the baseline is indicated as 0): ++ strongly positive; + positive; – – strongly negative; – negative; ≈ marginal/neutral; ? uncertain; n.a. not applicable

[74] http://www.bis.org/bcbs/publ/d347.htm

In a view of the analysis above, the option 3 would achieve the highest cost-effectiveness and would make most key stakeholders better-off.

4.4. On weaknesses to the regulatory framework for loss absorption and recapitalisation capacity

Policy options
1. No policy change
2. Integrate TLAC standard in MREL for G-SIIs
3. Integrate TLAC standard in MREL for G-SIIs and O-SIIs

A potential option to implement TLAC for G-SIIs in parallel to existing MREL requirements is disregarded as it would result in duplicate regulatory frameworks, inconsistencies and an unnecessary regulatory burden.

Option 1: No policy change

Under this option, the BRRD would continue to apply in its current form. The BRRD already creates a framework according to which MREL is set by the resolution authority, on a case-by-case basis for all institutions.

In terms of benefits, this option will continue to materially reduce the risk that the failure of an EU G-SII would destabilise the broader financial system in turn lowering the probability of a financial crisis. In addition, it will continue to ensure a significantly reduced probability of taxpayers' support in case of such failure and the amount of such support should it still be deemed necessary (for example, when losses would be significantly higher than implicitly assumed in the calibration of the requirement). Indeed, as a direct consequence of this option the capacity for loss absorption and recapitalisation of EU G-SIIs will improve and as an indirect consequence, incentives for creditors and shareholders to scrutinise the EU G-SII's risk-taking (ex-ante, rather than just ex post absorbing the losses) will be enhanced. Furthermore, by removing the current implicit subsidy for EU G-SIIs provided by governments, this option could help avoid the build-up of excessive risk and leverage within those institutions and consequently the EU banking system as a whole. It will also remove the competitive distortions created by the implicit guarantee.

Nevertheless, this option also has several potential drawbacks. After the adoption of the BRRD, the FSB has developed an international standard on adequate loss absorbing capacity for G-SIIs. EU members of the FSB have committed to implementing those standards. If the EU now decided not to implement them it would be seen as reneging on its commitment, irrespective of the fact that the BRRD would still continue to apply. This could potentially lead other jurisdictions that are home to G-SIIs to decide not to implement the standards either, while the latter however may not dispose of a bank resolution framework like BRRD to make good for this. If so, this would lead to an outcome which is not in the EU's interest: a less safe global financial system. Moreover, G-SIIs being active worldwide, a level playing field among them is of crucial interest for the EU. A situation where the EU held its G-SIIs to stringent MREL requirements

under BRRD and other jurisdictions did not implement the global standard and others did not implement TLAC would imply competitive distortions.

Furthermore, while TLAC and MREL share the same policy objective - ensuring sufficient loss absorption and recapitalisation capacity - the features of MREL and TLAC contain important differences. Under this option there would be no minimum ('Pillar 1') requirement for loss absorption and recapitalisation capacity for G-SIIs. While it could be argued that resolution authorities could use the BRRD framework to impose an MREL that would match the amount of loss absorption and recapitalisation capacity under the TLAC framework, different Member States and resolution authorities could choose different approaches when implementing the requirement, potentially creating an un-level playing field between the different EU G-SIIs. In addition, without transposing the TLAC requirement in EU law, there would be no legal guarantee that all G-SIIs would be subjected to it at all times as compliance would be dependent on discretional decisions of national resolution authorities.

For example, each Member State could implement the eligibility criteria in a different manner which could create situations where a given type of a liability could be used to meet the requirement in one Member State but not in another. Since the BRRD does not provide any specific treatment for an institution's holdings of MREL-eligible liabilities, Member States could decide not to require that they be deducted or more generally implement inadequate[75] or different approaches on how to deal with those holdings. In the former case the issue of potential contagion effect of a bail-in of an EU G-SII's liabilities would remain unresolved; in the latter case a plethora of different rules would unnecessarily increase the compliance burden of institutions. Furthermore, the BRRD currently does not prevent an EU G-SII from using CET1 capital, which it uses to meet its MREL, to meet the combined buffer requirement in the CRD IV (i.e. it does not prevent dual use of capital). This, inter alia, impedes effectiveness of capital buffer requirement as a policy tool. Member States may decide to address this issue differently in their national law, leading to further divergence of rules and also to insufficient amounts of own funds available to absorb EU G-SIIs' losses.

Not implementing TLAC could also lead to a situation where EU G-SIIs would be perceived as riskier (for example, if the resolution authority would not exercise its discretion to require the EU G-SII to meet its MREL requirement partially with subordinated liabilities, investors might have difficulties in establishing the insolvency ranking of those liabilities, and hence may shy away from purchasing them or require higher compensation to do so) by markets compared to their third-country peers subject to a TLAC requirement and therefore increase their funding costs, which could in turn reduce their international competitiveness.

Option 2: Integrate TLAC standard in MREL rules for EU G-SIIs

Under this option, the MREL rules would be amended to integrate the TLAC standard for EU G-SIIs. This would mean that, compared to option 1, option 2 would include the following additional elements:

- As of 1 January 2019 a Pillar 1 MREL would be set at the higher of either 16% of the risk-weighted assets (RWAs) or 6% of the leverage ratio exposure measure (LREM). After 1 January 2022, the requirements would be increased to 18% and 6.75%, respectively;

[75] Member States could potentially require deductions of those holdings from MREL, but could not require deductions for own funds items. The reason is that the latter deductions are laid down in directly applicable Union law (the CRR), which cannot be changed by national law.

- the Pillar 1 requirement could be met only with i) own funds and ii) eligible liabilities that would meet eligibility criteria that would be the same for all G-SIIs (as an exception, G-SIIs would be allowed to use non-subordinated liabilities up to an amount equivalent to 2.5% of RWAs (3.5% after 1 January 2022) to meet the requirement);

- based on the resolution strategy of each G-SII, the Pillar 1 requirement could be complemented with a firm-specific ('Pillar 2') additional requirement and with firm-specific guidance;

- a clearly spelt hierarchy of the different types of requirements (a G-SII would need to meet first its Pillar 1 requirement, then its Pillar 2 requirement, then the combined buffer as defined in the CRD IV and finally the guidance);
- a GSII's holdings of eligible liabilities issued by another G-SII would need to be deducted from the former's MREL or own funds.

All other institutions would remain subject to the current BRRD requirement for MREL. Some of the elements listed above would however apply also to those institutions (e.g. the common set of eligibility criteria for the 'Pillar 2' requirement with the exception of the subordination criterion, which would not be mandatory for MREL required under BRRD, or the alignment of the hierarchy of the different requirements).

Compared to option 1, this option would have several additional benefits. First and foremost, it would deliver on the EU's commitment to implement the TLAC standards into Union law. This would reinforce the expectation on other jurisdictions to follow suit and hence help ensuring that the TLAC standard is complied with world-wide so that also third-countries would have in place rules ensuring that their G-SIIs could be resolved in case of failure. Second, it would promote a level playing field amongst G-SIIs, both in the EU and internationally. Third, it would solve the issue of potential contagion effects stemming from holdings of eligible liabilities issued by G-SIIs. Fourth, it would provide a higher degree of legal clarity on the regulatory framework applicable in the EU because of the presence of a single set of rules applicable to all EU G-SIIs (e.g. common eligibility criteria, common treatment of holdings of eligible liabilities and clearly spelt rules on interactions between different types of requirements). Finally, given the partial "subordination requirement" of the TLAC Term Sheet[76], investors and resolution authorities would benefit from enhanced clarity on the ranking of instruments issued by G-SIIs in insolvency and in resolution, which, given the complexity and size of G-SIIs, is particularly desirable in their case.

The marginal impact of this option compared to option 1 is difficult to estimate as an important element for the cost and benefit estimation would be to have a view on the level at which MREL will be set under option 1. The current BRRD requires resolution authorities to set an institution's specific MREL requirement. The exact level of these requirements as well as the decision on whether and, if so, extent to which the MREL eligible instruments need to be subordinated are discretionary decisions which have not yet been taken by resolution authorities. Depending on a series of assumptions on how resolution authorities would exercise their discretion, EBA estimated the shortfall for G-SIIs under current MREL between € 87 bn and 720 bn. The resolution authorities' decisions on requesting subordination or not will be a key driver of the shortfalls under the current MREL rules.

Under option 2, TLAC is introduced into the MREL framework. The MREL framework would be complemented with a minimum on the level and quality of bail-inable liabilities for EU G-

[76] Total Loss-Absorbing Capacity (TLAC) Principles and Term Sheet, FSB, 9 November 2015

SIIs, whilst resolution authorities can still require more. Based on the existing requirements of the RTS on the methodology for setting an MREL[77], EU G-SIIs are unlikely to be required to meet an overall MREL lower than the minimum that would be introduced by TLAC. However, the mandatory subordination for the majority of the eligible debt can still have an impact. The extent to which there would be an impact from this mandatory subordination, depends on whether and to what extent the resolution authorities will require mandatory subordination for their G-SIIs – they have discretion to do so - under the current BRRD. The interaction between the shortfalls estimated under the option 1 and the 2022 calibration of the TLAC Term Sheet are:

Table 13.

In €	**Shortfall under option 1 (current BRRD)**	**Additional shortfall under option 2 (MREL incl. TLAC minimum)**
MREL scenario 1: - subordination of MREL instruments not required, - MREL set at twice the capital requirement (including Pillar 2 and capital buffer requirement[78])	34 bn non subordinated debt	310 bn subordinated debt (34 bn non subordinated debt under option 1 is no longer needed)
MREL scenario 2: - subordination of MREL instruments required - MREL set at (i) twice the capital requirement (including Pillar 2 and capital buffer requirement) and (ii) 8% of total assets)	720 bn subordinated debt	No additional shortfall

Given the transition period until 2022, it can be expected that G-SIIs would act upon their shortfall by replacing their current stock of non-eligible senior debt, at maturity, with eligible subordinated debt. This would increase the funding cost for these instruments. FSB estimates on this increase range between 30 and 50 bps. Specifically for the EU, as an upper limit, the funding cost increase should not be higher than the spread difference observed between senior debt and subordinated tier II debt which is between 100 and 200 bps for EU G-SIIs. As a lower bound, the German law subordinating all senior debt (thereby achieving the required subordination), resulted in a minor increase in spreads bellow 30 bps. While in the short term it may be possible that the type of subordination EU G-SII's apply for their eligible liabilities could play a role in determining the impact on its funding costs (for example, it would appear that right now senior bonds issued by a parent holding company that would be subject to bail-in in case of structural subordination involve a lower risk premium than subordinated bonds issued by a parent which is an operating company although the risk premium should, in principle, be the same), in the medium to long term this impact is expected to fade. It is important to stress that the choice of the strategy to achieve statutory subordination (cfr. section 4.7.) could also influence the overall impact on the funding cost. Finally, the actual impact would vary depending on the current amount, maturity profile, corporate structure, perceived strength and type of liabilities of each EU

[77] COMMISSION DELEGATED REGULATION (EU) 2016/1450 of 23 May 2016 supplementing Directive 2014/59/EU of the European Parliament and of the Council with regard to regulatory technical standards specifying the criteria relating to the methodology for setting the minimum requirement for own funds and eligible liabilities

[78] Pillar 2 is assumed to be set at 2%. The capital buffer requirements assumed are a Capital Conservation Buffer of 2.5% and an institution specific G-SII buffer.

G-SII. The more TLAC eligible liabilities an EU G-SII would already have, the less eligible liabilities it would have to 'create' (e.g. by issuing subordinated debt instruments) and the lower the impact on the funding costs (and vice versa). This impact could be partially offset by a reduction in the funding costs of senior liabilities (since there would be more loss absorbing capacity 'sitting' below senior liabilities, in case of insolvency or resolution of the G-SII the likelihood of senior liabilities bearing losses would be lower and hence the risk premium required from investors to buy them would be lower). However it is unlikely that this offset would be complete.

Option 3: Integrate TLAC standard in MREL for G-SIIs and O-SIIs

Under this option, the approach contained in option 2 would be extended to EU O-SIIs in order to ensure that those comply with the same minimum requirement as G-SIIs. While the failure of an O-SII may not have the same impact as the failure of a G-SII at global level, it can have a significant impact on the provision of critical functions at the local level (i.e. in the Member State where the institution was designated as a O-SII). Therefore, bail-in is likely to be part of the resolution strategy of a O-SII and sufficient amounts of MREL should underpin the resolution strategy.

The main drawback of this option is that applying a regime designed for G-SIIs to O-SIIs may have disproportionate effects on the latter. One issue is related to the "subordination requirement". EU O-SIIs that are not subsidiaries of G-SIIs may have a more restricted or even no access to markets when it comes to issuing subordinated debt instruments. Around 10% of such EU O-SII currently do not report any subordinated liabilities. This may mean that they may be unable to issue sufficient amounts of these instruments to meet the MREL in case of shortfalls and they may therefore be forced to issue more expensive instruments (shares). Assuming that resolution authorities would not exercise their discretion to impose the subordination of eligible liabilities under option 1, this would mean that option 3 could lead to an increase in the funding costs for EU O-SIIs compared to option 1. For the same reason it would also likely lead to higher increases for EU O-SIIs than would be the case for EU G-SIIs. It could be argued that imposing the same requirement on both may level the playing field to the extent the O-SIIs would in practice be subject to a lower requirement than the TLAC minimum. G-SIIs and O-SIIs are often competing in local markets. However, this level-playing field argument does not hold when the TLAC standard would be disproportionate for a smaller O-SII, thereby weighing on its ability to compete with both G-SIIs and non-O-SIIs.

Another issue is related to applying TLAC minimal requirements to a heterogeneous group of institutions such as the O-SIIs. As recommended by EBA[79], the calibration of MREL should be closely linked to, and justified by the institution's resolution strategy. This resolution strategy should depend on factors such as the business model, size, interconnectedness, legal structure, and scope and complexity of activities[80]. The differences in characteristics between EU G-SIIs and O-SIIs have been analysed in annex 2.13. Both in terms of size compared to GDP and in terms of business model and activities there is a large heterogeneity between the different O-SIIs both within and across member states.

Implementing the TLAC standards' harmonised minimum requirement, to such a heterogeneous group of institutions could overestimate the required bail-in capacity which would have to be met, for the most part, with subordinated liabilities. TLAC is calibrated to ensure that there is market confidence that each G-SII has a minimum amount of loss-absorbing capacity that is

[79] See Interim Report on MREL (2016)

[80] BoE on Resolution Planning

available to absorb losses and recapitalise the bank in resolution. As the resolution strategy for EU O-SIIs might vary depending on their size, business model and critical functions, it can be envisaged that the bail-in tool would not be suitable for certain O-SII or at least part of their activities. In cases where for example only the retail activities would need to be continued post resolution, it could be envisaged that the remaining activities would be liquidated. This would imply that there is no need for a recapitalisation amount for these non-critical activities. Hence setting a minimum MREL requirement at the levels required under the TLAC standard could overestimate the MREL required in accordance with the resolution strategy. Therefore the framework where MREL is determined as a Pillar 2 requirement, based on the loss absorption amount, the recapitalisation amount (determined by taking into account potential divestments and other resolution actions under the preferred resolution strategy) and the DGS adjustment, is better suited then a Pillar 1 requirement.

The impact of this option, in terms of shortfall of eligible instruments, compared to option 1 cannot be quantified precisely as current MREL should be set by the resolution authorities on a case-by-case basis and at this point, the relevant decisions are not known.

Comparison of policy options

The summary of the analysis of different options to achieve the specific objective to enhance capacity for loss-absorption and recapitalisation of G-SIFIs is presented in the table below.

Table 14. Comparison of policy options against effectiveness and efficiency criteria

	EFFECTIVENESS					**EFFICIENCY (cost-effectiveness)**
	Specific objectives					
Objectives / Policy option	**S-1**	**S-2**	**S-3**	**S-4**	**S-5**	
Option 1: No policy change	0	0	0	0	0	0
Option 2: Integrate TLAC standard in MREL for G-SIIs	n.a.	n.a.	++	++	+	++
Option 3: Integrate TLAC standard in MREL for G-SIIs and O-SIIs	n.a.	n.a.	+	++	+	≈

Table 15. Comparison of the impact of policy options on stakeholders

Stakeholder / Policy option	**Banks**	**Bank debt- and shareholders**	**Supervisors**	**Companies and households**
Option 1: No policy change	0	0	0	0
Option 2: Integrate TLAC standard in MREL for EU G-SIIs	+	+	+	+/–
Option 3: Integrate TLAC standard in MREL for EU G-SIIs and O-SIIs	+/–	+	+	+/–

Magnitude of impact as compared with the baseline scenario (the baseline is indicated as 0): ++ strongly positive; + positive; – – strongly negative; – negative; ≈ marginal/neutral; ? uncertain; n.a. not applicable

4.5. On inappropriate level of capital requirements against trading activities

Policy options
1. No policy change
2. Adopt the FRTB standards for all the institutions subject to the CRR
3. Adopt the FRTB standards with some adjustments to reflect European specificities and a revised regime for small trading book businesses

Option 1: No policy change

This option would consist in keeping unchanged the existing prudential framework for market risk, including the derogation for small trading books.

Under the status quo, institutions would suffer no costs related to the implementation of new rules for trading book exposures. However, the weaknesses and design flaws of the current prudential framework for these transactions would remain unaddressed. As a result, the allocation of capital requirements across trading book transactions may still be inadequate as compared to the true risks faced by the institutions. On the one hand, for certain transactions in the trading book, institutions subject to the CRR would not have a sufficient amount of capital to absorb the potential losses that may arise from adverse changes to the market conditions for those transactions. Those losses could be particularly significant for institutions with very concentrated portfolios in those transactions, which could potentially require State intervention or resolution of those institutions as a result. On the other hand, certain transactions in the trading book may be subject to capital requirements which are too high compared to their inherent risk. This could translate in reduced liquidity and increased transactions costs for those transactions.

Option 2: Adopt the FRTB standards for all the institutions subject to the CRR

This option would consist in replacing the current framework for market risk capital requirements by the new BCBS standards (i.e. the FRTB standards) for all the institutions subject to the CRR. This would include the new standardised and internal-models approaches as well as new rules for allocating positions to the trading book (i.e the "boundary" between banking and trading books). The flexibility for institutions to choose between the internal models and the standardised approaches would be retained, consistently with the new rules. CRR elements which are not included in the FRTB, such as the derogation for small trading books, would be carved out from the CRR.

The FRTB requirements would significantly improve the design of the prudential framework for market risks which was welcomed by both the supervisory authorities and the banking industry when the standards were developed:

- more objective rules would be defined to allocate transactions to either the trading or banking books, therefore reducing the risks of regulatory arbitrage whereby a trading position would be subject to inappropriate banking book capital

requirements. Stricter limits would also be implemented to move transactions between the two regulatory books;

- capital requirements would be more risk-sensitive under the FRTB standards which means that they would be more proportionate to the true market risk faced by the institutions. A number of technical improvements have been developed to make the measurement of market risk more risk-sensitive. First, the standardised approach formulas have been fundamentally revised to better reflect diversification and hedging effects. Second, some changes would affect both standardised and internal-models approaches: (i) replacement of the Value-at-Risk by the Expected Shortfall risk measure to better capture potential extreme losses; (ii) calibration to stress conditions in order to reduce the pro-cyclicality of the capital requirements; (iii) the introduction of variable liquidity horizons to reflect the liquidity of the transactions;

- The FRTB standards would reduce the likelihood that institutions would develop unrealistic and deliberately lenient modelling assumptions. First, the permission to use the revised internal-models approach would be conditional to fulfilling new quantitative criteria that measure the performance of models (P&L attribution and back-testing). Second, the revised standardised approach has been designed as a real backstop to the internal-models approach that can be applied at a more granular level ("trading desk") in case of poor internal-models performances. Finally, third, certain risk factors (non-modellable risk factors) or asset class (securitisation) would be restricted to specific standardised treatment for the calculation of their capital requirements.

However, institutions subject to the CRR would also incur additional compliance costs related to the implementation of the FRTB standards, even the ones that intend to apply the standardised approach of the FRTB. At present, the FRTB standards do not contain any proportionality features which raise some questions about their appropriateness for the least sophisticated institutions or the ones with small trading activities (although the BCBS is currently considering the inclusion of an extra, simpler standardised approach for those institutions). Therefore, implementing the FRTB for all banks as it currently stands could be contradictory with the principle of proportionality and would therefore not address the concerns of the industry raised via responses to the targeted consultation paper on this topic. In fact, the industry unanimously recommended to include a simplified standardised approach for medium-sized institutions as well as to maintain the derogation for institutions with small trading activities

Although the design of the prudential framework for market risks has been improved with the FRTB standards, it could have a potential detrimental impact on the functioning of the EU financial markets via an excessive level of capital required for certain product types that could lead to increased prices, reduced trading volumes and restricted access to capital market for certain actors of the economy. This concern was confirmed by a majority of respondents to the Call for Evidence on the impact of the FRTB standards on market-making activities and market liquidity who suggested to reconsider the calibration of the final Basel standards. Not only current market-making activities could be negatively affected by the excessive level of capital requirements of the FRTB standards but the CMU objectives, which aim to expand of capital market access for corporates in the EU, are also jeopardised. Once CMU is implemented, banks will play an essential role in providing liquidity in the trading of corporate securities. According to the industry, such market-making function could be dis-incentivised if the capital requirements for those products are too excessive.

Finally, implementing the FRTB as it currently stands could lead to some inconsistencies with other parts of the CRR, in particular:

- The FRTB standards does not propose any beneficial treatment for the capital requirements of STS (simple, transparent and standardised) securitisations while the Commission proposed to extend to trading book positions the beneficial treatment for the capital requirements of STS securitisations in the banking book which is currently under negotiation.
- The FRTB establishes capital requirements for sovereigns which are higher than in the current market risk framework. This may introduce a disparity between capital requirements for this type of securities in the trading and in the banking book, making them significantly higher in the former.

Option 3: Adopt FRTB standards with adjustments to the calibration and to reflect European specificities and a revised regime for small trading book businesses

This option would consist in the implementation of the FRTB standards with calibration adjustments to ensure that EU capital markets are not excessively affected by the introduction of the FRTB standards. It also aims to take into account certain EU specificities and ensure consistency with other parts of the CRR (e.g. STS securitisations and sovereign exposures) and with the objectives of CMU. Moreover, this option would allow a revised derogation for small trading book business to account for proportionality in the new regime.

The key mechanics of the FRTB framework would be maintained but its calibration would be modified to address the concerns about the conservativeness of the FRTB framework in general, as expressed by Member States during the CEGBPI group meeting on 19th July 2016, by the responses of many EU institutions and banking associations to the Call for Evidence but also during a number of physical meetings scheduled but the Commission services on this topic since the beginning of the year.

So far, two limited data analyses about the capital impacts of the FRTB have been performed based on mid-2015 data: (i) an impact analysis[81] from the Basel Committee for a sample of banks worldwide, including European institutions; this sample was mostly composed of banks with large trading books and (ii) an analysis from the Global Association of Risk Professionals (GARP), initiated by the banking industry which comprised 21 internationally active banks, 13 of which are designated G-SIBs, and 12 of which are European institutions.. The GARP analysis concentrated on the largest market dealers, which also participated in the Basel Committee analysis.

The samples in both analyses are sufficiently diversified to draw some broad conclusions about the capital impacts of the FRTB framework. However, both analyses contain a number of caveats:

- The Basel Committee analysis does not take into account the final adjustments that were made to the FRTB framework before it was adopted. It is not technically possible to correct the results of the analysis to take into account the impacts of these adjustments, the analysis would have to be reproduced again with the recalibrated parameters;

[81] http://www.bis.org/bcbs/publ/d352_note.pdf

- The GARP analysis is based on a smaller sample of banks, with a high percentage of participating banks being large market dealers;
- The banks in both samples operate in different markets and jurisdictions and it is not possible to isolate the impacts of the FRTB for European institutions only.

The global capital impact of the FRTB framework at bank level is broadly consistent in the two analyses: median impact at bank level of +22% in the Basel Committee analysis and, assuming full approval of bank internal models under FRTB, +20% in the GARP analysis; weighted average impact at bank level of +40% in the Basel Committee analysis and, assuming full approval of bank internal models under FRTB, non-weighted average impact at bank level of +50% in the GARP analysis. In light of these results, it seems that, even though the final adjustments made to the FRTB framework - taken into account in the GARP analysis - lowered capital requirements, a significant increase can be expected overall.

More recent and granular estimates by the EBA shows that the increase in capital requirements resulting from the implementation of the FRTB is more pronounced for those banks that expect to be granted the permission to use the internal model approach as compared to those banks that will use only the standardised approach.

Table 16. Capital requirements impacts of the FRTB framework at bank level split per approach used

Percentage change from Current to Revised at Bank level Split per Approach used	Mean	25th Percentile	Median	75th Percentile	Sample Size
Banks using internal model approach fully or partially	63%	3%	36%	94%	26
Banks using the standardised approach only	183%	47%	170%	269%	17

Source: EBA report on SACCR and FRTB implementation, November 2016.

Beyond these analyses of the overall impact of the introduction of the FRTB standards, the Basel Committee investigated the capital impacts at a more granular level for different asset classes. However, the analysis is limited to the banks using internal models and has not been performed under the standardised approach. It is hence very difficult to understand on that basis whether certain risk categories are more impacted than others due to the introduction of the FRTB in general, given that the most significant impact overall is observed under the Standardised approach.

All in all, the above analyses suggest that the overall calibration of the FRTB framework could be too conservative and possibly undermine the good functioning of financial markets in the EU by setting an excessive level of capital requirements. The following recalibrations could be envisaged:

(i) A general recalibration as we are concerned that the general calibration of the FRTB will significantly increase market risk capital requirements of EU banks. An overall multiplicative factor equal to 65% would be applied to the own fund requirements for market risks, irrespective of the approaches used to calculate it, to broadly offset the estimated average increase. This

treatment would be in line with the expectation of the Basel committee that the remaining measures to complete the post crisis banking reforms should not result in a significant increase in capital requirements. It would also address concerns from both Member States and the industry about the potential significant increase in capital requirements for market risks that could undermine the market-making activities of European institutions and more broadly the market liquidity of the EU financial markets.

(ii) No targeted recalibrations per asset class. The analyses that have been performed so far do not give a sufficient level of understanding of the impact at the level of the various products in scope. Moreover, the relative impact of an adjustment at asset class level would be much more difficult to assess, which risks undermining the horizontal consistency of the framework. Both the overall multiplicative factor and the opportunity to adjust calibrations at asset class level would be subject to revision 3 years after the entry into force of the new standard in the EU.

In addition to the revision of the calibration of the FRTB framework, some adjustments to the Basel standards would be proposed in order to reflect specificities of financial markets in the EU and to ensure consistency with the capital requirements for banking book transactions under the CRR.

Firstly, granular data on covered bonds have been received from the industry, which argues that the calibration of these products under the standardised approach of the FRTB (400bps shock) is too high for the European market, as highlighted by the historical estimates shown below for different European jurisdictions. According to these estimates, most European covered bonds markets experienced a maximum shock between 50bps to 150bps in the period 2008-2016. Moreover, the risk weight assigned to covered bonds seems high in comparison with other asset classes and does not reflect the good performance of European covered bonds.

Figure 7. Historical estimates of covered bonds volatility

Figure 1: During the crisis financials were far more volatile than covered or sovereigns

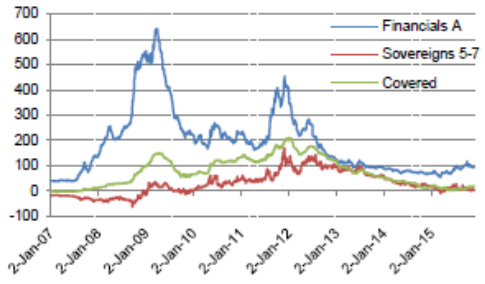


Figure 2: 99% percentile and max 40 days shock 08-16 (bp) and 2014 mkt size for Covered. (Bn €)

German Cov Hypo	43	58	402
German Cov Oeff	45	63	
Danish Cov	43	82	375
French Cov Str	42	58	325
French Cov Leg	58	70	
Spain Cov Sing	131	144	308
Spain Cov Pool	116	138	
Swedish Cov	37	73	210
Italy Cov	90	114	131
Ireland Cov	143	158	38
Portugal Cov	235	312	34

Source: EBA report on SACCR and FRTB implementation, November 2016.

These figures would support maintaining a beneficial treatment for covered bonds as it is currently the case for market risks capital requirements in the CRR. This market has been historically very important in the way certain European institutions obtain lower cost of funding in order to grant mortgage loans for housing and non-residential property and the supervisory authorities of those jurisdictions (e.g. Denmark) warned us about the potential detrimental impact that would have a significant increase in capital requirements for covered bonds.

Secondly, we would introduce a beneficial treatment for STS securitisation exposures comparable to the one established for banking book positions in the Commission proposal on STS securitisation. First, the risk of arbitrage opportunities between the trading and banking books would be reduced if the capital requirements between the two books are more aligned (although the new boundary will make it more difficult to move an instrument between the two books). More importantly, the beneficial treatment would improve the secondary market liquidity of STS securitisation by keeping less costly inventories.

Thirdly, we would adjust the capital requirements for domestic (i.e. EU) sovereigns. Since the FRTB introduces a new standardised capital charge (CSR) applicable to sovereigns, it would no longer be possible to hold EU sovereigns in the trading book with only a single, relatively thin capital charge, the one for interest rate risk, as it is now the case. Furthermore, the current underlying principle in the CRR that capital requirements for EU sovereigns are unrelated to their ratings would no longer be preserved, since the CSR is rating-dependent. Given the fact that the Basel is performing a comprehensive review of the treatment of sovereign exposures, it would seem reasonable to wait for its conclusions, and apply, in the meantime, a treatment for EU sovereigns in terms of the CSR charge that is in line with the current framework provided in the CRR.

- The beneficial treatment offered to institutions with small trading book businesses under Article 94 of CRR would be maintained for institutions with gross market values of trading positions[82], excluding FX and commodity trading positions for

[82] As defined by all the fair-values assets plus all the fair-values assets held for trading. This definition is more prescribed than the current definition of the size of trading activities under CRR 94 which offers some discretion for banks to calculate it and lacks overall clarity.

which the treatment under derogation has no effect, below €50 mio and for which these positions would not exceed 5% of total assets. Based on a data collection performed by the EBA who tested different levels for recalibrating the absolute threshold on a sample of EU institutions with small trading activities (277 institutions with gross fair valued assets and liabilities below EUR 500 million), the level of EUR 50 million for the absolute threshold would ensure that the beneficial treatment for small trading book businesses under Article 94 of CRR would apply to 85% of the sample tested.

Table 17. Gross market value of trading assets and liabilities (excluding FX & commodities) of banks with small and medium-sized trading book businesses

Absolute threshold based on the size of gross trading assets and liabilities (excluding FX and commodities)	**Number of institutions tested**	**Number of institutions with relative size of gross trading assets below 5% (proposed threshold)**
< 20 m€	227	223
20 m€ < and < 50 m€	17	13
50 m€ < and < 150 m€	21	16
150 m€ < and < 300 m€	8	5
300 m€ < and < 500 m€	4	2
Total	277	259

Source: EBA report on SACCR and FRTB implementation, November 2016

- In addition, to avoid the excessive burden associated with the introduction of the revised standardised approach for market risk, for some institutions with medium-sized trading book but limited trading activities, as defined by institutions with gross market values of trading positions below EUR 300 million, and for which trading positions would never exceed 10% of total assets, the current standardised approach for market risk would be used. This treatment would apply to all trading positions and also to FX and commodities positions held in the banking book and subject to own fund requirements for market risks under CRR. Based on a slightly broader sample of EU institutions with small trading activities (997 institutions with gross fair valued assets and liabilities below EUR 500 million), at least 46 institutions will be targeted by this measure (a large majority of the remaining ones would be eligible for the derogation of small trading book businesses).

Table 18. Gross market value of trading assets and liabilities (including FX & commodities) of banks with small and medium-sized trading book businesses

Absolute threshold based on the size of gross trading assets and liabilities (including FX and commodities)	Number of institutions tested	Number of institutions with relative size of gross trading assets below 10% (proposed threshold)
< 20 m€	922	920
20 m€ < and < 50 m€	16	15
50 m€ < and < 150 m€	33	31
150 m€ < and < 300 m€	16	15
300 m€ < and < 500 m€	10	9
Total	997	990

Source: EBA report on SACCR and FRTB implementation, November 2016

This option would make the FRTB standards proportionate to banks' involvement in the trading business. It would also address respondents' calls in the Call for Evidence for making it less difficult to apply the standardised approach.

Table 19. Comparison of policy options against effectiveness and efficiency criteria

Objectives / Policy option	EFFECTIVENESS			EFFICIENCY (cost-effecti-veness)	
	S-1	**S-2**	**S-3**		
Option 1: No policy change	0	0	0	*0*	
Option 2: Adopt the FRTB standards for all the institutions subject to the CRR	++	– –	+	+	
Option 3: Adopt FRTB standards with some adjustments to reflect European specificities and a revised regime for small trading book businesses	+ (less risk senstitive if we introduce simpler approaches)	++ (This could even improve with respect to the baseline, if we decide to increase the scope of the derogation + a simplified approach)	++ (With the implementation of STS in the Trading book we further reduce arbitrage opportunities with respect to the banking book).	++ (With the implementation of STS in the Trading book we further reduce arbitrage opportunities with respect to the banking book).	++

Table 20. Comparison of the impact of policy options on stakeholders

Stakeholder / Policy option	**Institutions using SA**	**Institutions using IMA**	**Companies and households**	**Regulators / supervisors**

Option 1: No policy change	0	0	*0*	*0*
Option 2: Adopt the FRTB standards for all the institutions subject to the CRR	–	–	*?*	+
Option 3: Adopt FRTB standards with some adjustments to reflect European specificities and a revised regime for small trading book businesses	+	+	*?*	++

Magnitude of impact as compared with the baseline scenario (the baseline is indicated as 0): ++ strongly positive; + positive; – – strongly negative; – negative; ≈ marginal/neutral; ? uncertain; n.a. not applicable

In light of the above analysis, Option 3 has the best overall score. Option 3 would introduce appropriate proportional capital requirements for market risks under the CRR taking into account some EU specificities that are not adequately reflected in the Basel standards.

4.6. On problems on remuneration rules

Policy options for problem 1: : Deferral and pay-out in instruments
1. No policy change
2. Allow Member States or supervisory authorities to exempt some institutions and staff from the rules on deferral and pay-out in instruments
3. Exempt small and non-complex institutions and staff with low variable remuneration in other institutions from the rules on deferral and pay-out in instruments, based on harmonised exemption criteria defined at EU level
Policy options for Problem 2: Payment in shares
1. No policy change
2. Allow listed institutions to use share-linked instruments in addition to or instead of shares in fulfilment of the requirement under Article 94(1)(l)(i) CRD IV

<u>Problem 1: Deferral and pay-out in instruments</u>

Option 1: No policy change

Under this option, the text of CRD IV would remain unchanged and leave no possibility for waiving the rules on deferral and pay-out in instruments in the specific circumstances where this would nevertheless be justified.

This would significantly affect the efficiency of these rules with regard to certain institutions and staff. A full application of the rules on deferral and pay-out in instruments to small and non-complex institutions, as well as towards staff with low, non-material levels of variable remuneration, would mean that these institutions have to sustain important compliance costs and burdens. Moreover, a full application of the rules to all institutions and all staff is likely to translate into non-negligible supervisory burden for competent authorities. At the same time, the prudential benefits of applying those requirements to staff with non-material levels of variable remuneration are low.

In conclusion, under the current situation, the CRD IV text does not address the objective (S-2) of increasing the degree of proportionality in the application of the deferral and pay-out in

instruments rules, which are too cumbersome and costly in case of certain categories of institutions and staff, without significant prudential benefits.

Option 2: Allow Member States or supervisory authorities to exempt some institutions and staff from the rules on deferral and pay-out in instruments

By exempting some institutions and staff from the application of the requirements on deferral and pay-out in instruments, this option would introduce a degree of proportionality, thereby meeting objective S-2. It would moreover positively influence these institutions' competitiveness, by reducing their cost base.

However, the possibility for Member States or supervisory authorities to set their own exemption criteria risks leading to a situation in which there are significant divergences in the way the rules are applied in the different Member States. Institutions of similar size and with similar activities and staff receiving similar levels of variable remuneration would be treated differently depending on where they are located. This would allow for regulatory arbitrage opportunities and lead to regulatory complexity and unwarranted compliance costs, in particular for institutions operating cross-border. This would also be at odds with the broader objectives of the European single rulebook, which is to a set of truly unified and directly applicable rules for all banks operating in the EU[83] and, with respect to institutions supervised by the SSM, could affect the SSM's ability to supervise banks efficiently and from a truly single perspective.

Given this concern, the overall benefits of Option 2 would not outweigh its costs, and thus the efficiency of this option is assessed as negative.

Option 3: Exempt small and non-complex institutions and staff with low variable remuneration from the rules on deferral and pay-out in instruments, based on harmonised exemption criteria defined at EU level

By exempting small and non-complex institutions and staff with low variable remuneration, a much needed and appropriate degree of proportionality in the application of the rules on deferral and pay-out in instruments would be introduced, thereby meeting the objective S-2. This would be without an impact on financial stability, as all the prudentially-relevant institutions will continue to be captured by the rules.[84]

Under this Option, there would be notable savings for institutions on the costs related to the full application of the requirements on deferral and pay-out in instruments for all identified staff. Based on EBA's current estimates of on-going compliance costs, cost savings for "small institutions" could be in the range of €50 000 to €200 000 yearly. In the case of other institutions, the cost savings from exempting staff with low variable remuneration are more difficult to

[83] The term Single Rulebook was coined in 2009 by the European Council in order to refer to the aim of a unified regulatory framework for the EU financial sector that would complete the single market in financial services (see European Council conclusions, June 2009).. The key objectives of the Single Rulebook are to eliminate legislative differences among Member States; ensure the same level of protection for consumers, and ensure a level playing field for banks across the EU.

[84] For example, estimates show that a threshold of EUR 5 billion in total asset value for "small" institutions would imply the exemption of institutions accounting for around 7% of the EU market size in terms of total assets. In order to further ensure that in all the individual Member States all prudentially relevant institutions are covered, it can be considered to combine the EU harmonised exemption criteria with a possibility for supervisory authorities to adopt a stricter approach where they consider this prudentially relevant.

estimate. Currently, according to EBA estimates, ongoing costs from the application to all staff in the case of large institutions range from €400 000 to €1.5 million.

The benefits of cost savings and reduced burden would be secured without the risk of other unintended consequences that can be associated with Option 2.

Indeed, institutions of similar size and with similar activities and staff receiving similar levels of variable remuneration will in principle be subject to or exempted from the rules on deferral and pay-out in instruments in the same way independently of where they are located. The harmonised exemption criteria would reduce regulatory complexity and avoid unwarranted compliance costs, in particular for institutions operating cross-border activities. They would promote further integration in the EU market and contribute to the elimination of regulatory arbitrage opportunities.

Therefore, the efficiency of Option 3 is assessed as positive.

Options 2 and 3 reflect the views expressed by the majority of stakeholders, including Member States, supervisors and industry. **Option 3** is in line with the proposal put forward by EBA in its *Opinion on proportionality.*

Table 21. Comparison of policy options for **Problem 1** against effectiveness and efficiency criteria

Objectives / Policy option	**EFFECTIVENESS** **Objective S-2**	**EFFICIENCY (cost-effectiveness)**
Option 1: No policy change	*0*	0
Option 2: Allow Member States or supervisory authorities to exempt some institutions and staff from the rules on deferral and pay-out in instruments	+	–
Option 3: Exempt small and non-complex institutions and staff with low variable remuneration from the rules on deferral and pay-out in instruments, based on harmonised exemption criteria defined at EU level	+	+

Table 22. Comparison of the impact of policy options on stakeholders for Problem 1

Stakeholders/ Options	Regulators / supervisory authorities	Institutions / Shareholders	Employees	Tax-payers/ consumers
Option 1: No policy change	0	0	0	0
Option 2: Allow Member States or supervisory authorities to exempt some institutions and staff from the rules on deferral and pay-out in instruments	+	+	+	*?*
Option 3: Exempt small and non-complex institutions and staff with low variable remuneration from the rules on deferral and pay-out in instruments, based on harmonised exemption criteria defined at EU level	+	++	+	≈

Magnitude of impact as compared with the baseline scenario (the baseline is indicated as 0): ++ strongly positive; + positive; – – strongly negative; – negative; ≈ marginal/neutral; ? uncertain; n.a. not applicable

Problem 2: Payment in shares

Option 1: No policy change

Under this option, the text of CRD IV would remain unchanged and leave no possibility for listed institutions to use share-linked instruments instead of or in addition to shares in fulfilment of the requirement under Article 94(1)(l)(i) CRD IV. In the case of exclusive use of shares, these institutions would have to sustain important compliance difficulties, while the prudential benefit would not be any higher than in case of the use of share-linked instruments.

Option 2: Allow listed institutions to use share-linked instruments in addition or instead of shares in fulfilment of the requirement under Article 94(1)(l)(i) CRD IV

Under Option 2, listed institutions would no longer need to face the unnecessary difficulties and burdens associated with the requirement to pay out part of the variable remuneration of identified staff in shares. Institutions could create share-linked instruments, without the need to purchase or create shares. As opposed to shares, share-linked instruments moreover do not bring problems of insider dealing.

At the same time, if it is ensured that they closely track the value of the underlying shares, that they have the same effect in terms of loss absorbency as shares and that they are presented in a transparent way to staff, share-linked instruments can be equally successful in achieving the prudential objectives of payment in shares (to limit the portion of variable remuneration paid in cash, to align the interests of the staff with that of shareholders, and to align the level of variable remuneration with the risk profile and long-term interests of the institution). In order to achieve this equivalence of effectiveness with shares, share-linked instruments should be designed in such a way that they closely track the value of the underlying shares, have the same effect in terms of loss absorbency as shares and be presented in a transparent way to staff.

As Option 2 would allow achieving the same prudential outcome in a less burdensome way, its efficiency is assessed as strongly positive.

Table 23. Comparison of policy options for **Problem 2** against effectiveness and efficiency criteria

Objectives / Policy option	**EFFECTIVENESS**	**EFFICIENCY (cost-effectiveness)**
	Objective S-2	
Option 1: No policy change	*0*	0
Option 2: Allow listed institutions to use share-linked instruments in addition or instead of shares in fulfilment of the requirement under Article 94(1)(l)(i) CRD IV	+	++

Table 24. Comparison of the impact of policy options on stakeholders for **Problem 2**

Stakeholders / Options	Regulators / supervisory authorities	Institutions / Shareholders	Employees	Tax-payers/ consumers
Option 1: No policy change	0	0	0	0
Option 2: Allow listed institutions to use share-linked instruments in addition or instead of shares in fulfilment of the requirement under Article 94(1)(l)(i) CRD IV	≈	++	+	≈

Magnitude of impact as compared with the baseline scenario (the baseline is indicated as 0): ++ strongly positive; + positive; – – strongly negative; – negative; ≈ marginal/neutral; ? uncertain; n.a. not applicable

4.7. On problems on insolvency ranking

Option 1: No policy change

Under this option, MS would continue to have divergent approaches to the subordination of creditor claims, creating an uneven playing field and increasing uncertainty for investors and issuers alike, potentially rendering the cross-border application of the bail-in tool more difficult.

Option 2: Partially harmonise insolvency ranking for unsecured debt

Option 2a: Statutory subordination of all unsecured debt, retroactive application

Based on market observations made in markets which implemented such an approach, the marginal increase in the cost of funding for subordinated debt is estimated to be between 2 – 30 bps with a higher likelihood towards the lower range of that interval. As indicated by industry stakeholders who contributed to our impact assessment exercise, it is very difficult to accurately isolate the impact of a retroactive subordination of all unsecured debt from other market developments (e.g. rating downgrade, Brexit, other developments).

An immediate effect of applying Option 2a would be the immediate compliance with TLAC (assuming GSIBs held sufficient senior unsecured liabilities that would become subject to statutory subordination) at no additional funding cost because outstanding contracts would continue under the previous issuing pricing conditions.

The short-term effect of a retroactive subordination approach would be a gradual increase in the cost of funding assuming some subordinated instruments reach maturity in the short-term and need to be rolled over as subordinated debt at an additional cost of maximum 30bps.

In the medium-long-term banks would experience a significant increase in the cost of funding because more debt gradually matures and must be rolled over as subordinated, at the extra cost of funding (up to 30bps), irrespective of the TLAC needs.

Another very significant effect of this option is that there will no longer be a senior unsecured debt category in practice; therefore banks would no longer be able to fund themselves by issuing senior unsecured debt. The impact would extend also to investors, especially mandated investors who cannot invest in subordinated instruments.

Option 2b: Creation of a non-preferred senior debt category

Since no jurisdiction implemented already such an approach and no issuance has been done yet into the new senior "non-preferred" class it is not possible to base oneself on market observations to estimate the impact on the cost of funding.

The impact on cost of funding has been estimated by making reference to the issuance of similar Tier 3 instruments by an EU bank. The extrapolated effect is set between 20 – 50 bps with a higher likelihood towards the upper range of that interval (50bps). This impact should be treated with caution since it is extrapolated based on a single issuance by a single bank, which means it could be biased by market conditions in that particular Member State. Another potential proxy for this estimate is the spread differential between debt issued by a holding company compared to an operating company (HoldCo vs Opco spread). Our limited data (comparison of HoldCo vs OpCo issuances for one bank) shows an increase of 30 – 150bsp depending greatly on currencies and maturities. Given the limited sample and the large variation, this method may not be representative enough for this assessment.

The immediate and short-term effect of this option would be a sharp increase in the marginal cost of funding (50 bps or more) for the senior "non-preferred" issuance aimed to close the TLAC gap. The total cost of funding would depend on the size of the TLAC shortfall but also currencies, maturities and general market conditions at that point in time. Banks have between 2017 and 2019 to build the TLAC buffer, assuming January 2019 as the start of the TLAC compliance period and the hike in the cost of funding under this approach is expected to be more pronounced in the first part of that time interval as several banks might issue non-preferred instruments at similar times.

After 2019 and beyond it is expected that, once banks have satisfied the TLAC levels with the non-preferred senior class, the marginal cost of issuing such instruments would gradually decrease, as banks move to "cruise" mode and issue such instruments only to replace the stock as it comes to maturity.

Option 2c: Statutory preferred status for all deposits vis-à-vis senior debt

This approach separates senior liabilities only through preference of deposits. Uninsured deposits are preferred and rank higher to senior bonds, which effectively minimises (but does not eliminate) the risk of them bearing losses in resolution or insolvency.

Other senior debt, including net uncollateralised derivative liabilities and structured notes continue to rank pari passu with unsecured senior debt.

Table 25. Comparison of policy options against effectiveness and efficiency criteria

	EFFECTIVENESS			COST-EFFICIENCY	
Objectives / Policy option	**Legal clarity**	**Availability of TLAC eligible/bail-inable debt – short-term**	**Availability of TLAC eligible/bail-inable debt – long-term**	**Short-term**	**Long-term**
Option 1: No policy change	0	0	0	0	0
Option 2(a):	++	++	++	+	– –
Option 2(b):	++	0	++	–	++
Option 2(c)	+	0	0	0	0

Table 26. Comparison of the impact of policy options on stakeholders

Stakeholder / Policy option	**Institutions with larger TLAC shortfall**	**Institutions with smaller TLAC shortfall**	**Investors**	**Resolution authorities**
Option 1: No policy change	0	0	0	0
Option 2(a):	++	+	– –	++
Option 2(b):	–	–	+	++
Option 2(c)	0	0	0	0

Magnitude of impact as compared with the baseline scenario (the baseline is indicated as 0): ++ strongly positive; + positive; – – strongly negative; – negative; ≈ marginal/neutral; ? uncertain; n.a. not applicable

Option 1 is the least preferred option. It does neither have a positive impact on the effectiveness of the bail-in tool, nor does it help banks to meet their TLAC target. On the contrary, maintaining a heterogeneous framework in insolvency ranking may impede resolution authorities' ability to apply the bail-in tool, may decrease investor confidence and create distortions of competition. A significant number of Member States and industry stakeholders endorse an EU partially harmonised approach to the subordination of unsecured debt because this would facilitate the resolution of cross-border institutions while providing for more clarity for both banks and investors as well as a level playing field in the EU debt markets. Options 2(a) and 2(b) have both advantages and disadvantages when assessing the short and long-term effects.

Option 2(a) has the strong advantage of addressing TLAC shortfalls with immediate effect and it may be advantageous in the immediate and very short term as it accomplishes TLAC compliance at low additional cost of funding. This is because the retroactive subordination of the outstanding stock of debt changes the order of preference of ongoing contracts concluded at what was previously, a senior issuing price. A significant disadvantage for the medium and long-term is the fact that banks would be prohibited to issue senior unsecured debt for funding reasons other than TLAC

compliance, and would need to roll-over the stock of subordinated debt at an increased cost of funding irrespective of how much they actually need to meet TLAC. In conclusion, this option is rigid and a "one-size fits all" type of option, with very significant effects on the debt market in the long run (e.g. the absence of senior unsecured market, the crowding out of mandated investors who cannot buy subordinated instruments).

However, Option 2(b) will enable banks to define and maintain the optimal funding mix according to their business and funding model. This option would allow banks to issue TLAC eligible senior non-preferred instruments up to the level of the TLAC shortfall. Although potentially costly in the short-run when several banks may issue senior non-preferred to close their TLAC shortfalls, the cost increase is deemed to dampen in the long-run when banks would have filled-in their TLAC buffers and only need to issue in this category to roll-over TLAC debt as its maturity period is below 1 year. The investor base for senior non-preferred debt, which would be bail-inable only in resolution, is expected to be similar to that for senior unsecured debt rather than that for subordinated debt. This is because subordinated debt bears higher risks, being potentially subject to write-down or conversion to equity also outside of resolution.

In conclusion, Option 2(b) would provide sufficient flexibility to take account of different bank business models across the EU and reduce over time the impact on bank funding costs. It would avoid the crowding out of investors with a mandate outside of subordinated instruments and allow for appropriate calibration to ensure a level playing field in the market. This direction has been endorsed by Member States and industry representatives in the expert group discussions as it fulfils the acceptance criteria set forth namely: flexibility, taking account of banking business and funding models, the possibility to adjust so that level playing field is ensured and confined impact on funding costs.

4.8. On lack of effectiveness of the current rules on moratorium

Policy options
1. No policy change
2. Further harmonise moratorium tools in the EU

Option 1: No policy change

This option would leave the current situation unchanged.

Option 2: Further harmonise moratorium tools in the EU

A further harmonisation of moratorium tools would require amendments to existing legislations, and particularly CRR/CRD IV and/or BRRD. A further harmonised moratorium tool at EU level could help smoothening the resolution process and guarantee that resolutions and supervisory authorities can freeze the bank's liquidity for a short period of time to assess whether the bank should be subject to early intervention measures, or should be declared failing or likely to fail, or to more precisely quantify its assets and liabilities in the context of the valuation process or to choose a certain resolution tool.

The objective of a further harmonisation of moratorium tools is to provide banks with a flexible and effective instrument to prevent undesirable effects on liquidity in a supervisory or resolution scenario.

At the same time it is of utmost importance to ensure that the execution of moratorium tools does not affect important safeguards (such as the rights of depositors) and, apart from this, is carried out in a proportionate manner. Also, it is important to ensure that the approach of supervisors/resolution authorities is as harmonised as possible to facilitate the smooth management of the resolution process in case of cross-border institutions.

The effectiveness of such a tool may vary substantially in intensity depending on how the moratorium tool is structured. The main features of the moratorium tool currently being assessed are:

- specific and clear conditions of application. The moratorium could be used only if necessary for specific purposes, namely:
    - decide on the existence of the conditions for early intervention measures
    - decide on the determination whether the bank is failing or likely to fail
    - assess the exact amount of assets and liabilities of the bank
    - decide on the application of a specific moratorium tool
- short duration (minimum period needed for the purpose above and anyway not longer than 5 days)

These features may effectively address the key concerns encountered by the Commission when consulting stakeholders in the course of expert discussion on the topic.

In particular, the clear conditions of application would be beneficial to ensure clarity and avoid rash reactions from creditors' of the bank, which may in turn limit the risk of liquidity outflows. Also, the fact that such conditions are directly linked to specific steps in the pre-resolution and resolution procedure should further contribute to ensure certainty by avoiding excessive discretion for the supervisory/resolution authority.

Moreover, the short duration appears as a key factor in avoiding bank runs. The short duration would be instrumental to the specific objective pursued by the regulator and would limit the impact on creditors. At the same time, the proposed provision should provide clarity on the maximum duration of the suspension, thereby limiting the possibility of diverging interpretations.

Also, it seems important to clarify the possibility to apply a moratorium tool in a pre-resolution (early intervention) scenario. It seems important for supervisors/resolution authorities to be provided with the possibility to use a moratorium tool where possible to reduce the impact of a resolution or avoid it altogether. This however, as explained above, requires a consistent approach in case of cross-border resolution and should keep into account the safeguards in favour of creditors. In this light, the conditions of applications of the tool in an early intervention scenario should be clear and specific to avoid diverging interpretations. Also, the suspension should have a short duration to preserve creditors' prerogatives.

It is worth mentioning that transactions which cannot be suspended – such as those involving CCPs – as well as covered deposits would be out of scope.

Table 27. Comparison of policy options against effectiveness and efficiency criteria

Objectives / Policy option	**Legal clarity**	**Level playing field**
Option 1: No policy change	0	0
Option 2: further harmonisation	+	+

Table 28. Comparison of the impact of policy options on stakeholders

Stakeholder / Policy option	**Institutions**	**Supervisory authorities**	**Resolution authorities**	**Depositors**
Option 1: No policy change	0	0	0	*0*
Option 2: further harmonisation	≈	+	+	?

Magnitude of impact as compared with the baseline scenario (the baseline is indicated as 0): ++ strongly positive; + positive; – – strongly negative; – negative; ≈ marginal/neutral; ? uncertain; n.a. not applicable

4.9. On insufficient proportionality of the current rules

Policy options
1. No policy change
2. Measures to reduce administrative burden and legal complexity for smaller credit institutions
3. Exemption of very small credit institutions from CRR/CRD IV

Option 1: No policy change

Under this option rules would remain unchanged. The CRR and CRD IV would simply continue to impose a general duty on Member States and European authorities to apply the rules in a proportionate manner (see Recital 46 of the CRR). Specifically, reporting would continue to be subject to the general requirement that it must be "proportionate to the nature, scale and complexity of the activities of the institutions" (see Art. 99(5) of the CRR). This formulation has proven to be excessively high-level and, as a result, insufficient to deliver a meaningful differentiation in the reporting required from smaller institutions.

With regard to disclosure, the requirements set out in the CRR would continue to apply to all institutions without any distinction with regard to their size and complexity.

Option 2: Measures to reduce administrative burden and legal complexity for smaller credit institutions

To address concerns related to excessive administrative burden, option 2 would set out a specific reporting and disclosure framework for smaller institutions with reduced frequency and content. More precisely, smaller credit institutions would be required to provide to the supervisors less granular information by eliminating those reporting obligations that are not relevant for supervisory purposes. Smaller credit institutions would also be subject to less frequent reporting obligations (e.g. quarterly instead of monthly, biannually instead of quarterly). To this end, the CRR and the CRD IV would be amended to give a mandate to the EBA to develop ad hoc

reporting for smaller credit institutions (see annex 3.3 for details). Furthermore, the CRR would be amended to provide for differentiated disclosure requirements for small credit institutions. In particular, similarly to reporting obligations, the number of information to be disclosed would be reduced for smaller credit institutions, as well as the frequency of disclosure obligations (see annex 3.2 for details).

Finally, to address the difficulties for smaller institutions resulting from the volume and complexity of the current framework, the EBA would be mandated to develop an IT tool to guide them through the rules which are relevant to their size and business model. This IT tool could help smaller institutions to gain a better of understanding of the rules and reduce compliance costs.

Option 3: Exemption of very small credit institutions from CRR/CRD IV

As an alternative to ad-hoc reporting and disclosure requirements, small credit institutions would be exempted from the CRR and CRD IV. The result of this would be to devolve to Member States full responsibility to regulate these firms from a prudential perspective.

However, exempting very small credit institutions would result in a fragmentation of the Single Market undermining the level playing field. In fact, similar smaller credit institutions would be treated differently depending on the Member State where they operate. Moreover, exempted credit institutions would still being able to compete in the EU internal market with credit institutions to which CRD IV/CRR are applicable in full. Eempting very small credit institutions would also increase risks to financial stability since it wouldn't provide any EU instrument to address the simultaneous failure of different small credit institutions, which may hamper the stability of the whole EU banking sector. During discussions with Member States[85] they shared this view and were also concerned that exempted credit institutions could be deprived from access to the EU Deposit Insurance Scheme (i.e. EDIS)[86], currently under discussion, and that, once the EDIS was implemented, an exemption from the CRR/CRD IV would contradict the stated objective of the EDIS proposal, in particular its risk-sharing premise. Moreover, such an exemption was regarded as potentially hindering efforts in some Member States to restructure their banking system through consolidation as a means to improve the solvency of weaker credit institutions.

Whilst calling for more proportionality in the prudential framework, stakeholders replying to the call for evidence did not advocate for very small credit institutions to be exempted from CRR/CRD IV.

Comparison of policy options

The combination of tailored prudential requirements as described under each relevant section (e.g. NSFR, leverage ratio etc.), specific reporting and disclosure requirements for smaller institutions and the introduction of an IT tool is assessed to be sufficient to deliver an appropriate balance between proportionality and consistency of prudential requirements for all institutions. Smaller institutions would benefit from prudential requirements and limited exceptions tailored to their business model, size, complexity and relative risk of the activities they undertake, but would be subject to the same baseline prudential standards as their larger counterparts. This would introduce in the EU banking system a degree of flexibility that would allow a significant

[85] This option was discussed with Member States during the Expert Group on Banking Payment and Insurance (EGBPI) meetings in June and July.

[86] For more information on the EDIS see http://ec.europa.eu/finance/general-policy/banking-union/european-deposit-insurance-scheme/index_en.htm.

number of credit institutions to benefit from proportionality measures. As a matter of fact, the high polarisation of the EU banking sector (i.e. there is a high difference between smaller and bigger credit institutions in terms of assets) and the differences across Member States in the composition of market operators (i.e. size and business model of credit institutions) would not allow for setting a 'one size fits all' type of regulatory framework for smaller institutions. For this reason, the possibility of exempting small credit institutions from the application from the CRD IV and CRR appears less effective. A plain exclusion of certain banks would not take into account differences in the composition of the EU banking sector in different Member States (no risk-sensitive) and would not improve legal certainty since 28 regulatory regimes would be applicable to credit institutions excluded from the CRD IV and CRR. This would also result in an unlevelled playing field both among credit institutions exempted and between the latter and credit institutions to which the CRD IV and CRR apply.

Other than the necessary measures to transpose the new provisions amending the CRD IV, Member States would not be required to put in place new specific administrative procedures.

The summary of the analysis of different options to achieve the specific objective of providing a more proportionate prudential framework is presented in the table below.

Table 29. Comparison of policy options against effectiveness and efficiency criteria

Objectives / Policy option	**EFFECTIVENESS**					**EFFICIENCY** (cost-effectiveness)
	Specific objectives					
	S-1	**S-2**	**S-3**	**S-4**	**S-5**	
Option 1: No policy change	0	0	0	0	0	0
Option 2: ad hoc reporting and disclosure requirements for small institutions and IT tool (plus tailored prudential requirements and limited exemptions)	++	++	++	0	++	++
Option 3: exempt very small credit institutions from CRR/CRD IV	-	+	- -	0	-	+

Table 30. Comparison of the impact of policy options on stakeholders

Stakeholder / Policy option	**Small credit institutions**	**Other credit institutions**	**Supervisors**
Option 1: No policy change	0	0	*0*
Option 2: ad hoc reporting and disclosure requirements for small institutions and IT tool (plus tailored prudential requirements and limited exemptions)	++	++	++
Option 3: exempt very small credit institutions from CRR/CRD IV	+	-	-

Based on the above analysis, option 2 scores better than the baseline option and option 3. Option 2 would, therefore, be more appropriate and beneficial for both financial stability protection and economic growth promotion perspectives.

4.10. The choice of the instrument

The policy options retained in the sections above could be implemented by amending the CRR and the CRD IV. The proposed measures indeed refer to or develop further already existing provisions inbuilt in those legal instruments (liquidity, leverage, remuneration, proportionality). It is therefore suggested that these measures be put forward as an amendment to the existing legal instruments. The indicated list of proposed amendments is presented in annex 6.

As regards the new FSB agreed standard on total loss absorbance capacity it is suggested to incorporate the bulk of the standard into the CRR, as only a regulation can achieve the necessary uniform application, much in the same way as the pillar 1 primary capital requirements. Shaping prudential requirements in the form of an amendment to the CRR would ensure that those requirements will in fact be directly applicable to them. This would prevent Member States from implementing diverging national requirements in an area where full harmonization is desirable in order to prevent an un-level playing field. Minor fine-tuning of the current legal provisions within the BRRD will however be necessary to make sure that TLAC and MREL requirements are fully coherent and consistent with each other.

5. THE CUMULATIVE IMPACTS OF THE ENTIRE PACKAGE

5.1. Introduction

This section discusses the cumulative impact of additional capital and liquidity requirements for the EU banking industry, in terms of their costs and benefits, compared to the baseline scenario. The baseline scenario represents the cumulative impact in the absence of measures under consideration but including the CRR and CRD IV measures currently in force. Specifically, this cumulative impact consists of two parts:

(1) a quantitative assessment of benefits and costs related to the FRTB and the leverage ratio, finding a modest reduction in expected losses in the banking system and associated potential burden on public finances at a very small overall costs to the economy;
(2) a qualitative assessment based on available empirical evidence of benefits and costs related to the NSFR, which shows that banks disposing of a higher level of stable funding tend to show a smaller decrease in lending to the real economy during the financial crisis and that introducing the NSFR would not have a significant impact on the supply of credit to the economy.

As indicated by Dewtripont and Hancock et al. (2016), capital and liquidity requirements have different direct impacts on banks' balance sheets which often interact. The reaction of individual banks can have an impact on aggregate economic activity - both positive (benefits) and negative (costs). Literature suggests[87], on the benefits side, that higher capital and liquidity ratios improve resilience to shocks of both individual banks, and the financial system. Improved resilience, in

[87] For example: Miles et al (2013), de-Ramon et al (2012), BCBS (2010), de Bandt (2015), Brooke et al. (2015), Elliot et al. (2016)

turn, lowers both the probability of a financial crisis and reduces the size of economic losses in the event that a crisis occurs. The benefits, in this sense, are the expected losses that are avoided. On the costs side, higher capital and liquidity requirements may increase bank funding costs which could be passed on to end-users (i.e. banks could react by reducing the volume or increasing the price of lending to households and non-financial firms). Changes to liquidity requirements could impact interbank lending and maturity transformation, which also has an impact on aggregate borrowing. Lower borrowing reduces aggregate consumption and investment and, eventually, gross domestic product (GDP). Some authors[88] also point to the effects of some of these measures on market liquidity in securities markets although the effects are difficult to disentangle from other factors influencing market liquidity.

Overall, the net benefits of regulation can be thought of as the expected loss that is avoided in the event that a crisis occurs (the benefit), which is offset by the opportunity cost of reduced economic activity during non-crisis periods.

This analysis focusses on the impact from additional capital requirements related to the leverage ratio requirements, market risk requirements (FRTB) and the NSFR, as calibrated by the Basel Committee. This implies that the actual impact of the preferred options, which leads to a calibration better reflecting EU specificities, should provide the same benefits at lower costs. In general, it needs to be stressed that, given the inherent complexity and special nature of banking and given that many benefits and costs are dynamic in nature (often related to unobservable incentives), there are limitations to the reliability and precision with which quantitative models can comprehensively estimate the social benefits and costs. Nevertheless, these models are useful to better understand the transmission mechanisms and the results generally give a good estimate of the direction and order of magnitude of expected impacts.

5.2. Quantitative assessment of benefits and costs related to FRTB and the LR

In order to support the qualitative assessment and comparison of reform options carried out above, the Commission services have attempted to quantify some of the costs and benefits that could result from the proposals on the leverage ratio and on FRTB.

Benefits (further details in annex 5.1)

Benefits are measured as a decrease in the potential costs for society due to bank defaults and recapitalisation needs. The analysis estimates the losses in excess of bank capital, as well as the recapitalization needs of banks to allow them to continue operating on an on-going basis. The effect of the various tools available in the various regulatory tools (i.e. bail-ins and resolutions funds) aimed at mitigating the leftover losses and recapitalisation needs, is also taken into account.

Banking losses are simulated using the SYMBOL model (Systemic Model of Banking Originated Losses). SYMBOL simulates losses for individual banks using information from their balance sheet data. The model also allows taking into account the safety-net that is available to absorb the simulated shocks (capital, bail-in, resolution funds). The initial simulation output is the full distribution of bank losses. These initial individual bank losses are then transformed into losses in

[88] For example: Elliot et al. (2016)

excess of capital and recapitalization needs, to be covered by the safety net, and the residual is finally aggregated at EU level.

The simulations consider the case of a systemic crisis event, similar in severity to the one started in 2008, and the conservative assumption is used that all simulated bank excess losses and recapitalization needs that the safety net cannot cover would eventually fall on public finances.

The exercise uses post-2014 data for a sample of 183 banks covering 83% of the EU total assets. A crisis comparable to the last global one is approximately placed on percentile 99.95 when considering excess losses and recapitalization needs based on pre-crisis data.

As indicated above, the analysis ignores excess capital buffers that many banks currently hold, partly in anticipation of future capital requirements; the analysis assumes that all banks hold just enough capital to cover their 10.5% RWA minimum capital requirement (MCR), both before and after the reforms. In reality there are banks which already hold an actual capital commensurate with the new rules MCR or even above. For these banks the associated costs- and benefits would not arise. However, considering currently existing additional capital buffers in the baseline may lead to an underestimation of the benefits, since it is not certain that banks currently holding a buffer will maintain it. Moreover, to the extent that the analysis focuses on the adjustment to the new rules, looking at actual buffers may ignore some of the adjustment that has already taken place. For that reason we use a scenario where banks start from the minimum of their current capital level and the MCR incl. a limited buffer.

The baseline scenario represents the case where banks' capital equals 10.5% risk based capital requirements (excl. policy measures). The policy scenario represents the case where banks' capital is the highest of 10.5% risk based capital requirements (including policy measures) and 4%[89] of the leverage ratio exposure measure. Recapitalisation needs to take place at the highest of 8% of risk based capital requirements and 3% of the leverage ratio exposure measure.

As shown in table 1, the model estimates that the introduction of FRTB and the leverage ratio reduces expected bank losses in a severe 2008-type crisis from €346.32bn to €313.49 (a 9.19% reduction), and reduces the impact on public finances after taking into account bail-ins and resolution funds from an already very low figure of €5.49bn to €2.87bn (a -47.85% reduction).

Table 31. Overview of benefits

[89] It is assumed that banks hold a 1% buffer in excess of the minimum leverage requirements, this is to keep consistency with the risk based capital requirement where not every euro of losses immediately leads to a recapitalisation need.

	Baseline			Policy scenario			Impact		
Benefits - Reduction in Financial needs	Financial needs after capital is used	Financial needs after bail-in[90]	Financial needs after resolution fund	Financial needs after capital is used	Financial needs after bail-in	Financial needs after resolution fund	Impact on Financial needs after capital is used	Impact on Financial needs after bail-in	Impact on Financial needs after resolution fund
In % of EU GDP	2.52%	0.37%	0.04%	2.29%	0.25%	0.02%	-9.19%	-32.20%	-47.85%
In € bn	346.32	50.68	5.49	314.49	34.36	2.87			

Costs (further details in annex 5.2)

In relation to costs, the analysis has focused on estimating through the QUEST model. In general, regulation induces banks to increase capital relative to debt (including deposits). This has two opposing potential effects on funding costs. Shifting to bank capital and paying an equity premium increases funding costs, while lowering the demand for deposits reduces the deposit rate, which lowers funding cost. The latter effect is, however, usually small, and likely even smaller in the current environment with effectively zero deposit rates. The first effect therefore dominates.

Optimising banks could try to shift the higher funding costs onto the non-financial private sector in the form of higher loan rates. This could increase capital costs for firms which partly finance their investment with loans which could have an impact on the size of their investments. Based on the same assumptions as for the estimation of the benefits, the estimated impact on long term GDP could range between -0.03% and -0.06% depending on whether an offset[91] is applied on the cost of equity or not resulting from the improved capitalisation of banks. The impact on banks' funding costs would range between 1.38 bps and 2.71 bps. These estimates do not include potential adjustments considered in this impact assessment to counteract the negative impact of the contemplated measures.

It is important to note that the costs and benefits that have been quantified are not comprehensive and are dependent on underlying assumptions (how to separate banks' balance sheets, behavioural responses of banks, required rates of returns for the different funding sources under different scenarios, etc.). Moreover, important social benefits (including the reduction in the occurrence of systemic crisis and reduction in possible contagion between banks as well as the impact of the reform on avoiding conflicts of interest, misallocation of resources and facilitating supervision, etc.) and costs (such as economies of scope and scale, impacts on liquidity of secondary markets and legal costs) have not been quantified and modelled.Qualitative assessment of benefits and costs related to the NSFR

[90] On the use of bail-in, some assumptions had to be taken. The actual amounts of bail-inable debt are not available from the data, therefore we assumed that the amount of available bail-inable debt equals the double of the minimum capital requirements corresponding to a loss absorption amount and a recapitalisation amount.

[91] This 50% offset is based on the work of Miles et al (2013)

Because stable funding requirements have only recently been defined and have not yet been introduced in any jurisdiction, empirical results on the impact of stable funding requirements are sparse, especially the ones focussing on marginal costs and benefits of a stable funding requirement. Potential benefits of a stable funding requirement are the reduced likelihood of bank failure caused by liquidity shocks and smaller contraction of banks' lending in reaction to a liquidity shock. It is important to keep in mind that, for stable funding requirements, the potential costs of the regulation in 'business as usual times' is compared to the costs of liquidity shocks.

As indicated in Dewatripont and Hancock et al. (2016) and EBA (2015), existing literature on the NSFR discusses its expected impact on banks' balance sheets via a lengthening of liabilities' maturity and a shortening of assets' maturity. Funding sources considered as less stable may also be replaced with more stable funding sources through e.g. substituting short term wholesale funding with retail funding. As a direct effect, banks' profitability could decrease due to the increase in funding costs. At macroeconomic level, the theoretical effects of liquidity regulation, as discussed in existing literature, are a consequence of the interplay of the LCR and the NSFR. On the benefits side, these effects are a reduced cost of bank failures (Calomeris et al (2015), lower probability of simulatenous bank failures (Perotti-Suarez (2011)), a banking system less vulnerable to liquidity shocks (Goodhart (2011), EBA (2015), Farhi-Tirole (2012)) and a lower contraction of bank lending following a liquidity shock (Acharya-Viswanathan (2010), EBA (2015)). On the costs side, these effects are a possible greater impact on market prices of liquidity shocks due to similar asset holdings and herding (Bonfim-Kim (2012), Allen et al (2012)), a decrease in bank lending in 'business as usual times' (Acharya-Viswanathan (2010)), lower overnight and wholesale funding which could reduce the effectiveness of monetary policy (Bech-Keister (2013)) and lower discipline of banks by wholesale investors (Calomeris-Kahn (1991), Diamond-Rajan (2001)).

While none of the literature empirically tests all costs and benefits of the NSFR in an integrated way, some empirical evidences are available:

Some papers examined bank behaviour during the most recent financial crisis and provide indirect indications on the potential benefits of stable funding requirements. Cornett et al (2011) found that the contraction of bank lending during the financial crisis was significant and that US banks that had extended more contingent credit lines and banks having a lower proportion of stable funding sources reduced more significantly their lending than other banks. In the same vein, Pessarossi and Vinas (2015) found that banks with lower funding risk profile and a lower ratio of long term loans to long term funding and deposits provide more lending after the interbank market freeze in 2007-2008.

Chiaramonte and Casu (2016) tested the relevance of both structural liquidity and capital ratios, as defined in Basel III, on EU banks' probability of failure. Estimates from several versions of the logistic probability model indicate that the likelihood of failure and distress decreases with increased liquidity holdings. The results show that banks that ran into difficulty almost always had low NSFR and capital requirements well above the statutory minimum.Stakeholder analysis

The retention of simplified approaches to calculate capital requirements would ensure continued proportionality of the rules for smaller banks. Furthermore, the additional measures to increase proportionality of some of the requirements (related to reporting, disclosure and remuneration) should decrease the administrative and compliance burden for those banks.

Other stakeholders, such as banks' clients (e.g. consumers and businesses), investors in securities issued by banks, and financial markets as a whole, would be affected by the initiative indirectly. As indicated above, there proposed measures could lead to an increase in lending rates, but the increase is not expected to be so marked that it would lead to a significant impact on banks' clients access to loans. Furthermore, after banks adjust to the new rules, they would be better placed to provide loans to their clients. The resolution-related measures contained in the proposal would have an impact on investors in banks' securities issued by G-SIIs: they will need to become more active in monitoring the amount of risk-taking of the G-SII. The proposed measures to increase the transparency of banks should help them in that respect. The same is true for markets more in general. Finally, the combined proposed measures would increase the safety and soundness of the financial system which is in the interest of all stakeholders.

5.3. Impact of the preferred options on administrative costs

Administrative costs[92] stemming from the implementation of the whole package of preferred options will be reduced to banks as a whole, mainly due to more proportionate requirements for supervisory reporting and disclosure (for more details see annexes 3.2 and 3.3), which will primarily concern smaller institutions.

Burdensome supervisory reporting was frequently mentioned in the call for evidence. The EBA is undertaking the analysis on proportionality of these costs. The preferred options would reduce recurring costs through the introduction of more proportionate reporting and significantly reduced disclosure requirements.

As regards disclosure by small banks, at this point defined as banks with total assets below €1.2 billion, they would be required to disclose only a simple key metrics table with capital, liquidity and leverage ratios once per year compared to the current detailed annual disclosure requirements. At this stage, however, precise number of concerns banks is not known as some of them can already be relieved from disclosure requirements if their parent company decided to provide disclosures only on the consolidated basis.

On reporting, small banks would be subject to a reduced frequency of reporting half year instead of quarterly and the EBA will be mandated to make proposals to further reduce the granularity of supervisory reporting templates for small banks. Moreover, an independent study would identify additional ad-hoc supervisory reporting requirements that supervisors are currently imposing in addition to the single rule book on supervisory reporting.

In some areas opportunity gains in administrative burden will be achieved by scoping out smaller banks: revised CRR requirements such as for the trading book and TLAC. No incremental administrative costs are expected from setting binding NSFR and LR. In the same way, no significant administrative costs will be incurred due to the extension of SME Supporting Factor, even for small banks, and the measure has been widely supported by the banking industry. Similarly, no significant administrative costs will be

[92] Administrative costs are defined as the costs which stakeholders (e.g. companies, citizens or public authorities) incur due to legal obligations to provide information. The administrative costs have two components: the business-as-usual costs and administrative burdens. The business-as-usual costs are the costs resulting from obligations to provide information which would be done by an entity even in the absence of the legislation. At the same time, the administrative burdens are the costs which the entity would not incur in the absence of legislation, i.e. which is borne solely because of a legal obligation.

incurred due to the further harmonisation of moratorium, as these tools will continue operating based on the same procedures. The option to partially harmonise the hierarchy of creditor claims for unsecured debt would not have an impact on the administrative cost of banks.

Moreover, in parallel to the proposed measures and with a view to further reducing administrative costs resulting from supervisory reporting, the EBA has already a mandate for developing common IT solutions and has developed a single data point model and a single XBRL taxonomy for the supervisory reporting package. These can be used by banks and software developers to optimise the collection and transfer of supervisory reporting data between the banks and supervisors as well as between supervisors and the EBA at an aggregated level. Overall, institutions are not expected to incur significant IT development costs from the implementation of the preferred options.

5.4. The impact on SMEs

The proposed recalibration of the capital requirements for bank exposures to SMEs is expected to have a positive effect on bank financing of SMEs. This would primarily affect those SMEs, which currently have exposures beyond €1.5 million as these exposures currently do not benefit from the SME Supporting Factor.

Other proposed options in the impact assessment, particularly those aimed at improving resilience of banks to the future crisis, are expected to increase sustainability of bank lending to SMEs.

Finally, measures aimed at reducing compliance costs for credit institutions, particular the smaller and less complex institutions are expected to reduce borrowing costs for SMEs.

5.5. Impact on third countries

Third countries will benefit from the proposed review with regard to three important elements. On one side, the proposal will enhance the stability of EU financial markets thereby reducing the likelihood and costs of potential negative spillovers for global financial markets. Moreover the proposed amendments will contribute to increase the harmonization of the regulatory framework across Member States thereby reducing substantially administrative costs for third countries banks operating in the EU. Finally, since several amendments are intended to align the EU legislation to most advanced internationally agreed standards, the proposal will contribute to increase the level playing field between EU banks and banks established in third countries with an even more significant reduction of compliance costs for doing business in the EU.

6. MONITORING AND EVALUATION

It is expected that the proposed amendments will start entering into force in 2019. The amendments are tightly inter-linked with other provisions of the CRD IV and CRR, which are already in effect since 2014. The current proposals underscore the importance of timely and appropriate changes of the rules in response to the markets events, the evolution of the EU economy, in particular its financing mechanisms, the new institutional setup with Banking Union in place and the EU commitments with international fora (FSB and Basel in particular).

The Basel Committee and EBA will continue to collect the necessary data for the monitoring of leverage ratio and the new liquidity measures in order to allow for the future impact evaluation of

the new policy tools. Regular Supervisory Review and Evaluation (SREP) and stress testing exercises will also help monitoring the impact of the new proposed measures upon affected credit institutions and assessing the adequacy of the flexibility and proportionality provided for to cater for the specificities of smaller credit institutions. Additionally, the Commission services will continue to participate in the working group of the BCBS and the joint task force established by the European Central Bank (ECB) and by EBA, that monitor the dynamics of institutions' own funds and liquidity positions, globally and in the EU, respectively.

The set of indicators to monitor the progress of the results stemming from the implementation of the preferred options are the following:

On NSFR:

Indicator	Net Stable Funding Ratio (NSFR) for EU institutions
Target	As of date of application, 99% of institutions taking part to the EBA Basel III monitoring exercise meet the NSFR at 100% (65% of group 1 and 89% of group 2 credit institutions meet the NSFR as of end-of December 2015)
Source of data	Semi-annual the EBA Basel III monitoring reports

On leverage ratio:

Indicator	Leverage ratio (LR) for EU institutions
Target	As of the date of application, 99% of group 1 and group 2 credit institutions will have the leverage ratio of at least 3% (93,4% of group 1 institutions met the target as of June 2015)
Source of data	Semi-annual EBA Basel III monitoring reports

On SMEs

Indicator	Financing gap to SMEs in the EU, i.e. difference between the need for external funds and the availability of funds
Target	As of two years after the date of application, <13% (last known figure – 13% as of end 2014)
Source of data	European Commission / European Central Bank SAFE Survey (data coverage limited to the euro area)

On TLAC:

Indicator	TLAC in EU G-SIIs
Target	All EU G-SIBs meet the target (>16% of risk weighted assets (RWA) /6% of the leverage ratio exposure measure (LREM) as of 2019, > 18% RWA/6.75% LREM as of 2022)
Source of data	Semi-annual EBA Basel III monitoring reports

On trading book:

Indicator	RWA for market risks for EU institutions Observed variability of risk-weighted assets of aggregated portfolios applying the internal models approach.
Target	- As of 2023, all EU institutions meet the own funds requirements for market risks under the final calibration adopted in the EU. - As of 2021, unjustifiable variability (i.e. variability not driven by differences in underlying risks) of the outcomes of the internal models across EU institutions is lower than the current variability* of the internal models across EU institutions. _____

	*Reference values for the "current variability" of value-at-risk (VaR) and incremental risk charge (IRC) requirements should be those estimated by the latest EBA "Report on variability of Risk Weighted Assets for Market Risk Portfolios", calculated for aggregated portfolios, published before the entry into force of the new market risk framework.
Source of data	Semi-annual EBA Basel III monitoring reports EBA Report on variability of Risk Weighted Assets for Market Risk Portfolios. New values should be calculated according to the same methodology.

On remuneration:

Indicator	Use of deferral and pay-out in instruments by institutions
Target	99% of institutions that are not small and non-complex, in line with the CRD requirements, defer at least 40% of variable remuneration over 3 to 5 years and pay out at least 50% of variable remuneration in instruments with respect to their identified staff with material levels of variable remuneration.
Source of data	EBA remuneration benchmarking reports

On proportionality:

Indicator	Reduced burden from supervisory reporting and disclosure
Target	80% of smaller and less complex institutions report reduced burden
Source of data	Survey to be developed and conducted by EBA by 2022

On insolvency ranking:

Indicator	Complaints about competitive disadvantages due to different insolvency rankings of unsecured bank debt
Target	Commission receives no indications or complaints about competitive disadvantages due to different insolvency rankings of unsecured bank debt after the harmonisation.
Source of data	Stakeholder feedback

On moratorium:

Indicator	Status of banks' liquidity before and after moratorium is used
Target	Absence of bank runs, no transfer of funds cross-border and smooth functioning of procedures in supervisory/resolution context
Source of data	SRB/NRAs/possibly survey

The evaluation of the impacts is expected to be conducted within five years after the date of the application of the new measures. The methodology should be designed taking into account the output of monitoring indicators.

Compliance and enforcement will be ensured on an ongoing basis including, where needed, through infringement proceedings for lack of transposition or for incorrect transposition and/or application of the legislative measures. Reporting of breaches of EU law can be channelled through the European System of Financial Supervision (ESFS), including the national competent authorities, EBA as well as through the ECB. EBA will also continue publishing its regular reports of the CRD IV-CRR/Basel III monitoring exercise on the European banking system. This exercise monitors the impact of the Basel III requirements (as implemented through the CRR and the CRD) on EU institutions in particular as regards institutions' capital ratios (risk-based and non-risk-based) and liquidity ratios (LCR, NSFR). It is run in parallel with the one conducted by the BCBS.

GLOSSARY

ASF	Available Stable Funding
BCBS	Basel Committee on Banking Supervision
BRRD	Bank Recovery and Resolution Directive
CCP	Central CounterParty
CfE	**Call for Evidence**
CRR	Capital Requirements Regulation
CRD IV	Capital Requirements Directive
CSR	Credit Spread Risk
EBA	European Banking Authority
ECB	European Central Bank
EDIS	European Deposit Insurance Scheme
EU	European Union
FSB	Financial Stability Board
FRTB	Fundamental Review of the Trading Book
GDP	Gross Domestic Product
G-SIB	Global Systemically Important Bank
G-SII	Global Systemically Important Institution
HQLA	High Quality Liquid Assets
IFRS	International Financial Reporting Standard
IRB	Internal-Ratings Based
LCR	Liquidity Coverage Ratio
MREL	Minimum Requirement on own funds and Eligible Liabilities
MS	Member State
MtM	Mark-to-Market
MtMM	Mark-to-Market Method
NSFR	Net Stable Funding Ratio
O-SII	Other Systemically Important Institution

RSF	Required Stable Funding
SA-CCR	Standardised Approach for Counterparty Credit Risk
SM	Standardised Method
SME	Micro, small and medium-sized enterprise
SME SF	SME Supporting Factor
SSM	Single Supervisory Mechanism
SREP	Supervisory Review and Evaluation Process
SRMR	Regulation on Single Resolution Mechanism
TLAC	Total Loss-Absorbing Capacity

ANNEX 1. PROCEDURAL ISSUES AND CONSULTATION OF INTERESTED PARTIES

The meeting of the Regulatory Scrutiny Board took place on 7 September 2016 to discuss the draft impact assessment. The Regulatory Scrutiny Board issued a positive opinion on this impact assessment on 27 September 2016.

Possible impact of the CRR/CRD IV on financing of the economy ("CRR consultation")

Consultation activity

The CRR required the Commission to review the impact of own funds requirements on lending to SMEs and long-term financing, including infrastructures.[93] As a result, the Commission services consulted on the potential impact of the CRR and CRD IV on the financing of the economy, including SME lending and long-term financing, in 2015.[94] This consultation has fed into the preparation of the legislative initiative accompanying this impact assessment.

Stakeholder groups

There were 84 responses to the consultation. The majority of responses came from the financial industry. Half of the responses came from three Member States: Belgium (a vast majority of industry associations), the United Kingdom and Germany.

Chart 1: Type of respondent

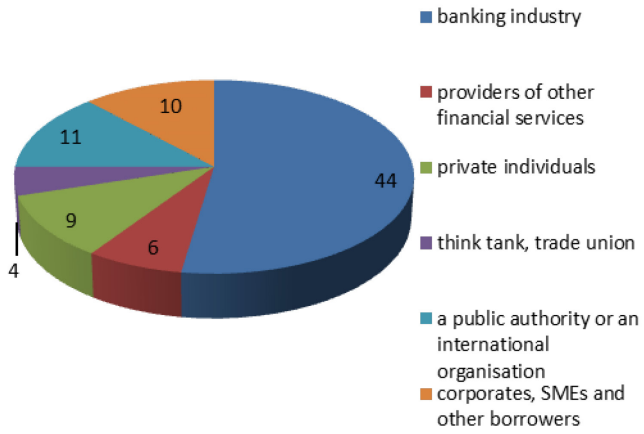
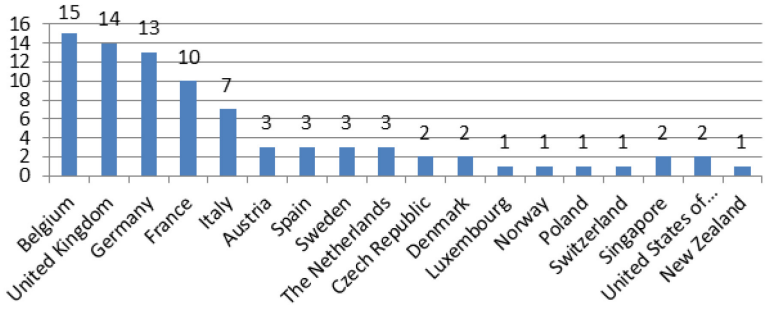


Chart 2: Location of respondent

[93] Article 501: the impact of own funds requirements on lending to SMEs and natural persons; article 505: the appropriateness of the CRR requirements in light of the need to ensure adequate levels of funding for all forms of long-term financing for the economy, including critical infrastructure projects; and, Article 516: the impact of CRR on the encouragement of long-term investments in growth-promoting infrastructure.

[94] The public consultation was launched in July 2015 and closed in October 2015. A summary of the responses is published on the Commission's website.



Results

In terms of substance, the consultation asked stakeholders for their views on the impact and role of the CRR/CRD IV on the recapitalisation process; lending to corporates in general and SMEs in particular; and, lending to infrastructures. It also asked questions related to proportionality, simplification and the single rulebook. While views differed substantially between type of respondents, a number of high-level messages can be extracted:

- **Role of CRR/D in recapitalisation process**: All stakeholder groups shared the view that the CRR/D have increased the resilience of the European banking sector. As to what drove the increase in the capital levels, most banks ranked regulatory demands as the most important ones, at the same time highlighting the importance of supervisory and market demands, which in general frontloaded full CRR requirements or even went beyond those. The views of other stakeholders were mixed, emphasizing more the role of supervisory and market demands. The financial industry did not portray capital requirements as excessive in general (some contrasting views on the securitisation and credit valuation adjustment (CVA)[95] frameworks). By contrast to the general acceptance for the minimum regulatory requirements, the banking industry criticised additional supervisory capital requirements, largely stemming from supervisory stress tests (Pillar II add-ons), and macro prudential buffers, primarily because of their unpredictability, complexity, lack of transparency and uneven implementation across the EU;

- **Lending to corporates**: all stakeholder groups argued that regulation was not key in driving lending. Other factors, such as demand-side factors (slowing economic activity) and monetary policy, affect the actual level of lending more than regulatory requirements. Nevertheless, stakeholders generally agreed that increased capital requirements have had a negative impact on the overall capacity to lend, at least during the transitory period to adjust to the new capital requirements. A few banks however stated that those banks which raised their capital and retained earnings and those banks that already had high capital levels were able to maintain their lending supply unaffected. A vast majority of respondents agreed that the impact on corporate lending is in part structural (permanent), and in part transitional (temporary). Banking industry most often referred to the structural increase in refinancing costs. Banking industry highlighted the important role of other financial sector regulations besides CRR, notably, the BRRD, in affecting the cost/availability of lending. There were also references to not yet implemented standards, such as the NSFR or the leverage ratio, as having the potential to affect the availability and cost of lending. Banks

[95] CVA risk is the risk of mark-to-market losses on OTC derivatives that are due to a deterioration in the credit quality of the counterparty.

referred in general to instruments bearing more risk and with longer maturities most affected by regulatory requirements. More specifically, they cited among others: securitisations, trade finance, repos and derivatives and real estate exposures;

- **Lending to SMEs**: views differed on the effectiveness of the SME supporting factor (SF) in providing more lending to SMEs[96]. The financial industry was largely of the view that the SF has been effective to incentivise SME lending. SMEs and other corporates also supported capital relief for these SME exposures and asked for an extension of the scope of application of the SF.[97] SMEs and corporates also highlighted the importance of bank lending, as market financing is associated with high fixed costs. However, a majority of supervisors and regulators did not notice any clear impact of the SF on lending, with some noting that the SF distorts the perception of actual risk arising from SME exposures. Many respondents thought that concerns about SME funding should be solved by other means (e.g. creating a credit register for SMEs and developing specific public subsidies or guarantees for SME loans). Some respondents also provided alternative proposals to change CRR in favour of SMEs, such as improving the risk-sensitivity of the standardised approach, making the standardized approach dependent on SME specific factors (profitability/turnover) or reviewing the prudential calibration of some market segments, especially securitisations;
- **Lending to infrastructures**: According to the banking sector, CRR requirements for infrastructure projects, especially capital and liquidity ones, do have an impact on the capacity of banks to provide loans to this sector. Moreover, some indicated that supervisory practices in approving banks' risk measurement for infrastructure puts some banks at a disadvantage and creates an uneven playing field. Public authorities and supervisors were split on whether CRR requirements actually have an impact on infrastructure lending. Those who answered positively regarded the NSFR and the leverage ratio as having the greatest potential impact, arguing that these would affect longer-maturity and lower-risk instruments, such as infrastructure, relatively more. On the issue of whether infrastructure projects should continue to be treated as loans to corporate borrowers, a majority of respondents from all stakeholder groups answered negatively, except for public authorities and supervisors, where the answers were more split. Justifications given for a specific treatment were based on the alleged different features[98] and presumable different risk of these two types of exposures. In particular, the banking industry and corporate sector argued in favour of a specific supporting factor for infrastructure, similar to the one for SMEs. There were also, from these two groups, calls for greater risk-sensitivity of the standardised approach and more harmonization amongst supervisory practices as regards these loans;
- **Proportionality**: within the banking sector, there was a divide between big and small banks. The former generally argued against more proportionality, claiming that there are already additional requirements for big banks and systemic institutions. The latter favoured increased proportionality, arguing that

[96] 24% lower capital requirements for banks' SME exposures subject to certain conditions (see Article 501 of the CRR).

[97] At the moment, only small SMEs are likely to benefit in practice given a limit of €1.5 million on the total amount led to each SME.

[98] Among those cited: longer maturity, higher collateralisation, higher recovery rate and lower volatility of infrastructure exposures compared to corporate exposures.

compliance costs for small- and medium-sized banks can be disproportionate. For those banks which wanted enhanced proportionality, there were different views on how to select the target institutions and on which areas of the CRR should allow a more proportional treatment. On the former, size and risk profile were the most prominent responses. On the latter, there were a few singling out reporting requirements; otherwise, responses were much dispersed, including: leverage, market risk, operational risk or remuneration, among others. Supervisors and public authorities were of the opinion that proportionality is already embedded in the CRR through: risk-based rules, the possibility to choose between standardised approaches and internal models and the additional requirements for systemic institutions. However, supervisors and public authorities suggested simplifying reporting requirements for small banks or simpler institutions. They also saw the need to alleviate disproportionate compliance costs for these institutions by simplifying complex rules, provided simpler rules are not less conservative;

- **Simplification**: the banking industry generally supported greater simplicity of the rules. However, bigger banks were of the view that greater simplicity should be promoted for all banks, while smaller ones thought they should be the main target. Specific areas mentioned for simplification were: supervisory reporting, using accounting values (dismissing prudent valuation or credit risk adjustments), and governance and risk management requirements. Several private persons and think tanks argued, as a general policy option, that internal ratings based approaches should be replaced by a simple leverage ratio in combination with the standardised approach; and
- **Single rulebook**: a clear majority of respondents from the banking industry were supportive of greater harmonization and against national discretions. This harmonization was understood by many respondents not only as harmonizing Pillar I requirements, but also supervisory practices (Pillar II). There was some recognition of the need to maintain certain national flexibility regarding the macroprudential toolkit, given that different EU jurisdictions may not follow the same financial cycles. However, these tools should be solely used to address systemic risks, and not to address risks covered by the other CRR requirements.

Call for Evidence

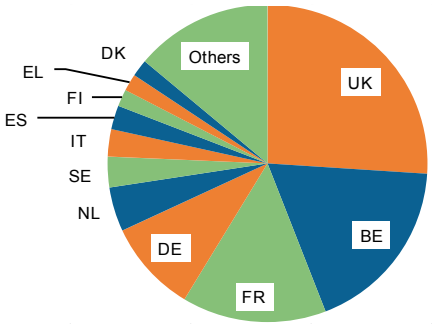
Consultation activity

On 30 September 2015, the European Commission launched a public consultation entitled the Call for Evidence: EU regulatory framework for financial services. The consultation closed on 31 January 2016. The purpose of the Call for Evidence, which is part of the Commission's 2016 work programme as a REFIT item, was to consult all interested stakeholders on the benefits, unintended effects, consistency, gaps in and coherence of the EU regulatory framework for financial services. It also aimed to gauge the impact of the regulatory framework on the ability of the economy to finance itself and grow.

Stakeholder groups

The Commission received 288 responses.[99] Most responses came from the UK, Belgium, France, Germany and the Netherlands (figure A1, table A1). Responses came from various sectors (tables A2-A3). The majority of respondents came from the financial sector, including banking, investment management, insurance and market infrastructure operators. The majority of respondents were providers of financial services, or associations representing them. In contrast, responses from consumers of financial services were more limited.

Figure A1. Respondents by country



Source: Call for Evidence database

Table A1. Respondents by country

Country of respondent	No.
United Kingdom	75
Belgium	52
France	42
Germany	27
The Netherlands	13
Sweden	9
Italy	8
Spain	7
Finland	5
Greece	5
Denmark	5
United States	4
Ireland	4
Croatia	4
Austria	4
Czech Republic	4
Norway	4
Switzerland	4
Malta	3
Luxembourg	3
Hungary	2
Slovakia	1
Poland	1
Guernsey and Jersey	1
South Africa	1
TOTAL	**288**

Source: Call for Evidence database

[99] Responses to the Call for Evidence as well as the summary feedback statement can be found on the Commission's website.

Table A2. Respondents by type

Type of respondent	No.
Public Authority	**29**
Regulatory authority, Supervisory Authority or Central bank	15
Government or Ministry	13
Regional or local authority	1
Organisation	**246**
Industry association	218
Company, SME, micro-enterprise, sole trader	89
Consultancy, law firm	7
Consumer organisation	7
Non-governmental organisation	6
Think tank	4
Trade union	3
Academic institution	2
Private Individual	**13**
TOTAL	**288**

Table A3. Respondents by sector

Sector of respondent	No.
Banking	100
Investment management	79
Insurance	50
Market infrastructure operator	39
Pension provision	30
Auditing	21
Consumer protection	20
Accounting	19
Civil society (advocacy, unions, NGOs)	19
Other Financial services	19
Credit rating agencies	11
Corporate (governance, issuers, treasuries)	11
Consultancy, law firm	8
Telecommunication	8
Social entrepreneurship	7
Academia	7
Energy	6
Auto	2
Real estate	2
News	1
Transport	1
TOTAL	**288**

Source: Call for Evidence database

Results

Respondents referred to all the main legislative acts in financial services, but most replies concerned the Capital Requirements Regulation and Directive (CRR/CRD IV). While the Call for Evidence aimed to assess the effect of existing legislation, respondents also expressed views on possible forthcoming regulation. This was particularly pronounced in the area of banking, where a large number of claims were focused on the leverage ratio, NSFR, FRTB, TLAC and BSR. Responses covering the CRR/D raised the following issues that are of relevance for this impact assessment:

- **Unnecessary constraints on financing**: some public authorities and other non-industry respondents argued that higher regulatory capital requirements for institutions may have a net positive effect on the financing of the economy in the longer term, while adverse effects on loan supply may occur in the short term. They further argued that the slowdown in lending observed in some Member States is more likely due to factors other than regulation (e.g. lower demand for loans). Many respondents sought improvements in financing conditions for SMEs. They suggested providing further support to SME financing, for instance by continuing with the current 'supporting factor' for loans to SMEs. They also expressed concerns about the potential impact of capital requirements for interest rate risk in the banking book, especially if those would be introduced in the form of a Pillar 1 requirement..

- **Negative impact on market liquidity**: many respondents stressed the combined impact of the leverage ratio, the NFSR and the revised capital requirements for market risk on market liquidity in general and, in relation to the revised market risk rules, the particularly negative impact on e.g. market-making. Hence, as

regards the latter respondents proposed to reconsider specific aspects of calibration and making it less operationally difficult to apply the standardised approach.

- **Proportionality**: A large number of respondents called for a more proportionate application of the rules, in particular on: (i) reporting and disclosure requirements; and, (ii) prudential requirements. As regards the former, respondents highlighted the difficulty for smaller and less complex credit institutions to comply with these requirements, including those that will eventually apply in relation to the NSFR. There were additional concerns that requirements would be "gold-plated" by some Member States (e.g. require subsidiaries of international groups to report additional financial information at individual level). As regards the latter, some respondents argued that capital requirements should take better into account firms' size and business model, in particular with regard to smaller and less complex credit institutions. Finally, some respondents also argued that the leverage ratio could reduce diversity, as it would have a disproportionate negative impact on low risk-weighted business models (e.g. specialised community banks, building societies, mortgage banks).

- **Reporting and disclosure obligations**: Banking associations and individual institutions frequently pointed to reporting burdens imposed by various regulatory and supervisory bodies (national competent authorities, the SSM, EBA, etc., to perceived inconsistencies between various reporting requirements and respective templates, as well as to wide-spread 'gold-plating' by competent authorities in a context of maximum harmonisation.

- **Interactions**: many claims stressed possible inconsistencies arising from the interaction between EMIR and the CRR. Specifically, respondents argued that the introduction of the leverage ratio would be penalising for institutions offering clearing services, as it does not take into consideration the risk-reducing effect of (segregated) initial margin provided by the institutions' clients in relation to the CCP-cleared transactions.

Targeted consultations

On the NSFR, to complement the EBA report and the responses to the call for evidence, the Commission services conducted an additional targeted consultation to gather stakeholder's views on some specific aspects of this requirement:

- the potential adjustments resulting from complying with the NSFR;
- the treatment of derivative transactions;
- the treatment of short term transactions with financial institutions;
- the effective application of the principle of proportionality.

Respondents expressed concerns that the cost of compliance with the NSFR requirement might be excessive for certain specific business models or activities, in particular for short term and market activities.

The treatment of derivative transactions is one of the main sources of concern in a vast majority of answers to the consultation. The additional requirement to hold 20% of stable funding against gross derivatives liabilities is very widely seen as a rough measure that overestimates additional funding risks related to the potential increase of derivative liabilities over a one year horizon. The

rules underpinning the calculation of NSFR derivative assets and liabilities and in particular the asymmetric treatment between variation margins received and posted and of initial margins received and posted is also cited as detrimental to derivatives markets.

Regarding short term transactions with financial institutions, the vast majority of respondents are concerned that the asymmetric treatment of short term (less than 6 months) secured funding (0% ASF) and lending (10% or 15% depending on the quality of the underlying collateral) transactions with financial counterparties could be very detrimental to market making activities and, as a consequence, to the liquidity of repo market and of the underlying collateral. Repo markets are presented as essential for the smooth functioning of both bank liquidity management and market makers' inventory management. This treatment also raises some concerns regarding the impact on the interbank market, in particular for liquidity management purposes.

The 5% RSF factor that applies to Level 1 HQLA and the high RSF factor that applies to non-HQLA equities are criticised as being too high. For the Level 1 HQLA, this is deemed as not being consistent with the LCR that recognize the full liquidity of these assets even in time of severe stress. For non-HQLA securities, they think that funding requirements for a particular asset should depend on the purpose for which the bank holds the asset (eg securities held as a market hedge for a derivative transaction).

Secured issuances, and covered bonds issuances in particular, are single out as being unintendedly penalised by the NSFR. Concerns are also raised about the continued ability to operate pass-through structures, amongst which the distribution of promotional loans feature prominently. Doubts are also voiced about the relevance of a stable funding requirement for business models that, even though they require a banking license, engage into maturity transformation to a very limited extent. The respondents are in favour of taking into account European specificities and raise some more technical issues on the design of the NSFR.

Finally, the majority of respondents do not favour a reduced scope of application or differentiated treatment for small banks to make NSFR requirements more proportionate. An exemption from NSFR requirements or the introduction of simplified metrics for either smaller or 'low funding risk' institutions do not have a wide support. They are furthermore in favour of applying the NSFR on a consolidated basis only or, at least, of defining a preferential symmetric treatment of intragroup transactions if the NSFR is also applied on an individual basis.

On the FRTB, to complement the EBA report and the responses to the call for evidence, the Commission services conducted an additional targeted consultation to gather stakeholder's views on the application of the principle of proportionality under the revised market risk framework, including:

- potential changes to the current derogation for small trading book businesses; and

- potential options for a simplified calculation of the market risk capital requirements for small banks.

A majority of respondents choose as preferred policy option a combination of the derogation for small trading book businesses and a simplified standardised approach.

First, respondents agree that the new standardised approach of the FRTB framework, the sensitivities based approach (SBA), is far more complex than the existing approach under CRR and this additional complexity would be inappropriate for banks with small or medium trading

books. In particular, respondents consider that the granularity of data requirements under the SBA would be too extensive which would complicate its use on an on-going basis. In addition, the one-off costs of implementing the SBA could be substantial[100].

A majority of respondents agree that treatment of capital requirements of trading positions of institutions granted with the derogation for small trading book businesses would be inadequate for institutions with medium-sized trading books, due to its crudeness, implying that it would not be a solution to raise the thresholds of this derogation to capture more institutions that could suffer from the introduction of the SBA.

An alternative, simplified standardised approach is envisaged as the solution for institutions with medium-sized trading books for most of respondents. To the question on what this simplified standardised approach should consist of, there is also a clear consensus among respondents to use the current standardised approach as the basis for the new simplified standardised approach. In this case, institutions would avoid any implementation costs. However, some respondents highlight that some recalibration of the current standardised would be necessary, in order to keep incentives to move to the SBA but also to avoid cliff-effects. Finally, no respondents provided clear proposals for the eligibility criteria that would grant institutions with medium-sized trading books the permission to use a simplified standardised approach instead of SBA.

Regarding the derogation for small trading book businesses, most respondents support keeping it. There is not strong support for raising the threshold of the derogation, at least not significantly, but some say it should be explored, based on data. On the other issues concerning the definition of the derogation, respondents are not very specific. Some support clarifying the definition of the size of trading assets and the application of the treatment provided by the derogation. Others highlight the fact that the scope of the current derogation does not include positions in FX and commodities and need to apply a simpler regime for these positions for banks under the derogation, especially for FX.

On the introduction of SACCR, to complement the EBA report and the responses to the call for evidence, the Commission services conducted an additional targeted consultation to gather stakeholder's views on the overall complexity and operational burden to implement SACCR and whether it would be preferable to maintain some of the current standardised approaches for counterparty credit risk exposures, simpler than SACCR, for small banks.

The majority of respondents see some merits in introducing SACCR in the EU, mostly because it would increase the risk-sensitivity of the capital requirements for counterparty credit risk and align capital requirements with the true risks faced by institutions.

However, all respondents recognised that the SACRR approach would impose undue complexity to institutions with small trading portfolios and therefore a simpler alternative approach should be maintained for them. Respondents have diverging views whether this simpler alternative should be the current Original Exposure Method, the current Mark-to-Market method or a revised version of the Original Exposure Method to align certain of its assumptions with SA-CCR.

Finally, most of the respondents considered that more institutions should be able to use a simpler alternative to SACCR than institutions that are currently permitted to use the

[100] One member reported that the cost of implementation for a bank would be at least 1 Million, which is a considerable investment for an institution with small trading book activities.

OEM (ie the institutions that are eligible for the derogation for small trading book business under CRR article 94).

Remuneration

The Commission has engaged in several work streams in order to carry out its assessment of the CRD IV remuneration rules and to collect the information underpinning this impact assessment. The strategy consisted of a mix of the following: stakeholders' consultation (through a stakeholders' event, bilateral meetings and a public consultation), own research, input from the European Banking Authority (EBA) and a study on a number of aspects relevant for evaluating the CRD IV remuneration rules commissioned to an external contractor.

On 16 December 2015, the European Commission hosted a fact-finding stakeholder event in the context of its ongoing review of the remuneration rules of the Capital Requirements Directive (2013/36/EU) and Regulation (No 575/2013). The objective of the event was to gather evidence on the effects of the CRD IV remuneration rules in terms of contributing to curbing excessive risk taking and by impacting on the incentives for the so-called "material risk takers".

The effectiveness of deferral requirements in term of risk-adjustment was generally acknowledged, with a number of participants arguing in favour of a possible differentiated regime for certain types of investment firms, or in favour of a proportional application depending on the size of the firm and on the level of individual remuneration.

On the issue of pay-out in instruments, it was expressed that the use of share-linked instruments should be allowed for listed companies (as it is for non-listed ones), as the process to pay-out in shares is considered burdensome, unsuited for certain types of entities (e.g. cooperative banks) and is subject to certain restrictions in some foreign jurisdictions. Non-listed companies on the other side can be faced with high costs for creating suitable instruments and this cost, it was argued, can be disproportionately high for small firms.

A recurrent theme throughout the discussion was an argument about the allegedly excessively wide application of the CRD IV remuneration rules, and a plea from some of the participants to allow disapplication of those rules on the basis of the principle of proportionality with respect to certain entities, staff or awards.

Public consultation

The public consultation on the impacts of the maximum remuneration ratio under the Capital Requirements Directive 2013/36/EU (CRD IV), and on the overall efficiency of the CRD IV remuneration rules, ran from 22 October 2015 to 14 January 2016. By the set deadline 35 online contributions were received from a variety of stakeholders such as credit institutions, investment firms, industry or employee representation organizations and public authorities. A summary of the contributions is provided below for each of the topics covered by the public consultation.

Figure A2. Country overview of the respondents

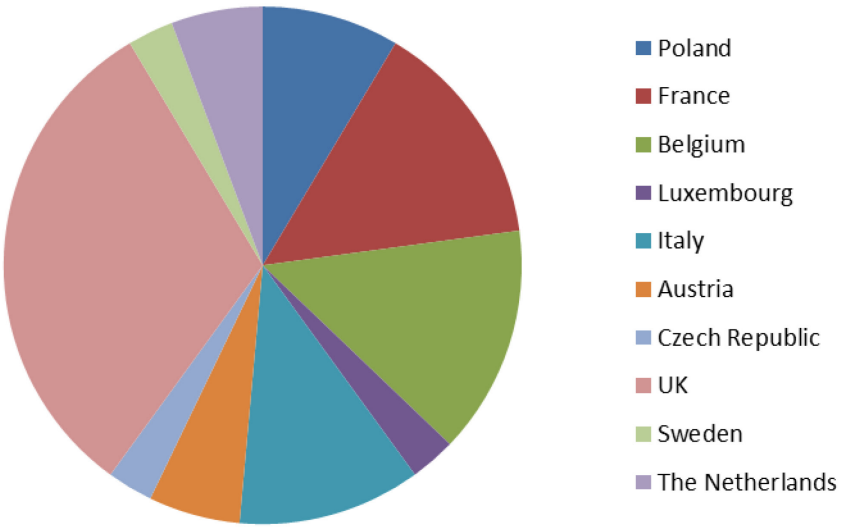
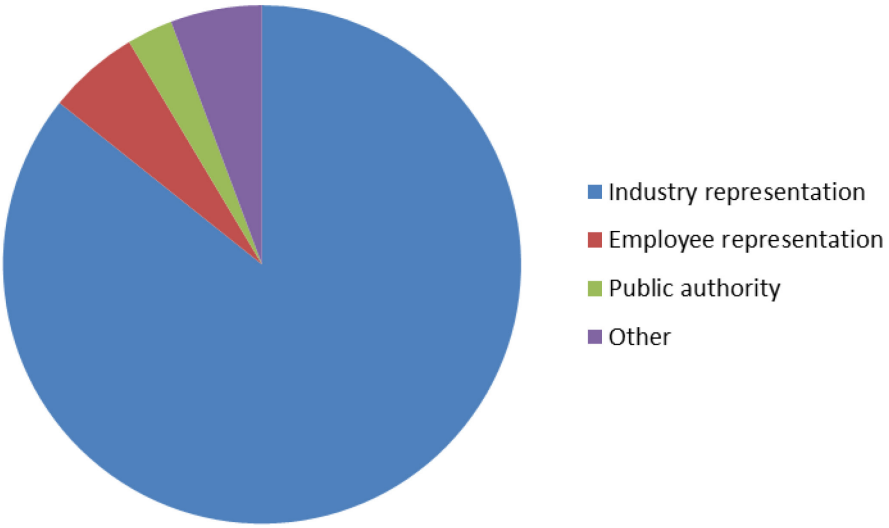


Figure A3. Profile overview of the respondents



The requirement to defer part of the variable remuneration

Most respondents agreed with the deferral requirement and positively appreciated its effectiveness in ensuring alignment with long-term performance and deterring excessive risk-taking behaviour. A few respondents highlighted its usefulness in conjunction with the application of *malus* and one respondent considered that deferral is useful in retaining employees.

Regarding the percentage of variable remuneration to be deferred, a few respondents supported a higher deferred portion (i.e. 60%) for senior managers and the highest paid material risk takers. Those who assessed the deferral period generally supported the appropriateness of 3 to 5 years, but certain investment firms (e.g. proprietary trading firms) argue in favour of shorter deferral periods, better aligned with the time horizon of their investments and associated risks. Asset managers consider that the UCITS V and AIFMD rules contain provisions regarding deferral periods that appropriately account for the fund strategy, risk and lifecycle.

Many respondents argued that it is important to preserve flexibility in the application of the rules and to maintain the possibility to exempt some entities and staff from the application of some of the remuneration rules. Some ask for the definition at EU level of uniform thresholds to apply the requirements on variable remuneration. Another respondent considered that national supervisory authorities are the best placed to assess to which extent a particular bank should comply with each of the rules.

It is argued that deferral is not appropriate for staff members receiving only low amounts of variable remuneration (or for small, non-complex institutions that generally pay out only limited amounts of variable remuneration) for a number of reasons: (i) the deferral of small amounts of variable remuneration would have detrimental motivational effects on staff and erode the perceived value of the award, leading in some cases to increases in either fixed or variable remuneration; (ii) it would make it less attractive for lower-paid identified staff with transferrable skills (e.g. in control functions or middle management) to retain or take up jobs in CRD IV-regulated sectors; (iii) deferral would be particularly difficult to apply with respect to staff in non-EEA subsidiaries.

Some respondents consider the deferral requirement costly and administratively difficult, with costs affecting disproportionately smaller firms and the multiple, small instalments of deferred variable remuneration in the case of staff with low bonuses. Deferral is also said to have only negligible (if any) influence on the risk-taking behavior of staff receiving only low variable remuneration.

A vast majority of respondents therefore argued in favour of a proportionate application of the deferral requirement.

The requirement to pay out part of the variable remuneration in instruments

A number of respondents considered that pay-out in instruments is an efficient tool in terms of aligning the remuneration of material risk takers with the performance and risks of the institution.

Nevertheless, most respondents pleaded for a more proportional application of the pay-out in instruments requirement and considered that its administrative burden outweighs its benefits in the case of staff earning only low levels of variable remuneration and in the case of institutions that are small, non-complex or of a certain legal form (e.g. public bank, building society, savings or cooperative bank, principal trading firm).

Pay-out in instruments is considered particularly problematic for institutions with a specific legal form or ownership structure, for which there would be legal and factual barriers preventing them from issuing such instruments. Where institutions cannot issue shares, requiring to issue "equivalent non-cash instruments" is said to create additional risk for these firms (they cannot readily hedge against the additional cost that may be associated with an increase in the value of the underlying instrument) and additional cost (they would need to "value" the instruments).

Respondents stated that it is important to maintain flexibility in the type of instruments used, as long as they have the same efficiency. It is argued in this respect that listed institutions should have the choice between shares and share-linked instruments. Share-linked instruments are said to be as efficient as shares in terms of alignment with the institutions' performance and risks, while it can be applied more easily, in a less costly way and in a uniform manner worldwide.

It is said that the payment in shares cannot be put in place in a uniform way in all countries, given the different legal, regulatory, accounting and tax constrains and formalities (in some countries payment in shares would even be forbidden). From an operational standpoint (IT, HR, governance accounting and tax, external and internal communication) pay-out in shares is also considered complicated and costly. Institutions would need to either create new shares or buy them in the market. Creating new shares would mean that existing shareholdings get diluted, whereas buying shares is said to have the possible disadvantage of triggering speculation, thus resulting in the institution needing to pay a hefty premium.

On the other hand, one respondent considers that shares are commonly known financial instruments for which staff members may appreciate their link to the institution's performance, while share-linked or debt instruments may be too opaque and difficult to understand, hindering the staff member's ability to assess their value against the institution's performance.

Regarding the use of bail-in-able debt instruments, it was argued that they should be limited to top staff and that they could be costly if the existing instruments are not adapted to paying remuneration (e.g. because they are meant for large institution investors, with no secondary markets available and not aligned with remuneration schemes in terms of maturity).

Some investment firms (in particular employee-owned or controlled by a small group of employees or founders, and where risks are said to be effectively aligned with those of the long-term interest of the firm) consider that the rules on payment in instruments are too complex and expensive for their kind of firm. They consider that deferred cash bonuses that remain subject to full forfeiture serve as a far more effective disincentive to imprudent risk-taking.

Cooperation with the European Banking Authority

EBA was closely associated with the process of evaluating the CRD remuneration rules, by gathering and providing information and data through annual reports on Benchmarking remuneration practices at EU level[101], a Public Consultation on its draft *Guidelines on sound remuneration policies*, which contained a number of questions directly relevant for the issue of the proportionate application of the rules[102], as well as a *Report on the Member States' implementation of the rules under the principle of proportionality*, accompanied by the *Opinion on proportionality* to the Commission advising on a CRD IV legislative change.

ANNEX 2. PARTIAL EVALUATION OF THE EXISTING POLICY FRAMEWORK

The CRR and CRD IV entered into force on 1 January 2014. Therefore, at this stage there is insufficient available data and experience for conducting a full evaluation. Nevertheless, the need of amending these instruments in order either to introduce new provisions or to review the existing ones has emerged as a result of the work carried out by the BCBS, obtaining evidence on the national implementation of the Directives or as an outcome of specific consultations and studies, solicited by the Commission.

[101] Available at https://www.eba.europa.eu/regulation-and-policy/remuneration

[102] Consultation on Guidelines on sound remuneration policies (EBA/CP/2015/03)

The focus of the analysis below is limited to providing early and targeted assessment of two specific areas: the rules on remuneration and the impact of CRR on bank financing of the economy, including SMEs.[103]

A full evaluation will be conducted after sufficient experience with the functioning of the new rules has been gathered.

Annex 2.1. Evaluation of rules on remuneration

As required under Article 161(2) of the CRD IV, the Commission has reviewed the efficiency, implementation and enforcement of the remuneration rules. In carrying out this review, the Commission engaged in several work streams. It studied available academic literature and commissioned a study from an external contractor to assist with its assessment[104]. It sought stakeholders' input through a public consultation[105], a fact-finding stakeholder event and bilateral meetings with industry representatives. Moreover, the Commission engaged with Member State representatives and supervisory authorities. In accordance with the CRD IV mandate, the European Banking Authority was closely associated with the review process and delivered valuable information. In particular, the European Banking Authority reports on high earners and on benchmarking of remuneration practices at EU level[106] were a valuable source of data covering the years 2010-2014. The findings of the Commission's evaluation are reflected in the Commission Report COM(2016) 510[107].

Other than for the maximum ratio between variable and fixed remuneration, for which the review found that for the time being there is insufficient evidence to draw final conclusions on its impact, the review allowed for a largely positive assessment of the remuneration rules.

The rules on the governance of remuneration processes, performance assessment, disclosure and pay-out of the variable remuneration of identified staff, introduced by CRD III are overall well received by stakeholders and thus can be positively assessed in terms of acceptability.

These rules are found to contribute to the overall objectives of curbing excessive risk-taking and better aligning remuneration with performance, thereby contributing to enhanced financial stability. These objectives are still fully relevant today. The rules can thus be positively assessed in terms of effectiveness and relevance.

The CRD IV remuneration rules and associated delegated acts[108] brought about a set of common requirements on remuneration. The rules continue to require action at EU level in order to ensure

[103] The other areas covered in the problem definition are not in the scope of the existing policy framework

[104] institut für finanzdienstleistungen e.V., study on the remuneration provisions applicable to credit institutions and investment firms (2016).

[105] Public consultation on impacts of maximum remuneration ratio under Capital Requirements Directive 2013/36/EU (CRD IV), and overall efficiency of CRD IV remuneration rules (22.10.2015 – 14.01.2016).

[106] All publications are available at https://www.eba.europa.eu/regulation-and-policy/remuneration/-/topic-documents/ ckV8kFRsjau9/more.

[107] Report from the Commission to the European Parliament and the Council of [28 July 2016] – Assessment of the remuneration rules under Directive 2013/36/EU and Regulation (EU) No 575/2013.

[108] Commission Delegated Regulation (EU) No 527/2014 introduced a harmonised definition of classes of instruments that adequately reflect the credit quality of an institution as a going concern and are

the level-playing field, avoid fragmentation of the internal market and eliminate the risk of similar institutions being treated differently depending on the jurisdiction in which they are located. A common binding framework is all the more relevant given that some institutions are active in more than one EU Member State. Thus, the rules on remuneration can overall be positively assessed in terms of their EU added value.

The review nevertheless also revealed shortcomings with respect to the rules on deferral and pay-out in instruments in certain specific circumstances. The Commission therefore carried out a detailed evaluation of these two rules in function of their relevance, effectiveness, efficiency, coherence, acceptability and EU added value, the findings of which are set out in a Staff Working Document[109]. The evaluation yielded positive results with regard to the relevance, effectiveness, efficiency and acceptability of the two rules overall, but revealed significant reservations in the particular cases of small and non-complex institutions and of staff with low levels of variable remuneration. A negative assessment was also made with respect to the efficiency and acceptability of the provision requiring listed institutions to use shares (and not share-linked instruments) for meeting the requirement under Article 94(1)(l)(i) CRD IV. The coherence of the analysed provisions in the absence of implementation flexibilities for the above-mentioned types of institutions and staff was assessed as rather low, whereas the overall EU added value was assessed positively.

appropriate to be used for the purposes of variable remuneration, whereas Commission Delegated Regulation (EU) No 604/2014) laid down qualitative and quantitative criteria to identify categories of staff whose professional activities have a material impact on an institution's risk profile

[109] Staff Working Document SWD(2016)266 - Evaluation of the deferral and pay-out in instruments rules under Directive 2013/36/EU

Annex 2.2. Impact on the bank financing of the economy, including SMEs

Main conclusions on the impact of CRR on bank financing of the economy and infrastructure

As far as the impact of CRR on the long-term financing and investment is concerned, the Commission commissioned a study to London Economics to assess the impact of CRR on bank financing of the economy. [Impact of the Capital Requirements Regulation (CRR) on the access to finance for business and long-term investments insert a link to a website where the study will be published].

The following main conclusions can be drawn from the report:

- Main estimate of the transitional effect, derived in this study using data for the period 1985-2014, shows that for a one percentage point increase in the Total Capital Ratio the impact on lending flows of banks in the EU is -0.8% over one year with the implied impact over a three-year period being -1.5%.

- Macroeconomic environment matters a lot for the credit flows to the economy. A one percentage point increase in the output gap results in a 0.95% reduction in bank lending flows.

- An analysis carried out for subsamples of banks based on pre-crisis business models proxied by size, capitalisation, and funding, showed that the impact of the Total Capital Ratio on bank lending flows was greater for banks that have historically been less capitalised and are funded to a greater extent through non-deposit liabilities.

- Estimated impact of the Total Capital Ratio on bank lending stocks in long-run is negative (of -2.2%), but the effect is not statistically different from zero.

- There is not clear evidence of a major impact of increased capital requirements under the CRR on bank financing of infrastructure, a result which is consistent with findings from the consultations and survey. The results highlight further that the impact of changes in the Total Capital Ratio on bank lending flows in general (as per the transitional effects analysis) are economically more significant than on bank financing of infrastructure in particular.

These conclusions have been taken into account once estimating different options, particularly on their impact to maintain sustainable bank financing of the economy.

Main conclusions from the EBA report on SMEs

Art 501 of CRR introduced a capital reduction factor for exposures to SMEs under both the SA and IRB approach. The introduction of this factor was accompanied by a review clause according to which the Commission, on the basis of an advice from the EBA, should have assessed by the 28 June 2016 the impact of the measure on SME lending.

The EBA in its 2016 report on SMEs[110], using the data made available by national supervisors, highlighted that the capital reduction stemming from the CRR did not make SMEs to benefit more than large corporates in the provision of new loans: *there is no evidence yet that the SME SF has provided additional stimulus for lending to SMEs compared to large corporates. In particular, according to the results presented, SMEs have faced the same probability of being credit constrained as large firms*. The EBA, however, also recognised *that it might be too early to draw conclusions, given the limitations of the data available and the relatively recent introduction of the SME SF. In order to be effective the SME SF has to be fully integrated into the decision process of institutions which is not yet the case*[111].

EBA in the SME report also highlighted that the use of SF is consistent with the empirical riskiness of SME exposures, except for the retail asset class in IRB banks: *"The results for France and Germany suggest that, under CRR/CRD IV, the SME SF is consistent with the lower systematic risk of SMEs for all exposure classes in the SA, and for corporate SMEs in the IRBA. However, for IRBA retail loans, the capital reductions associated with the SME SF lead to relative capital requirements that are lower than those suggested by the systematic risk. As a result, after the application of the SME SF, the relative regulatory RWs are in line with the empirical ones in the IRBA corporate exposure class and the SA, but are lower than the empirical ones in the IRBA retail class, suggesting that these exposures may not be sufficiently capitalised relative to large corporates"*[112].

Regional differences in the EU

- For the EBA reporting banks, the highest impact in CET 1 ratios is observed in most Easter EU Member States>0.45% point in CET1 ratios: Estonia, Latvia, Lithuania, Slovenia;
- For smaller banks, which do not report regularly to EBA, the highest impact (>0.4% point change in CET 1 capital ratio) is observed on Italy, Germany, Poland, Sweden, Belgium.

Table A4. Increase in CET1 capital ratio due to SME SF

[110] EBA report on SMEs

[111] EBA report on SMEs, March 2016, p. 11

[112] EBA report on SMEs, March 2016, p. 95

Based on the ad hoc data collection conducted by the EBA

	Increase in CET1 capital ratio with the application of the SME SF		Information on sample smaller banks	
	Percentage points			
	Smaller banks	EBA sample	Nb smaller banks	% of assets
Austria	0.18	0.18	39	18.0
Belgium	0.48	0.20	25	10.0
Bulgaria	0.43	0.17	19	57.0
Croatia	0.30	0.20	30	42.0
Czech Republic	0.22	0.01	13	35.0
Denmark	0.31	0.06	76	24.0
Estonia	1.05	1.68	5	10.0
Finland	0.34	0.17	67	13.2
France	0.14	0.17	314	n.a.
Germany	0.46	0.07	1,626	n.a.
Greece	0.22	0.25	15	3.0
Ireland	0.03	0.17	7	18.5
Italy	0.50	0.22	472	18.0
Lithuania	0.29	0.45	5	10.0
Latvia	0.20	0.55	14	51.0
Luxembourg	0.13	0.29	18	14.6
Hungary	0.27	0.15	26	50.2
Poland	0.41	0.20	599	62.1
Portugal	0.12	0.13	12	2.3
Romania	0.35	0.31	28	51.8
Slovakia	0.16	0.20	10	32.0
Slovenia	0.44	0.60	14	56.0
Sweden	0.52	0.27	80 (4 in the sample)	43.0

Notes:

Data refers to 2014Q4.

Information from Malta and the United Kingdom is missing. The Netherlands and Spain did not provide additional data. In the case of Spain, the EBA sample covers more than 90% of its financial system.

Data was requested at the highest level of consolidation for this best-effort basis exercise. Issues may arise if the list of smaller institutions includes institutions that are either a subsidiary of an EBA reporting bank or a subsidiary of another small bank, which creates potential sources of double counting. Explicit information on the composition and group structure of the smaller banks is available for: Belgium, Croatia, the Czech Republic, Estonia, France, Germany, Ireland, Italy, Hungary and Portugal.

Data is under review for Austria.

EBA conclusions on the consistency of risk weight with the actual riskiness of SMEs

Table A5. Risk weights under IRB and SA and their comparison with the empirical riskiness in France and Germany over the full economic cycle

France

		Retail	Corporate			
Turnover (€mio)		0.75 - 1.5	1.5 - 5	5 - 15	15 - 50	BM
		Applicable risk weights				
Basel III	IRBA	46%	78%	80%	91%	100%
	SA	75%	100%	100%	100%	100%
CRR/CRD IV	IRBA	35%	59%	61%	70%	100%
	SA	57%	76%	76%	76%	100%
		% points difference from the applicable risk weights				
Estimated RWs on the actual riskiness of loans	IRBA & SA	57%	58%	59%	63%	100%
Difference to Basel III	IRBA	11%	-20%	-21%	-28%	0%
	SA	-19%	-42%	-41%	-37%	0%
Difference to CRR/CRD IV	IRBA	22%	-2%	-2%	-6%	0%
	SA	-1%	-19%	-17%	-13%	0%

Germany

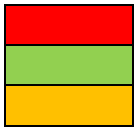
		Retail		Corporate			
Turnover (€mio)		0.75 - 1.5	0.75 - 1.5	1.5 - 5	5 - 15	15 - 50	BM
		Applicable risk weights					
Basel III	IRBA	46%	47%	78%	82%	93%	100%
	SA	75%	75%	100%	100%	100%	100%
CRR/CRD IV	IRBA	35%	36%	59%	62%	71%	100%
	SA	57%	57%	76%	76%	76%	100%
		% points difference from the applicable risk weights					
Estimated RWs on the actual riskiness of loans	IRBA	48%	47%	44%	58%	63%	100%
Difference to Basel III	IRBA	2%	1%	-34%	-24%	-30%	0%
	SA	-27%	-28%	-56%	-42%	-37%	0%
Difference to CRR/CRD IV	IRBA	13%	12%	-15%	-4%	-7%	0%
	SA	-9%	-10%	-32%	-18%	-13%	0%

In comparison to empirical riskiness, in relative terms:

RWs too low

RWs are about right

RWs are too high



Source: EBA report on SMEs, figures 47 and 48

EBA conclusion on the relevance of the €1.5 mio threshold, *EBA report p. 92*

"No empirical evidence supporting the limit of €1.5 million currently implemented in Article 501 of the CRR is found for either Germany or France. This means that the limit of €1.5 million for the amount owed set in the Article 501 of the CRR does not seem to be indicative of any change in riskiness for firms. Hence, further work would be required to understand whether the limit is justified, compared to the €1 million threshold already existing in the CRR for the allocation of retail/corporate exposures or a different threshold".

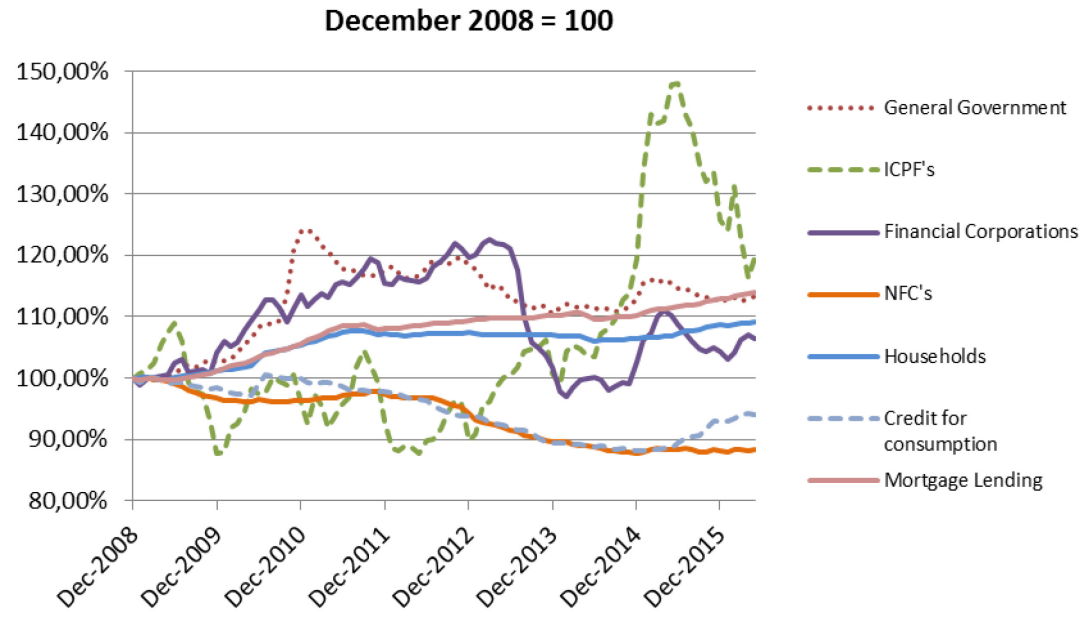
EBA conclusion on the prudential soundness of the SF*, EBA report, p. 88-89, 94*

"The results for France and Germany suggest that, under CRR/CRD IV, the SME SF is consistent with the lower systematic risk of SMEs for all exposure classes in the SA, and for corporate SMEs in the IRBA. However, for IRBA retail loans, the capital reductions associated with the SME SF lead to relative capital requirements that are lower than those suggested by the systematic risk. As a result, after the application of the SME SF, the relative regulatory RWs are in line with the empirical ones in the IRBA corporate exposure class and the SA, but are lower than the empirical ones in the IRBA retail class, suggesting that these exposures may not be sufficiently capitalised relative to large corporates"

Bank lending to natural persons

Article 501 (4) requires the Commission to report on the impact of the own funds requirements also on lending to natural persons. The figure below does not indicate any material drop in lending to natural persons in the aftermath of the crisis, except mild reduction in the stock of consumer loans during 2014. However, lending to natural persons increased in all the relevant categories of lending over 2015, namely in the category of *households*, *mortgage lending* and *credit for consumption,* leading to a continuing increase in the stock of lending in these categories. While it is cannot be excluded that an increase in the overall capital requirements could have had a negative net impact on lending to households, particularly over 2014, overall macroeconomic environment, such as interest rate policy by monetary institutions, can adjust or be adjusted effectively so as to maintain a sustainable level of credit flow to households. Moreover, the success of the peer-to-peer lending platforms over the recent years suggests that households can also obtain credit, particularly consumer credit, outside the banking system. Finally, no respondent to the CRR consultation or to the Call for Evidence raised an issue of the lack of credit to natural persons.

Figure A4. Evolution of bank lending in the EU



Source: ECB data warehouse.

ANNEX 3. ASSESSMENT OF OTHER PROPOSED AMENDMENTS TO CRR/CRD IV/BRRD

As mentioned in annex 2, the CRR and CRD IV entered into force on 1 January 2014. Therefore, at this stage there is insufficient data for a full evaluation of most topics included in this impact assessment, even though the CRR included some early "review" clauses.

However, the call for evidence launched by FISMA in 2015[113] (please add reference) has allowed to identify shortcomings on some areas/provisions warranting some fine-tuning of existing rules. Moreover, for several of these issues, a review has been recently finalised by the BCBS and needs to be reflected in EU legislation.

Therefore, an early review of a number of provisions becomes necessary even in the absence of data allowing completing a full evaluation. A preliminary analysis of the functioning of the provisions/areas referred above is summarised below. The amendments suggested in relation to these provisions/area are of limited scope/impact or, in other cases, implement a solution which is straightforward and uncontroversial. In a few cases the amendment is basically required to ensure a better alignment with the applicable international standards.

[113]See http://ec.europa.eu/finance/consultations/2015/financial-regulatory-framework-review/index_en.htm

Annex 3.1. Calculation of derivative exposures in the counterparty credit risk framework

Problem definition

Under the current CRR institutions have the choice to use among three different standardised approaches for calculating the exposure value of derivative transactions under the counterparty credit risk framework: the Standardised Method ('SM'), the Mark-to-Market Method ('MtM method') and the Original Exposure Method ('OEM') (see Articles 276 to 282, Article 274 and Article 275 of the CRR, respectively). These approaches are also used in other areas of the CRR that need to measure the exposure value of derivative transactions. Among the own fund requirements, the MtM method, the SM or OEM can also be used in the own fund requirements for CVA risks and the own fund requirements for trade exposures to CCP. Otherwise the use of these standardised approaches is allowed in the large exposure framework while the leverage ratio and the own fund requirements for default funds exposures to CCP impose the MtM method.

The proportion of own fund requirements under CRR calculated with one of the standardised approaches for derivative exposures is generally small: less than 5.28% of the total own fund requirements for 75% of large EU institutions and less than 0.06% of the total own fund requirements for 75% of small EU institutions. For large EU institutions, this proportion varies materially depending on the business models of the institution while this proportion remains relatively low for all EU institutions with small trading activities irrespective of their business models.

Table A6. Materiality of the own fund requirements for Counterparty Credit risk and CVA risk for a representative sample of European institutions

Sample of large EU institutions[114]		Sample of EU institutions with small trading activities[115]	
Min	0.00%	Min	0.00%
25% percentile	0.85%	25% percentile	0.00%
Median	2.17%	Median	0.01%
75% percentile	5.28%	75% percentile	0.06%
Max	55.75%	Max	18.21%

Source: EBA report on SACCR and FRTB implementation, November 2016

Table A7. Materiality of the own fund requirements for Counterparty Credit risk and CVA risk for a representative sample of European institutions depending on their business models

[114] This sample consists of 193 large European institutions that the EBA receives COREP and FINREP reporting from.

[115] This sample consists of 1094 European institutions with a presumption of small trading activities as identified by the EBA as the institutions with less than euros 500 million of fair valued assets and liabilities.

	Large EU institutions		EU institutions with small trading activities	
	Number	Average	Number	Average
Auto & cons.	5	3.11%	16	0.06%
CCP	2	8.08%	0	-
Co-operatives	15	6.46%	505	0.28%
Custodien inst.	3	1.41%	3	0.42%
Div. no retail dep.	14	0.05%	3	0.33%
Local Universal	52	4.37%	210	0.29%
Mrtg. & Build.Soc.	13	12.19%	26	0.56%
Other	2	0.19%	28	1.38%
Other no retail dep.	8	1.95%	12	0.64%
Pass-through	1	42.52%	0	-
Savings	10	1.30%	144	0.16%
Sec. trading house	4	5.63%	6	0.35%
Univ. Cross-Border	33	4.49%	13	0.31%
Unclassified	31	8.12%	47	0.34%
TOTAL	193	5.55%	1013	0.31%

Source: EBA report on SACCR and FRTB implementation, November 2016

The EBA identified only 6 EU institutions currently using SM, 372 EU institutions[116] using the OEM. Knowing that the EBA also identified 20 EU institutions currently permitted to use the Internal model method ('IMM') - the alternative model approach to the standardised approaches - all the other EU institutions subject to own funds requirement for counterparty credit risk – potentially few thousands - are supposed to currently use the MtM method.

[116] The EBA launched an ad-hoc survey to identify all the EU institutions that currently use OEM. Therefore, the 372 EU institutions identified as currently using OEM come from a broader population than the 1094 European institutions with a presumption of small trading activities (for this population

Table A8. Number EU institutions currently using OEM and SM per jurisdictions

Member State	Institutions using OEM	Institutions using SM
AT	176	NA
BE	1	0
BG	0	5
CZ	0	0
CY	NA	NA
DE	117	0
DK	0	0
EE	0	NA
EL	0	NA
ES	4	0
FI	NA	NA
FR	5	0
HR	26	0
HU	3	NA
IE	0	NA
IT	1	NA
LT	0	0
LU	27	NA
LV	1	NA
MT	NA	NA
NL	NA	NA
PL	NA	NA
PT	2	0
RO	NA	NA
SE	NA	1
SI	1	0
SK	NA	NA
UK	8	0
TOTAL	**372**	**6**

Source: EBA report on SACCR and FRTB implementation, November 2016. 'NA' means that the jurisdictions did not provide the relevant answer to the EBA during the survey.

The need for an early review without evaluation

The MtM method and the SM have been criticised[117] for several limitations, mainly: they do not recognise appropriately the risk-reducing nature of collateral in the exposures (an issue in light of the forthcoming international clearing/margin obligations); their calibrations are outdated and do not reflect the high level of volatility observed during the financial crisis; they do not recognise appropriately netting benefits. While at this stage we do not have the relevant data to quantify the inefficiencies of that result from the current approach, it has to be noted that, in March 2014, the Basel Committee for Banking Supervision (BCBS) adopted a new standardised methodology to compute banks' derivatives exposures in the Basel framework – the Standardised Approach for Counterparty Credit Risk ('SA-CCR'). It agreed that SA-CCR would replace the two existing methodologies allowed in the Basel framework (the Current Exposure Method (CEM) and the

[117] See Section B in http://www.bis.org/publ/bcbs254.pdf

Standardised Method (SM)) for computing banks' derivatives exposures in Basel counterparty credit risk framework from 01 January 2017.

To better capture the exposure value of derivative transactions under the counterparty credit risk framework, and to comply with international agreed standards, SA-CCR should be introduced in the EU.

Proposed solution

Under the proposed amendment, institutions would use the SA-CCR in the counterparty credit risk framework while, under revised conditions, institutions with small trading activities would have the possibility to use a revised version of OEM. A simplified version of SA-CCR will also be available for banks that would face some operational difficulty to implement SA-CCR but have sizeable derivative activities that would not warrant them the use of the revised OEM.

SA-CCR would provide institutions not permitted to use an internal model approach for calculating the exposures of derivative transactions (the vast majority of EU institutions since only 20 institutions have been permitting to use such a model according to a survey performed by the EBA) with a more risk-sensitive approach than the current ones, calibrated to stress conditions and differentiating between collateralised and uncollateralised derivative transactions. Under this option, SA-CCR would be implemented under CRR without any material deviations from the Basel rules.

However, it is clear from the responses to the consultation paper that the implementation of SA-CCR would be too challenging for banks with small trading activities that currently use OEM or the MtM method. The responses are split whether OEM, the MtM method or a simplified version of SA-CCR should be used for those banks. However, it is also clear that some of the features of OEM and the MtM method are too different from the features SA-CCR, leading to different exposures amount for the same transactions, which would create an unlevel playing field between the institutions applying SA-CCR and institutions that would be allowed to use these approaches if they were kept alongside SA-CCR.

Based on the above evidence and to maintain the level playing field across all institutions not permitted to use an internal model for calculating derivative exposures, only one simple alternative to SA-CCR will be maintained under CRR – OEM – with revised assumptions to ensure its consistency with SA-CCR (the revised assumptions have been designed to limit additional undue complexity for the targeted institutions).

In addition, new eligibility criteria would be set to permit institutions to use the revised OEM, based on the size of the market values of their gross derivative activities for trading purposes. A combination of absolute and relative threshold may be maintained to ensure that only institutions with small derivative portfolios, as compared to their entire balance sheet, would be eligible for the application of the revised OEM.

The EBA has assessed different level of thresholds based on the new eligibility criteria for the application of the revised OEM based on a small sub-sample of the EU institutions with small trading activities (the sample has been reduced to 134 EU institutions due to lack of data available). The majority of EU institutions in this sub-sample have a size of the market values of their gross derivative activities for trading purposes below euros 20millions and a relative size of the market values of their gross derivative activities for trading purposes to total assets below 5%. The remaining few EU institutions in this sub-sample have a size of the market values of their gross derivative activities between euros 20 and 300 million and a relative size of the market

values of their gross derivative activities for trading purposes to total assets between 5% and 15%.

In order to allow enough leeway to capture those institutions that would face some operational difficulty to implement SA-CCR, it would be preferable not to set the level of the absolute and relative thresholds too low. Based on the EBA data, we propose that the new eligibility criteria for the application of the simplified SA-CCR would be based on an absolute threshold of EUR 150 million and a relative threshold of 10%.

Annex 3.2. Disclosure

Problem definition

The specific policy objective is for institutions to provide meaningful, consistent disclosures of prudential information at a reasonable cost. These disclosures complement the mandatory solvency and liquidity requirements and the supervisory review process and are in combination the bedrock for safe-guarding the financial stability of institutions established in the Union.

Under the current CRR institutions have to disclose information to allow users (investors and other stakeholders) to form a view on the risk profile of the institution and exercise market discipline. Whilst overall the substantial disclosure requirements of the CRR can be considered sufficient, the lack of harmonised disclosure formats hampers the comparability of disclosures between institutions and over time thereby reducing market discipline. Moreover, the existing disclosure requirements are mainly a "one size fits" allowing for hardly and differentiation based on the size of the institution and are therefore not optimally proportionate.

Maintaining the status quo of Part Eight "Disclosure" of the CRR would imply that the disclosure requirements 1) would have very little proportionality thereby neglecting the claims for more proportionate disclosure requirements made during the call for evidence, 2) would not use the full potential of disclosures by facilitating efficient comparability and 3) create divergence from the revised Basel disclosure requirements in an area where the EU is currently fully compliant

The Basel Committee adopted in January 2015 revised Pillar 3 disclosure requirements for financial years starting on or after 2016[118] requiring common formats for any disclosure in relation to the Basel mandatory ("Pillar 1") requirements.

The need for an early review without evaluation

The current CRR disclosure requirements were applicable from 1 January 2014 onwards. The EBA issued a report on Pillar 3 disclosures by banks for the year 2014 in 2015 which included a synthetic overview of the missing CRR disclosures compared to the revised Basel Pillar 3 disclosure framework. In order to be aligned with the revised Basel international requirements, the CRR should be amended.

In addition, disproportionality of disclosure requirements was mentioned by many respondents to the call for evidence indicating the unnecessary administrative burden for smaller banks. In light of this Commission's better regulation agenda, these call for proportionality should be addressed before the evaluation of the CRD IV/CRR.

Proposed solution

In order to alleviate the current disproportionate operational burden and to be aligned with the revised Basel Pillar 3 disclosure framework institutions should be categorised on the basis of their significance. "Significant institutions" would be defined along the lines of the SSM Regulation criteria for identifying significant banks and "small institutions" would be defined on

[118] http://www.bis.org/bcbs/publ/d309.htm

the basis of total asset size. A further proportionality criterion would be whether the institution has issued securities listed on an EU regulated market or not.

Institutions would either be significant, small or "other" with or without being "listed". The disclosure requirements would be a sliding scale with differentiations in the substance and frequency of disclosures whereby for all types of institutions disclosure templates developed by the EBA would be mandatory.

At the upper end of the sliding scale would be significant institutions that would be required to quarterly disclosure of approximately 1 to 2 pages key metric tables of prudential information, semi-annually disclosure of key metrics plus some selected more substantial disclosures and a fully-fledged annual disclosure small banks with no securities listed would be required to disclose only annual key-metrics.

Annex 3.3. Supervisory reporting

Problem definition

Reporting prudential information by institutions to supervisors is an essential prerequisite for effective ongoing supervision and monitoring of risks. The CRR constitutes a single rulebook for supervisory reporting whereby EBA develops Implementing Technical Standards (ITSs) for supervisory reporting with common data definitions, common templates, common reporting frequencies and common remittance dates as well as a common IT solution.

The Commission adopts the ITSs prepared by EBA as implementing regulations. So currently the Union has a legally enforceable common supervisory reporting system applicable to any institution established within the EU. The single rulebook of supervisory reporting in combination with the underlying notion of maximum harmonisation implies that supervisors cannot impose additional systematic reporting requirements on institutions. However, supervisors have the power to request ad hoc information from individual institutions which is one the minimum supervisory powers laid down in the CRD IV.

Although the CRR mandate on supervisory reporting specifically mentions that supervisory reporting shall be proportionate to the scale, nature and complexity of the activities of the institutions and where there is "implicit proportionality" in the sense that if an institution has a simple business model it only has to report a fraction of the data points from the supervisory reporting package, several claims have been made during the call for evidence that supervisory reporting in the EU has become disproportionate.

Respondents to the call for evidence highlighted in particular the high administrative burden caused by 1) disproportionate reporting requirements generally and for smaller banks in particular in terms of content and reporting frequency and 2) supervisors requiring additional reporting on top of the regular EU reporting requirements. Some respondent also expressed strong concerns about further disproportionate reporting requirements based on forthcoming initiatives such as the ECB's AnaCredit and the ECB European Reporting Framework.

So based on the call for evidence there seems to be two main sources of potential disproportionality in the area of supervisory reporting:

1. EBA is not considering proportionality optimally when developing ITSs on supervisory reporting; (Note: this includes some detailed "level 1" reporting requirements in the CRR that do not fulfil a clear supervisory purpose);

2. Supervisors requesting systematic reporting of prudential information on top of the EU agreed supervisory reporting package; (Note: this is partly driven by the Commission's non-timely adoption of ITSs creating a misalignment between the applicable level 1 prudential requirements and the reporting requirements or Commission decisions to reject certain reporting requirements that EBA decided necessary for effective supervision).

The need for an early review without evaluation

Disproportionality of reporting requirements was invoked by many respondents to the call for evidence as a cause of unnecessary administrative burden for smaller banks. In light of this and

taking into account the Commission's better regulation agenda, these calls for proportionality should be addressed before an evaluation of the CRD IV/CRR can be undertaken.

Proposed solution

Non optimal proportionality in level 1 and level 2 legislation

As to the first source of disproportionality it is not straightforward for EBA to determine the appropriate trade-off between the cost of reporting relevant prudential data by institutions and the benefits for effective supervision. EBA makes this trade-off inter alia via public consultations of draft ITSs. However, since proportionality is a qualitative concept open to different views on the cost-benefit, the trade-off may not always be right depending on the stakeholder perspective.

In particular the frequency of reporting for smaller institutions could be reduced leading to less reporting burden without undermining overall the supervisory effectiveness or financial stability risk. In order to achieve reduced frequency for smaller institutions the proportionality concept in the CRR it is proposed to better frame in the CRD IV and CRR the proportionality mandate of EBA when developing ITSs.

Additionally the extant body of reporting requirements should be reduced for some or all institutions depending on their size or other quantitative criteria. This can be achieved by including in the CRR a specific requirement for EBA to report to the Commission on concrete proposals for reducing the current supervisory reporting package without sacrificing supervisory effectiveness or directly in the level 1 text.

As regards too detailed level 1 reporting requirements, the CRR review proposal should include amendments to delete or reduce some specific reporting requirements in the level 1 text. In particular those for which supervisory experience has shown they are dis-proportionate but which EBA has to include in the ITSs since they are specified in the level 1 text.

Supervisors requesting additional systematic reporting of prudential information

In order to address this supervisory behaviour, the CRR review proposal should include a mandate for an independent study of any such systematic additional reporting requirements that would infringe on the single rulebook. On the basis of the conclusion drawn by the study the Commission would consider whether the additional reporting imposed by supervisors is infringing on the single rulebook and take corrective actions if deemed necessary.

In addition, CRD IV rules entrusting supervisors with supervisory reporting powers should limit those powers to *ad hoc* reporting by individual institutions (thus eliminating the possibility for supervisors to impose systematic reporting by all or a subset of institutions).

Annex 3.4. Pillar 2 additional capital

Problem definition

Pillar 2 capital requirements are additional capital requirements that supervisors may impose on individual banks in excess of Pillar 1 capital requirements (i.e. "minimum" requirements applicable to all banks) and the combined buffers requirement (i.e. the combination of various buffer requirements related to certain macro-prudential risks applicable to all banks or a subset of banks). According to CRD IV[119], a bank that doesn't meet Pillar 1 or Pillar 2 capital requirements may lose its license, whilst the consequence of breaching the combined buffer requirement is the automatic restriction of dividend payments, bonus pay-outs and the remuneration of Additional Tier 1 (AT1) instruments to a certain share of the bank's profits (i.e. Maximum Distributable Amount – MDA)[120].

The current text of the CRD IV sets the broad parameters of the exercise of Pillar 2 powers, whilst leaving to supervisory authorities a wide margin of discretion when exercising their powers.

The need for an early review without evaluation

Input received from industry and supervisory authorities during the 2015 public consultation on the CRR/CRD IV review, the Call for evidence and from bilateral contacts between the Commission and various parties concerned hinted to some discrepancies and weaknesses in the way Pillar 2 capital requirements are applied across jurisdictions and to the sometimes not transparent way supervisors' decisions on the additional capital imposed on individual banks are made. This is due to the ambiguities generated by the legal text as currently drafted. The way Pillar 2 capital add-ons are defined and calculated are an important driver of an institution's overall level of capitalisation and are relevant for market participants since the level of additional capital imposed by supervisors as a Pillar 2 measure may impact on the triggering of restrictions of dividend payments, bonus pay-outs and the remuneration of AT1 instruments (MDA).

Despite the lack of sufficient data for a full evaluation, a clarification of the current rules is thus needed to ensure the proper functioning of the market, especially for those financial instruments directly linked to the automatic restrictions of distributions (e.g. AT1). Moreover, with regards to the interest rate risks for banking book positions, the modification of the current text is justified by the shortcomings identified at international level and the solutions developed in the standard adopted by the BCBS in April 2016, to which the proposal seek to align.

Solution proposed

The relevant articles of the CRD IV and CRR will be modified to clarify: the relation between Pillar 1, Pillar 2 and buffer capital requirements (so called "stacking order" of capital requirements)*;* the distinction between Pillar 1 (applicable to all banks) and Pillar 2 (bank specific) capital requirements; the difference between Pillar 2 capital requirements (to be met by the bank at all time and subject to public disclosure) and Pillar 2 capital guidance (which implies an expectation that the institution have additional capital beyond mandatory capital

[119] Article 18(1)(d) of CRD.

[120] Article 141 of CRD.

requirements); the fact that the MDA shall be calculated by taking into account Pillar 1, Pillar 2 and buffers capital requirements (but not Pillar 2 capital guidance) and that the AT1 instruments should be given priority if as a result of the MDA calculation distributions have to be limited. In addition, the framework for capturing interest rate risks for banking book positions under Pillar 2 measures will be included.

These proposed amendments are expected to promote consistency in the application of rules, improve transparency and legal certainty on the use of Pillar 2 capital instruments.

Impact of the proposed solution

The modifications of the CRD IV and CRR proposed are not expected to impact on the total amount of capital hold by credit institutions or on their ability to lend. As a consequence of the clarifications proposed credit institutions are likely to meet the different capital requirements or capital expectations by reallocating the capital they have.

Annex 3.5. Equity investments into funds

Problem definition

The CRR contains specific rules governing capital requirements for banks' banking book exposures in the form of units or shares in collective investment undertakings (CIUs) – basically undertakings for collective investment in transferable securities (UCITS) and alternative investment funds (AIFs).

There is a separate set of rules for banks applying the standardised approach (SA) for credit risk on the one hand and those applying the internal ratings-based (IRB) approach on the other hand, both with different methods for calculating risk weights.

Both SA and IRB banks may apply a "look-through approach", whereby they look through to a CIU's underlying exposure in order to calculate an average risk weight for their exposures in the CIU; this is the most risk-sensitive and transparent approach. The other, less risk-sensitive methods differ for SA and IRB banks and tend to assign risk weights based on crude criteria. For SA banks, the look-through approach is optional, whereas IRB banks must use it if certain criteria are met.

The abovementioned rules are the EU implementation of the internationally agreed standards published by the Basel Committee as currently applicable.[1]

During the crisis, concerns were raised regarding the oversight and regulation of "shadow banking" entities and activities, as well as their indirect regulation through banking regulation. In this context, the Financial Stability Board recommended[2] in 2011 that "the risk-based capital requirements for banks' exposures to shadow banking entities should be reviewed to ensure that such risks are adequately captured", specifically referring to the treatment of investments in funds. Such review was conducted by the Basel Committee, resulting in a new standard published in December 2013, but not yet implemented in EU legislation.

The concerns raised with respect to the current framework notably relate to risk sensitivity and transparency. The framework lacks risk sensitivity notably in the sense that it does not require banks to reflect a fund's leverage when determining capital requirements associated with their investment, even though leverage is a very important risk driver. This creates undesirable incentives by encouraging investments in higher-risk funds and may result in an insufficient capitalisation of such higher-risk exposures.

Also, the framework does not promote transparency and appropriate risk management of the relevant exposures, as there is no clear rank ordering between the different approaches, with different degrees of prescriptiveness for SA banks compared to IRB banks and insufficient incentives to apply the look-through approach.

The need for an early review without evaluation

The Commission proposes to adopt the main aspects of the new Basel standards, which would help address a number of the aforementioned weaknesses of the current rules while allowing us

[1] Basel Committee on Banking Supoervision, "International Convergence of Capital Measurement and Capital Standards", 2006

[2] Financial Stability Board, "Shadow Banking: Strengthening Oversight and Regulation", 2011

to comply with our international obligations. However, at this stage, we do not have the relevant data to quantify the shortcomings of the current EU approach.

Proposed solution

The proposed framework consists of three approaches, which would apply to both SA and IRB banks' exposures. The look-through approach (LTA) requires banks to risk weight the fund's underlying exposures as if they were held directly; the mandate-based approach (MBA) assumes that the underlying portfolios are invested to the maximum extent allowed (as per the mandate, regulations, or other disclosures) in the assets attracting the highest risk weights; and the fall-back approach (FBA) – used for funds with insufficient transparency – requires the application of a 1,250% risk weight. It provides a hierarchy of approaches as a function of the degree of due diligence performed by banks, with an appropriate incentive structure, whereby the degree of conservatism increases with each successive approach as risk sensitivity and transparency decrease. This promotes appropriate risk management of bank exposures to funds by providing incentives to use the more risk sensitive and transparent approaches.

A leverage adjustment is added, whereby banks using the LTA or the MBA must adjust the average risk weight for an equity investment upwards by the fund's leverage (LTA) or permitted leverage (MBA). This will allow an improved reflection of the actual risks faced by the banks as concerns of double gearing are addressed.

According to Basel Committee data, banks' equity investment in funds do not appear to be material exposures in most jurisdictions, as risk weighted assets arising from these investments represent less than 2 per cent of total RWAs in most jurisdictions, even though a considerable degree of heterogeneity across jurisdictions is observed.

Annex 3.6. Bank financing of infrastructure projects

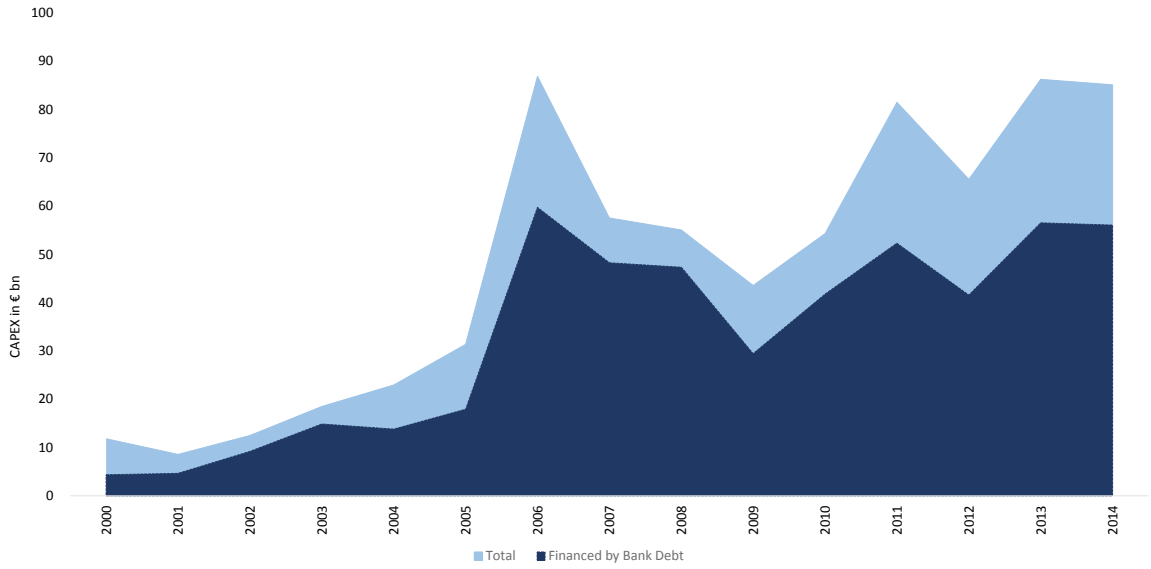
Problem Definition

One of the goals of the Capital Markets Union is to help mobilise capital in Europe and channel it to the infrastructure and long term sustainable projects that Europe needs to create jobs. The European Investment Bank estimates that the EU may need up to €2 trillion in investment in the period up to 2020. Public support through measures such as the €315 billion Investment Plan for Europe (IP/15/5420) will help, but there is a need for more private investment in such projects in the longer term.

Despite the growing role of large institutional investors in providing long-term funding for infrastructure investments, banks continue to play an important role and being the most relevant source of funding of infrastructure projects in the EU. In 2014 the proportion of the value of infrastructure financed through bank debt in the EU of the total value of infrastructure deals was equal to 65.9% (it was 82,7% in 2014).

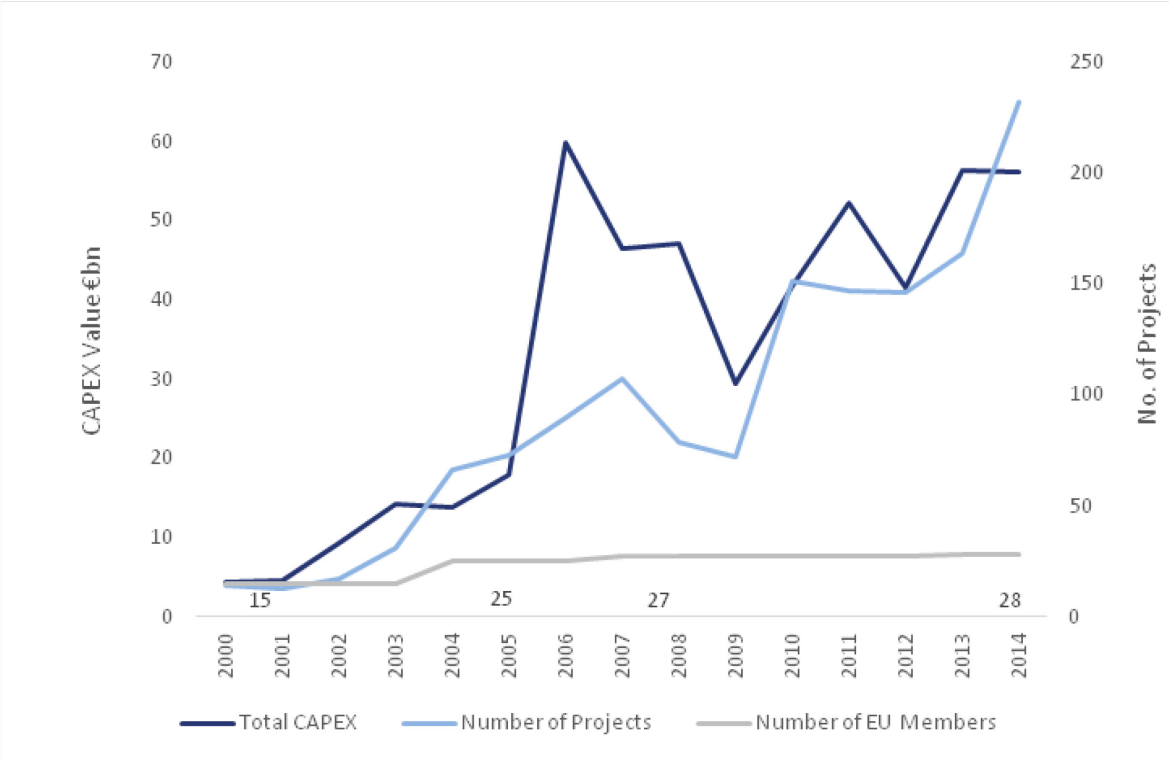
In absolute terms, bank lending for infrastructure has grown markedly from 2009 to 2014, almost reaching the pre-crisis peak of 2006.

Figure A6. Proportion of infrastructure finance lent by banks in total volume of infrastructure funding



Source: InfraDeals and Infrata calculations

Figure A7. Total value of EU Infrastructure projects for which banks provided financing – 2000-2014



Source: InfraDeals and Infrata calculations

The need for an early review without evaluation

Although the limited time elapsed since the entry into force of CRD IV/CRR didn't allow an in-depth evaluation of rules applicable to specialised lending, several replies in the call for evidence suggest the need for a more risk-sensitive approach to the credit risk attached to infrastructure projects. These calls highlight that in order to boost long-term funding for infrastructure investment to respond to the needs of the EU economy is therefore important, besides promoting the role of non-bank investors, to make infrastructure investments, in particular high-quality ones, more attractive to banks and allow banks to better understand and manage risks attached infrastructure projects.

Proposed solution

A specific 'population' of specialised lending exposures will be identified which aim at funding infrastructure projects and fulfil certain criteria able at reducing the different risks a bank would incur in providing such funding (financial, political, legal, operating, etc.). This new asset class of qualifying specialised lending exposures would benefit from a discount factor of 25% The criteria will denote safer infrastructure projects and ensure that lending banks understand the associated risks.

These criteria, largely derived from those used for the Category I exposures in the so-called 'slotting approach' in the IRBA (see draft EBA RTS on specialised lending exposures[121]), would be consistent with the criteria developed in the insurance framework for the prudential treatment of qualifying infrastructure investments (Commission Delegated Regulation 2016/467).

The proposed amendment, while promoting high-quality, sustainable infrastructure investments, would enhance cross-sectoral harmonization and comparability between SA and IRBA banks[122].

[121] Draft RTS on Assigning Risk Weights to Specialised Lending Exposures under Article 153(9) of Regulation (EU) No 575/2013 (Capital Requirements Regulation – CRR)

[122] Currently the slotting approach is used by only 23% of IRBA Banks but the BCBS is currently considering requiring in future all IRBA banks to apply the slotting approach for specialised lending exposures.

Annex 3.7. Large exposure framework (alignment with Basel rules)

Problem definition

The purpose of the large exposure limits is to protect banks from significant losses caused by the sudden default of an individual counterparty or a group of connected counterparties. It thus targets exposures that are large compared to a bank's capital resources. The current text set a general limit to large exposures of 25% of institutions' eligible capital[123] (which is the sum of Tier 1 capital and an amount of Tier 2 capital equal to one third of Tier 1 capital[124]).

The general limit of 25% is not sufficiently prudent, especially for larger banks, since it only capture a small part of the overall large exposures that European institutions have. In fact, the 25% limit addresses only a limited number of the exposures. Moreover, it results in a higher limit for smaller banks since larger banks have usually more Tier 2 capital than smaller ones. This doesn't ensure that the maximum possible loss a bank could incur if a single counterparty or a group of counterparties were to suddenly fail would not endanger the bank's survival as a going concern.

Moreover, the current limit doesn't take into account the higher risks carried by the exposures that globally systemically important Banks (G-SIBs) have to single counterparty or groups of connected clients and, in particular, as regards exposures to other G-SIBs. The financial crisis has, in fact, demonstrated that material losses in one systemically important institution (SIFIs) can trigger concerns about the solvency of other SIFIs with potentially serious consequences on financial stability.

Finally, the BCBS has developed in 2014 a new methodology (i.e. Standardised Approach for Counterparty Credit Risk, SA-CCR) for computing banks' derivatives exposure (i.e. Over The Counter, OTCs) that better capture the risks carried by this type of exposures. The current large exposures framework relies instead on less accurate methods, which could lead to underestimate the risks linked to derivatives exposures.

The need for an early review without evaluation

At international level the BCBS identified some shortcomings in the large exposure regime that the BCBS standard, published in 2014 and expected to be implemented by jurisdictions by 2019, aims to address. The standard has been published for 2 years and market participants, which have participated in the public consultation[125] and the quantitative impact assessment (QIS)[126] launched by the Basel committee, expect the EU system to be aligned with the standard. It is thus proposed to modify the CRR to reflect the Basel framework.

Solution proposed

The measures proposed to address the loopholes identified in the current large exposures framework are essentially three. First, increasing the quality of capital that can be taken into

[123] Art. 395 of CRR.

[124] This is the definition of eligible capital that applies as from 2016, after the transitional period set out in Article 494 of the CRR has expired.

[125] http://www.bis.org/publ/bcbs246.htm.

[126] http://www.bis.org/publ/bcbs246/instructions.pdf

account for limiting large exposures, by limiting the eligible capital only to Tier 1 capital (no more Tier 2 capital). The higher quality of capital used as capital base will improve the ability of institutions to absorb losses. At the same time, the change in the capital base will reduce the quantity of exposures that a bank can have - and thus the risk of losses in case of default of the counterparty – and introduce a more proportionate system for smaller banks compared to larger ones. In the same direction, a second proposal is to introduce a lower limit for G-SIBs exposures to other G-SIBs (15% of banks' Tier 1 capital instead of the 25% of banks' Tier 1 capital required for other banks) in order to reduce systemic risks related to the interlink among large institutions and the probability that the default of G-SIBs counterparty may have on financial stability. Finally, it is proposed to impose to use the SA-CCR methods for determining exposures to OTC derivative transaction, even for banks that have been authorised to use internal models.

These interventions will overall increase the risk-sensitivity of the large exposures regime and better tailor the requirements to specific types of exposures and to the size of banks. At the same time, the modifications introduced in the current framework will align the European system to the BCBS standard on large exposures issued in 2014[127], thus increasing international comparability and consistency across jurisdictions.

Impact of the proposed solutions

The enhanced quality of capital (only to Tier 1 capital taken into account as capital base) is not expected to have a significant impact on the number of the exposures exceeding the large exposure limit. According to the available data the total number of exposures in breach of the 25% limit of the capital base increases from 25 (considering eligible capital) to 63 (considering Tier 1 capital).

Table A9. Changes in the number of large exposures due to the enhanced quality of capital

	Eligible capital			Tier 1 capital		
Exposure bucket	**Total**	**Group 1**	**Group 2**	**Total**	**Group 1**	**Group 2**
≤ 10%	14 096	10 885	3 211	13 953	10 800	3 153
> 10% ≤ 15%	384	130	254	417	183	234
> 15% ≤ 20%	167	56	111	210	63	147
> 20% ≤ 25%	62	13	49	91	32	59
> 25%	25	13	12	63	19	44
Total	14 734	11 097	3 637	14 734	11 097	3 637

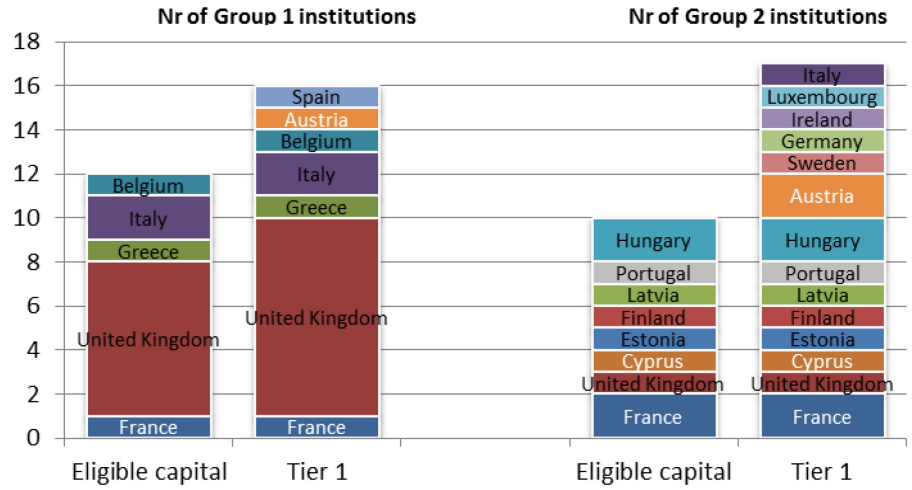
Source: EBA (Group 1 and Group 2 institutions differentiate between respectively big and less big banks. The smallest bank in Group 2 has total assets of EUR 5 billion

There would be 11 additional credit institutions out of 198 credit institutions analysed which would exceed the large exposures limit when the capital base changes from eligible capital to Tier 1 (of which 4 are Group 1 and 7 Group 2 institutions). This would imply that 6 Member

[127] BCBS, *Supervisory framework for measuring and controlling large exposures*, April 2014, available at http://www.bis.org/publ/bcbs283.pdf.

States that would not have reported exposures above the large exposure limit (25% or 15%) would be affected by the change in capital base (namely, ES, AT, LUX, IE, DE and SE).

Figure A8. Changes in the number of large exposures per country due to the enhanced quality of capital



Source: EBA (Group 1 and Group 2 institutions differentiate between respectively big and less big banks. The smallest bank in Group 2 has total assets of EUR 5 billion)

The modification of the large exposure limit for exposures between G-SIBs (from 25% to 15%) would in practice have no impact, since there are no G-SIBs in the EU that have reported exposures greater than 10% both in terms of eligible capital and Tier 1 capital. The imposition of a 15% limit will however prevent in the future G-SIBs to increase the number of exposures towards other G-SIBs.

Table A10. Changes in the number of large exposures due to the change of limit for G-SIBs v G-SIBs exposures

	Eligible capital		**Tier 1 capital**	
Exposure bucket	**Number of Institutions**	**Number of Exposure**	**Number of Institutions**	**Number of Exposure**
> 0% ≤ 5%	13	193	13	186
> 5% ≤ 10%	4	5	8	12

Source: EBA

As concerns the use of the *standardised approach for measuring exposure at default for counterparty credit risk* (SA-CRR), it was not possible to gather information concerning the impact of this change on the large exposure regime. A data collection on simulated data would need to be conducted given that the SA-CRR is not yet implemented in the CRR.

Overall, the modifications to the large exposure framework are however not expected to impact on the ability of credit institutions to lend since the large exposure regime only impose a diversification of clients to which credit institutions' have exposures. The number of clients or of exposures are not limited.

Annex 3.8. Exemptions on large exposures

Problem definition

Article 400 (2) of the CRR lists a number of exposures that competent authorities may fully or partially exempt from the scope of application of the large exposures limit. These exposures can only be exempted if the conditions laid down in paragraph 3 of the same article are met.

By way of derogation from Article 400 (2) and (3) of CRR, Article 493(3) of CRR provides for a temporary possibility for Member States to grant an exemption from the large exposures limit for the same exposures listed in Article 400 (2) of CRR, however without having to meet the conditions set out in paragraph 3 of Article 400 of CRR.

The concurrent possibility of Members States and competent authorities of granting exemptions to the same exposures has proved to be problematic after the introduction of the Single Supervisory Mechanism (SSM).

Since November 2014 the SSM (and not anymore national supervisors) has become the competent authority for significant institutions established in the banking union. It is therefore the SSM which has to decide whether one of the exposures listed in Article 400 (2) of the CRR should be partially or fully exempted from the large exposures limit for significant institutions. The fact that Article 493(3) of CRR entrusts Member States with the same power interferes with the ability of the SSM to perform its tasks in a consistent and coherent manner. In fact, the same exposure may or may not be exempted from the large exposure limit depending on whether the Member State where the significant institution is established has exercised the option set out in Article 493(3) of CRR or not.

The need for an early review without evaluation

Article 493(3) of CRR entered into force in 2013 and was elaborated when supervisory authorities were only national supervisors. The adoption of the SSM regulation (Regulation EU No 468/2014) and the start of the functioning of the SSM revealed the shortcomings created by the use of Article 493(3) of CRR by Member States. Moreover, Article 493(3) of CRR is a transitional provision and its modification is expected.

Solution proposed

We would propose to end the transitional period allowing Member States to grant exemptions for certain exposures to the large exposure limit set out in Article 493(3) of CRR.

The modification will allow for a more coherent application of large exposures rules, foster harmonisation across Member States and promote a level playing field among significant banks established in the banking union.

At the same time, ending the transitional period is not expected to have negative impacts on the EU system since competent authorities – including national supervisors for banks not falling under the supervisory competence of the SSM – will still be able to grant exemptions to the same types of exposures according to Article 400 (2) and (3) of CRR.

Ending the transitional period for exemptions to the large exposure regime would also be more prudent since exemptions to the large exposures limit could only be allowed when

the conditions of paragraph 3 of Article 400 of the CRR are met. Finally, ending the Member States transitional period could also enhance the further integration of the single market in banking services.

Impact of the proposed solutions

The proposed measure is not expected to have any impact on credit institutions (including their lending capacity) since they will not be deprived of the possibility of being exempted from the large exposure limit. Competent authorities will still be able to exempt form the application of the large exposures limit the same exposures set out in Article 493(3) of CRR according to Article 400 (2) and (3) of CRR.

Annex 3.9. Rules on exposures to CCPs

Problem definition

The CRR introduced specific rules on capital requirements for institutions' exposures to central counterparties (CCPs). The introduction of these rules represented an important change in terms of the measurement, monitoring and management of such exposures as they had previously attracted no capital requirements.

In a nutshell, the CRR contains capital requirements for two types of exposures to CCPs: trade exposures and exposures due to default fund contributions. The size of the requirement depends on whether a CCP is labelled as a 'qualifying' (QCCP) or not (non-QCCP). Requirements for the former are lower than requirements for the latter (in fact, the requirements for exposures to non-QCCPs were deliberately designed to be penal to disincentivise institutions from using them). In order for a CCP to be considered a QCCP, it has to be either authorised (for CCPs established in the EU) or recognised (for CCPs established outside the EU) in accordance with EU rules.

In order to achieve a certain degree of risk sensitivity in the level of capital requirements for exposures due to default fund contributions, the CRR sets out a method ('Method 1') that compares a “hypothetical” level of resources that a QCCP should have in order to cover potential losses resulting from the default of one or more of its members with the actual resources the QCCP has at its disposal. The capital requirement depends on the difference between those two amounts (the requirement is higher if the "hypothetical" resources exceed the actual resources than in the opposite case). The CRR also contains an alternative method for calculating the capital requirements for such exposures, which depends solely on the size of the exposures ('Method 2'). Institutions are free to choose which of the two methods to apply.

The abovementioned rules are the EU implementation of the internationally agreed interim standards published by the Basel Committee.[128]

Under the CRR, Method 1 relies on the application of the Mark-to-Market Method (MtMM) when calculating the "hypothetical" resources in relation to derivatives exposures.[129] One concern that was expressed in relation to the use of MtMM in that context was that, given that the MtMM was designed for simpler and more directional derivatives positions, it was not suitable for the centrally cleared space. This is because CCPs have, by definition, balanced positions (i.e. the amounts owed by the CCP to its members and the amounts the CCP's members owe to the CCP perfectly offset each other)[130] and clear also more complex derivatives. Impact studies carried out at international level found that calculating the hypothetical level of resources using the MtMM – combined with the nature of the formula for determining the capital charge – meant that capital requirements on member contributions to default funds varied significantly between QCCPs: in many cases the charges were very small, and in some cases they were very large. That degree variation could not be explained solely by differences in the risk profiles of the different QCCPs. In other words, the results showed that the method did not capture risks sufficiently well, i.e. either leading to too low or too high requirements.

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[128] Capital requirements for bank exposures to central counterparties, July 2012. Available at http://www.bis.org/publ/bcbs227.pdf.

[129] Within the Basel framework it is known as the Current Exposure Method (CEM).

[130] This balance can be disrupted only in case one or more of the CCP's members default.

There were also concerns that the rules did not take a sufficiently holistic view of how the different types of exposures to a QCCP interrelate and were therefore not sufficiently sensitive to the aggregate risk of those exposures and how that risk is distributed. More specifically, the concerns were that the rules did not recognise sufficiently the fact that increasing members' contributions to a QCCP's default fund would, all else equal, make the QCCP safer. These concerns were due to the fact that the capital requirements proportionately increase with the size of the contribution to the default fund of the QCCP.[131]

The abovementioned Method 2 was introduced in the interim international standard (an implemented in the CRR) as a temporary solution intended to address situations where Method 1 was deemed to lead to excessively high capital requirements. It was meant to buy time to allow for the development of a permanent solution that would address the abovementioned problems.[132] The permanent solution was published by the Basel Committee in April 2014.[133]

The need for an early review without evaluation

Despite the lack of sufficient implementation experience for an in-depth evaluation of existing rules, impact studies at international level and work conducted by the BCBS have showed the shortcomings of current rules which will be fixed with the amendment described below. The review is also needed to comply with BCBS standards.

Proposed solution

The revised standards adopted by the Basel Committee will be implemented. Notable revisions to the Basel standards include the use of a single method for determining the capital requirements for exposures to QCCPs stemming from default fund contributions, an explicit floor for those requirements, as well as an explicit cap on the overall capital requirements applied to exposures to QCCPs (i.e. those charges will not exceed the charges that would otherwise be applicable if the CCP were a non-qualifying CCP). They did not change the treatment of exposures to non-QCCPs.

Under the new method for capital requirements for default fund contributions a more holistic approach is taken that ensures that the capital requirement no longer increases in proportion with the size of the contribution. The method also applies a more risk-sensitive approach for calculating the "hypothetical" resources (called the standardised approach for counterparty credit risk or SA-CCR). While this new approach is more complicated, the fact that the calculation of the hypothetical resources is actually required from the QCCP and not from the institutions, means that there is no increase in compliance costs for institutions and the increase in costs for the QCCP should be fairly limited (mostly due to the one-off cost of changing their systems to accommodate this new approach) but this is more than outweighed by the benefits brought from the higher risk-sensitivity of the approach. The method also introduces a floor to the capital requirements to ensure that there is at least a small capital requirement for those exposures and hence that institutions still monitor them and manage them.

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[131] This is true under both Method 1 and Method 2.

[132] Its introduction created a new problem: since institutions were left full freedom of choice between the two methods, this meant that they were allowed to choose the method that delivered the lower capital requirement and not necessarily the one that reflected the inherent risks better.

[133] Capital requirements for bank exposures to central counterparties - final standard. Available at http://www.bis.org/publ/bcbs282.pdf.

The revised standard also provides for an explicit cap on the capital requirements for exposures to QCCPs: the latter cannot be higher than in case if the same CCP would be deemed a non-QCCP.

The fact that only one method is used instead of two has the additional benefit of decreasing the complexity of the rules and removes the arbitrage possibility present in the current rules (because of the two methods).

The revised rules further reduce the administrative burden for institutions by dropping the requirement for legal opinions from the conditions that need to be met by institutions in order to be able to use the more favourable treatment for trade exposures (it was replaced by the condition for the institution to conduct sufficient legal review).

Annex 3.10. Contractual recognition of bail-in (article 55 BRRD)

Background/introduction:

Stakeholders raised practical concerns with respect to Article 55 of Directive 2014/59/EU establishing a framework for the recovery and resolution (BRRD). The provision requires credit institutions and other entities falling under the scope of the BRRD to include in contracts to which they are party and which are governed by the law of a third country a clause by which the creditor recognises the bail-in power of Union resolution authorities. This obligation is particularly relevant for branches of Union banks in third countries, as their business, and in particular concluded contracts, are usually governed law of those third countries.

Problem definition

Stakeholders reported that compliance with Article 55 BRRD raises two types of difficulties. First, certain third country counterparties refuse to include a contractual clause recognising a Union bail-in power in financial contracts concluded with Union banks. These third country entities often have a high degree of negotiating power against Union banks, or apply internationally agreed standard contractual terms in their banking contracts, e.g. with respect to liabilities to non-Union financial market infrastructures or trade finance liabilities (letters of credit, bank guarantees and performance bonds). As a result, the only way for Union banks to comply with Article 55 BRRD in these cases would be not to enter into the contract at all. In extreme cases this could entail that a certain portion of their business would need to be ceased. Secondly, even when third country counterparties are prepared to accept bail-in related clauses in their contracts with Union banks, in some cases the local supervisor may forbid this. In this case the only way for banks to comply with Article 55 BRRD would be to either contravene to the rules imposed by the local supervisor or exit the relevant part of their business.

The need for an early review without evaluation

The BRRD provisions entered into force in 2016. Despite the lack of sufficient implementation data to conduct an evaluation, in particular the provisions of Article 55 generated an extensive feedback from the industry and resolution authorities. Data on the magnitude of the problem has been made available by banks under the coordination of the European Banking Federation. It was not verified to what extent this data was representative, but it was nevertheless suitable to demonstrate the different degrees of impact for banks, since their share of liabilities governed by third-country law widely differs. Hence, an early adjustment of rules seemed necessary and the proposed solution to grant discretion to the resolution authority in applying the requirement seemed the most suitable approach.

Objective

A better environment for jobs and growth across Europe is the ultimate goal. In this respect, it is worth mentioning that a credible and stable financial system is key. To achieve this goal, there must be reassurance that global institutions can be resolved in an orderly manner without causing disruptions to the financial system and to the economy in general, therefore avoiding the use of taxpayers' money. This is only possible if institutions hold sufficient liabilities that can actually be bailed-in in resolution. It is within this spirit that the EU agreed initially on a broadly worded provision (Article 55 of BRRD) whereby any liability which is subject to the law of a third country would not escape the normal loss absorption cascade in resolution, and therefore, would

not be treated more favourably than other liabilities of the same type only for the reason that they are not subject to EU law. Still, this should not be seen as a one-size- fits-all-approach. A series of instruments, including trade finance instruments are of the utmost importance for international trade, in particular, for small and medium sized EU companies. In this regard, article 55, should not affect access of European manufacturers and service providers to trade finance instruments, in particular, and should not weaken their competitiveness in international markets with potential adverse economic effects in the EU.

Furthermore, the effectiveness and practicability of the Article 55 provisions need to be judged in the context of their ultimate purpose, i.e. the facilitation of bail-in. To that end, Commission staff has gathered evidence from the European Banking Federation, jointly with the Bankers Association for Finance and Trade (BAFT) and the International Chamber of Commerce (ICC). The evidence includes a survey to banks which aims at quantifying the potential effects of application (or waving of) Article 55 for two types of liabilities: (i) information on subordinated and senior unsecured debt, i.e. debt that would likely be available for bail-in, (ii) other liabilities, which may impede the effectiveness of the bail-in tool due to e.g. operational challenges.

For the first type of liabilities, the submitted data shows a large margin of deviation regarding the share of subordinated and senior debt governed by third country law in comparison to debt of that category governed by Union law. For some banks this category is entirely irrelevant, whereas some banks claim that up to 35% of these securities are governed by 3rd country law.

The conclusions are three-fold: Firstly, the issue at stake is generally sizable for parts of the industry. If third-country counterparties would not be willing to enter into contractual recognition clauses, banks may struggle to roll-over significant parts of their liabilities at maturity. Secondly, for some banks the resolution authority will need to assess the effectiveness of these clauses for a significant part of the liabilities, as well as managing the related risks. Thirdly, the data exhibits a very heterogenous picture that suggests enabling the resolution authority to conduct a case-by-case approach.

For the second type of liabilities, stakeholders have singled out three particular classes for which the application of Article 55 would likely lead to costs without equivalent benefits:

a) Contingent liabilities arising from e.g. trade finance products (e.g. letters of credit)

Trade finance generates mostly contingent exposures; hence its potential value in resolution is difficult to evaluate ex-ante. Moreover, a reduction of the liability under a letter of credit vis-à-vis the bank under resolution would automatically result in a corresponding reduction of the counterclaim of this bank against the third party in whose interest the trade finance product in question has been issued, therefore it is unlikely to create any loss absorption or recapitalisation capacity. No industry-wide data has been available, but banks who have responded to the survey indicated that the value of the (contingent) liabilities stemming from trade finance does not exceed 1-2% of MREL.

b) Liabilities vis-a-vis Financial Market Infrastructures/Central Counterparties (FMIs/CCPs)

FMI/CCP participation is generally governed by standard contracts that individual banks are incapable of changing on their own. Hence, Article 55 appears to be a particularly inappropriate

mechanism for introducing bail-in rights vis-à-vis FMIs. In addition, according to Article 44(2)(f) BRRD, liabilities with a remaining maturity of less than seven days owed to operators of such infrastructures are excluded from bail-in and already not subject to Article 55.

c) Derivatives

Respondents to the survey indicated that the immense majority of derivative contracts are written under standard (ISDA) terms into which individual banks cannot insert Article 55 clauses. Those few respondents who provided data indicated that contracts which are not governed by such standard contracts would not exceed 3% of the nominal value of all derivatives, including collateralised positions. The costs of inserting Article 55 hence seem to outweigh the benefits significantly.

Proposed solution

Article 55 can only be amended by a new legislative proposal. It cannot be revised by way of a technical 'Level 2' measure or through interpretative guidance. Even before the proposal would be finally adopted by the co-legislators, it would produce some benefits for the authorities and industry concerned as it is common practice for the Commission not to pursue violations of Union law provisions after it has adopted a proposal which aims at amending the provision in question in a way that would eliminate the violations.

The amendment to article 55 BRRD would entail an application of the requirement by the resolution authority in a proportionate manner. The resolution authority can exclude the obligation by means of a waiver if it determines that this would not impede the resolvability of the bank, or that it is legally, contractually or economically impracticable for banks to include the bail-in recognition clause for certain liabilities. In these cases, those liabilities should not count as MREL and should rank senior to MREL to minimize the risk of breaking the No-Creditor-Worse-Off (NCWO) principle. In this regard, the proposal will not to weaken the bail-in.

Annex 3.11. Changes to MREL

Problem definition

The incorporation of TLAC in the EU legislative framework should not materially affect the burden of non G-SIBs to comply with the current MREL framework. Fundamentally, TLAC and MREL aim to achieve the same policy objective of ensuring that banks hold a sufficient amount of bail in-able liabilities that allow for smooth and quick absorption of losses and bank recapitalisation. Some technical differences exist however between the 2 frameworks regimes in terms of eligibility criteria (excl. subordination) and in terms of basis of calculation of the requirement. Additionally, MREL is not specific as to how bial-in capacity should be allocated within groups depending on the choses resolution strategy. MREL is set on an individual basis to each institution. As resolution policies are developing, thereby distinguishing between a Single Point of Entry (SPE) and a Multiple Point of Entry (MPE), it becomes clear that resolution tools will be applied at the level of the resolution entity, covering all material subgroups (subsidiaries) that compose the resolution group. Firstly, the concepts of resolution entities, resolution groups and material subgroups are not defined in the current BRRD level 1 legislation. Secondly, the prepositioning of internal/external loss absorbing capacity at subsidiary level is not defined in the current MREL framework.

Maintaining the status quo would imply that the existing differences between TLAC and MREL would be maintained which would result in 2 technically inconsistent frameworks which pursue similar objectives. Moreover, the lack of an adequate approach to resolution policies within groups could lead to divergence of practices across member states and reduced confidence by resolution entities in charge of subsidiaries, leading to ring fencing measures. In the call for evidence, several claims were received on the lack of consistency between the TLAC and the MREL framework and the complexity that this would entail.

The need for an early review without evaluation

BRRD provisions requiring banks to comply with MREL entered into force in 2016. Reviewing them is consistent with the directive, Article 45(18) of which includes a mandate to the European Commission by December 2016 to submit, if appropriate, a legislative proposal to the European Parliament and the Council on the harmonised application MREL, including proposals for the introduction of an appropriate number of minimum levels of MREL and any appropriate adjustments to the parameters of the requirement. The proposal takes into account the analytical report of the EBA on a wide range of MREL-related aspects listed in Articles 45(19) and (20) of the BRRD, including consistency of MREL with the minimum requirements relating to any international standards (such as TLAC) developed in the international fora.

Proposed solution

MREL will be amended to address some shortcomings, notably to (1) create 1 set of eligibility criteria for MREL/TLAC eligible instruments (except for subordination), (2) clarify the internal loss absorbing capacities within banking groups, independent of the chosen resolution strategy through introduction of the concepts of resolution groups, resolution entities and material subgroups, and (3) the alignment of the basis for calculation on the RWA and the leverage ratio exposure measure.

Annex 3.12. Application of IFRS 9 by the EU banks

Problem definition

After the financial crisis, the G20 and the BCBS pushed international accounting standard setters to enhance the "too little too late" credit loss provisioning rules under the IAS 39 and the US GAAP models. IFRS 9 will bring improvements in that respect by introducing a forward looking model for the provisioning of loan losses that should lead banks to book higher and earlier provisions than in the past. IFRS 9 which was endorsed by Member States on 27 June 2016 will be applied from the beginning of 2018.

The move from IAS 39 to IFRS 9 will affect CRR capital requirements. The impact will depend on:

1. the amount of the increase in provisions due to the change in accounting;
2. the type of regulatory approach the bank follows to calculate its capital requirements;
3. for IRB banks, their present level of provisions compared to the regulatory expected loss.

In relation to the first issue, there is still **uncertainty about the difference in levels of provisioning between current IAS 39 and IFRS 9**. Banks are still working on the implementation of the new IFRS. They have therefore not been able to produce precise figures so far. Some analysts have however pointed to a 20% increase in provisions. A 20% - 30% increase of loan loss provisions seems to be confirmed by an analysis the EBA is currently carrying out for a sample of banks. The EBA provisionally estimates a reduction of 50 basis points on average for the CET1 ratios. EBA has however already pointed out that data are not fully reliable.

In relation to the second issue, banks on the **Standardised Approach (SA)** will probably be the most affected. They will see a reduction in their CET1 capital equal to the increase in provisions following the introduction of IFRS 9 which is only very partially compensated by reduced capital requirements following a reduction of exposure values from increased deductions of specific credit risk adjustments.

In order to partially limit the impact on accounting provisioning, Basel and CRR (Art. 62) allow banks that use the standardised approach to add back provisions which are "general" in nature (i.e. not linked to any particular position) and deducted from CET1, as (lower quality) Tier 2 capital to meet some of the bank's capital requirements. The adding back of general provisions as Tier 2 capital is subject to a cap of 1.25% of the bank's risk weighted assets RWA.

In contrast to the US, where all credit provisions are considered as "general", the EU has adopted a RTS that labels any credit risk provision under the current IAS 39 incurred loss model as a "specific" provision which cannot be added back to Tier 2 capital.

In relation to **Internal Ratings Based (IRB) banks**, it is necessary to differentiate the analysis on whether present accounting rules result for certain assets (e.g. a loan portfolio) in a provision that is higher or lower than the Expected Loss calculated according to CRR / Basel prudential rules. There are two possible cases.

- The "*shortfall" case:* if the accounting loan loss provision is lower than the prudential expected losses. In this case banks must, when calculating their capital ratio, deduct from CET1 capital the difference between the prudential expected losses (higher) and the accounting provisions (lower). Obviously, this reduces for a bank the available amount of CET1, the highest quality of capital, and makes it for the bank more difficult to maintain a certain surplus on top of capital requirements and therefore a certain rating.
  This deduction from CET1 is imposed by bank regulators to prevent insufficient levels of provisions from accounting standards.

- The "*excess" case*: if, in the alternative case, the accounting provision for credit losses is higher than the prudential expected loss, when calculating their capital ratio IRB banks can add the "excess" in provisioning back as Tier 2 capital up to a limit of 0.6% of the Risk Weighted Assets.[134]

The impact on an IRB bank of an increase in accounting provisions due to the introduction of IFRS 9 will therefore depend on whether the bank is in a "shortfall" or in an "excess" case. If this increase happens for a bank with a "shortfall" (i.e. accounting provisions are less than the prudential expected loss), IFRS 9 will increase accounting provisions, but the effect on CET1 capital of these higher provisions will be normally compensated by fewer deductions according to Basel / CRR rules described above. The impact can therefore be expected to be - by and large - limited.

If the increase in accounting provisions occurs instead for a banks in an "excess" case, (i.e. accounting provisions are already higher than the prudential expected loss), any increase in accounting provisions will directly determine a reduction in CET1 capital, and the bank CET1 capital ratio will be reduced accordingly, with all expected consequences (higher funding costs, lower rating, etc.). The possible increase in lower quality Tier 2 capital would not provide a sufficient compensation.

EBA has informally estimated that some 2/3 of the EBA sample (large) banks using the IRB approach are in a situation of "shortfall" of accounting provisions, while one third would be in a situation of "excess" of accounting provisions. These some 38 banks in the "excess" case, plus all those on the SA approach not comprised in the EBA sample would be the one most probably affected by any increase in provisioning due to the introduction of IFRS 9 in 2018.

We suspect that banks more active in commercial banking activity and focused on Member States with high levels of NPLs might be the most affected. Although there are not entirely reliable numbers on the impact, we have understood that for some banks the capital ratios might be reduced by 0.5 – 1.5 percentage points (i.e. up to minus 15% for a bank with a 10% capital ratio). This would most probably have a direct impact on those banks' lending practices.

The Basel Committee will not finalise a revised specification of how IFRS 9 accounting interacts with the calculation of bank capital requirements until after IFRS 9 becomes effective on 1 January 2018.

The need for an early review without evaluation

[134] IRB banks in the "excess" case and SA banks are therefore in a "similar" situation in relation to how the introduction of IFRS 9 can impact their capital (higher deductions from CET1, possibly reconsidered in Tier 2).

The mandatory application of IFRS 9 starts from 1 January 2018 onwards, before the CRR will be evaluated. In light of the potential significant and sudden impact on banks' capital ratios it is opportune to include the transitional phasing in of expected credit loss provisions in the CRR review.

Proposed solution

The potential significant impact of IFRS 9 expected loss provisioning on CET1 capital creates a need for action now so that possible measures can avoid any sudden unwarranted impact on banks' capital ratios and lending in 2018.

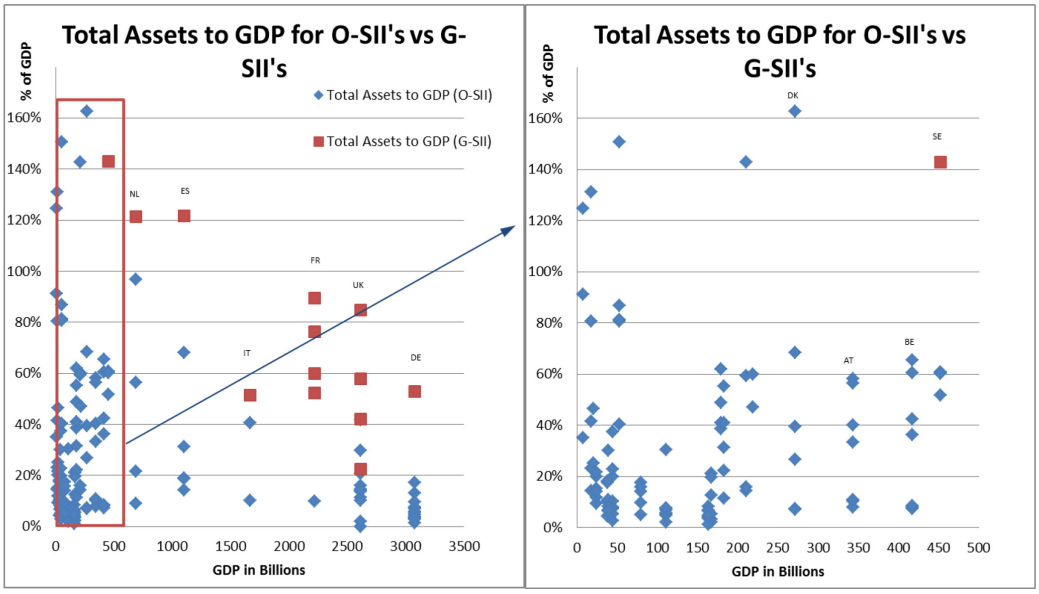
The best possible solution seems to introduce in CRR a transitional regime so that IFRS 9 changes will be phased-in progressively over a few years. Treatment would need to be adapted according to the approach for calculating capital requirements used by banks.

The CRR review would need to include a separate article (e.g. Art. 473a) for a transitional regime on the phasing in of the higher loan loss provisioning of IFRS 9 compared to IAS 39 from 2018 onwards.

Annex 3.13. Comparative analysis of characteristics of EU G-SIIs and O-SIIs

The calibration of MREL should be closely linked to and justified by the institution's resolution strategy and should take into account such criteria as the business model, size, risk profile, funding model or the extent to which the Deposit Guarantee Scheme could contribute to the financing of resolution[135]. It can be observed from the figure below that in terms of size compared to GDP (of the member state in which a O-SII is recognised) there is a large heterogeneity between the different O-SIIs both within and across member states.

Figure A9. Size of EU G-SIIs and O-SIIs compared to GDP

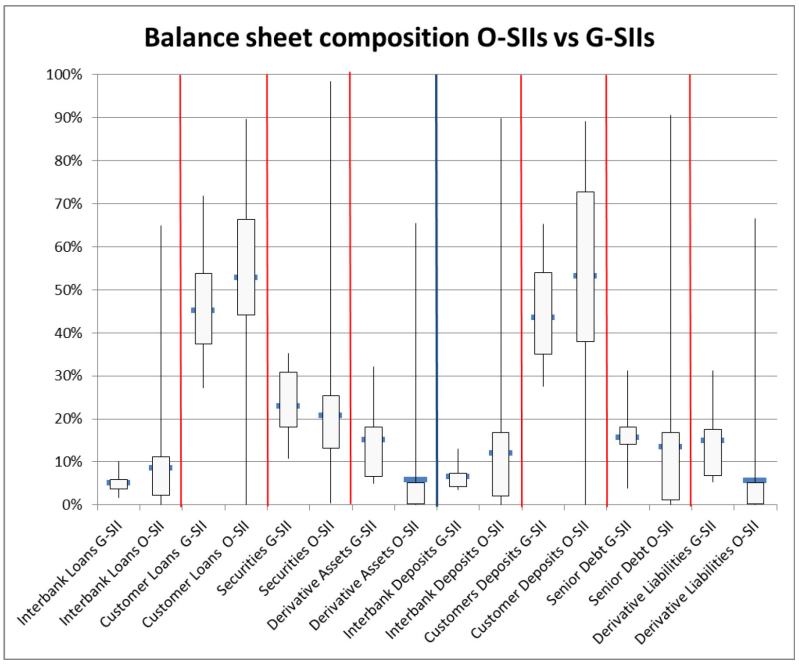


Source: The European Commission calculations based on SNL and Eurostat

Also in terms of business models and activities there is a large disparity between the different O-SIIs. In the figure bellow we split up both assets and liabilities of EU G-SIIs in four main activity categories (interbank, customer loans and deposits, derivatives and securities/senior debt). It can be observed that O-SIIs on average have on the one hand more interbank activities, more customer loans and deposits, on the other hand on average they have less derivative and securities activities. Senior debt levels are similar in both groups. Looking beyond the averages gives a good insight in the variety in business models. For each activity, there are O-SIIs which have more than 60% of their total balance sheet volume in this activity, but there are also O-SIIs which have no volume in it. This a consequence of the different types of banks which have been identified as O-SIIs ranging from retail savings banks, depositary banks, investment banks, captive banks, building societies, etc.

[135] Article 45(6) of the BRRD

Figure A10. Importance of selected liabilities for EU G-SIIs and EU O-SIIs



The figure shows, based on data for almost all EU-SIIs, for selected balance sheet components the minimum, maximum, interquartile range and average compared to total assets for respectively EU G-SIIs and EU O-SIIs

Source: The European Commission calculations based on SNL

Annex 3.14. Analysis of a leverage ratio requirement for different business models and exposure types

The EBA has assessed the impact of the leverage ratio for different levels of calibration for twelve different business models and found some differences in impact of the leverage ratio on certain business models, including public development banks. However, EBA's advice is that these differences are not so material that they would justify a differentiation in the calibration of the leverage ratio requirements. Hence the EBA advises on a single Tier 1 capital calibration for the leverage ratio for any institution irrespective of its business model.

A possible lower calibration for public sector lending by public development banks

As evidenced by the Call for Evidence some public development banks have to date a 1% leverage ratio. Normally public development banks are majority owned by the State or the public sector, are not for profit, do not take retail deposits and are subject to legal constraints on their lines of business which limits their possibilities to meet a leverage ratio requirement compared to other types of banks. The latter implies that public development banks have much less discretion to manage their balance sheet or income compared to universal banks that can freely choose their business model. The EBA recognises this special situation for public development banks in its report.

The EBA points out that it is difficult to provide a common European definition of public development banks given the broad diversity of types of public development banks. It may be difficult indeed to define public development banks and one should be wary of distorting competition through favourable prudential treatments and favourable treatments being considered State aid. However, there are common criteria that could define a public development bank. A public development banks is a credit institution that:

- is organised as a credit institution under public law;
- has a legally defined mandate defining the public policy objective of its business and defining the business areas in which it is allowed operate;
- operates on a not for profit basis;
- does not take deposits from retail clients.

Moreover, there is already a definition of promotional banks in the Commission delegated regulation (EU) 2015/63 on the ex-ante contribution to resolution financing arrangements.

In a context of enhancing economic growth and jobs creation, it seems contradictory to impose prudential requirements on public development banks through a leverage ratio that would increase the cost of public sector lending.

The leverage ratio requirement should therefore be adjusted by excluding from the leverage ratio exposure measure public development loans and pass-through promotional loans provided by public development banks set up by a Member State, central or regional government or municipality.

A possible higher calibration for G-SIIs (Globally Systemically Important Institutions)

If a bank is categorised as a G-SIB its CET1 risk sensitive capital requirement will increase depending on its degree of SIFI-ness. In order to maintain the same level of backstop of the leverage ratio for G-SIIs subject to higher risk sensitive capital requirements, the leverage ratio requirement would need to be increased in proportion to the additional G-SIB capital surcharges. The Basel Committee has not yet decided on possible leverage ratio surcharges for G-SIBs. The EBA has indicated in its report on the leverage ratio that it is carefully monitoring the possible G-SII surcharge in terms of design and calibration. At this point the outcome of the Basel Committee work on G-SII surcharges should be awaited and upon the Basel Committee adopting G-SIB surcharges should be decided whether the Basel G-SIB surcharges would be appropriate for European G-SIIs and whether these surcharges should be considered also for large O-SIIs (Other Systemically Important Institutions).

Several claims have been made in the Call for Evidence about undesired effects of a binding leverage ratio on other prudential or economic objectives. In particular claimants asserted (without providing further evidence on the impact) that the leverage ratio:

- would run counter the Liquidity Coverage Requirement objective of holding highly liquid assets as the leverage ratio would impose constraining capital requirements on these low risk weighted highly liquid assets;
- would undermine central clearing of derivatives by banks for clients due to not recognising segregated collateral for reducing the leverage ratio exposure measure including initial margins;
- would require holding more capital for trade finance exposures secured by Export Credit Agencies (ECAs);

Although the comments on the LCR interaction are understandable, the LCR and leverage ratio pursue different prudential objectives (liquidity and capital) which credit institutions have to meet in parallel. EBA concluded in its report that correlations between the LCR and the leverage ratio are very weak. Holding buffers on top of the prudential minimum requirements for a particular ratio, such as the LCR, is not necessarily accompanied by a low Leverage ratio. On the contrary, the EBA results give evidence that many institutions manage to hold significant buffers on top of all prudential requirements at the same time. The leverage ratio requirement should therefore not be adjusted for the interaction between the LCR and the leverage ratio.

Banks acting as clearing member have argued that if the leverage ratio requirement does not allow the initial cash margins received from clients and properly segregated from their own cash, to reduce the potential future exposure on the client leg of the centrally cleared client derivative transaction this would result in a disproportionate increase in capital requirements for this low margin business. This would adversely affect the provision of central clearing services to clients which is contrary to the G20 objective of promoting central clearing. The Basel Committee is currently considering this issue carefully and seeking further evidence on the potential impact of the Basel III leverage ratio on clearing members' business models during the consultation period. The leverage ratio should not adversely impact the provision or pricing of centrally cleared derivative transactions that credit institutions as a clearing member to a CCP (Central Clearing Party) offer to clients. From this perspective the Commission looks forward to the forthcoming Basel decision on the treatment of initial margins for inclusion in the CRR review.

Short term trade finance exposures such as letters of credit are often subject to higher capital charges than the implicit leverage ratio capital requirement of 35% or in case of off balance sheet trade finance positons subject to the same credit conversion factor and hence the leverage ratio would not be constraining compared to the risk weighted capital requirements. This is however different for export credits guaranteed by sovereigns or export credit agencies which receive a

considerably lower risk weight. In these instances the leverage ratio would be constraining capital requirement leading to higher capital charges. The leverage ratio would in any case affect the internal allocation of capital costs within banks to the specific business line of export credit and depending on the relative importance of export credit within the bank overall business impact the overall leverage ratio. (Albeit that since virtually all banks operate well above a 3% Tier 1 leverage ratio the inclusion of guaranteed export credits in the leverage ratio exposure measure will not necessarily create a sudden need for banks to raise capital or to deleverage.) However, export credits are important for jobs and growth and therefore guaranteed export credits need to be excluded from the leverage ratio exposure measure.

ANNEX 4. ESTIMATED IMPACT OF POLICY OPTIONS

On funding Risk

Comparison of the different policy options to provide a complementary stable funding requirement to capital and liquidity requirements

	Effectiveness	Efficiency
Option 1: No policy change	*n.a.*	*n.a.*
Option 2: A single NSFR requirement as per Basel for all banks	*(+) would be an internationally recognised credible stable funding measure for all EU banks* *(-) may disproportionally "hit" business models of banks that are outside the scope of the international Basel framework* *(-) may have a disproportionate impact on some specific activities*	*(+) since institutions have already to ensure that their long term obligations are adequately met with a diversity of stable funding instruments there is hardly incremental operational cost to determine the requirement*
Option 3: A single NSFR requirement as per Basel with some adjustments for all credit banks	*(+) could allow taking into account some European specificities* *(+) could help to alleviate the unintended consequences of the NSFR on some specific activities* *(-) difficult to define these specific activities and an appropriate calibration*	*(+) less operational cost if adjustments to the NSFR are closer to the economic reality of the operations* *(-) uncertainties linked to the potential different calibration of the European NSFR*

	Impact on stakeholders
Option 1 (no policy changes)	*n.a.*
Option 2 (A single NSFR requirement as per Basel for all banks)	*(+/-) Improves the stability of funding of **banks'** activities on an ongoing structural basis and reduces the maturity mismatches but can disproportionately impact some specific activities that are not adequately recognised by the Basel standard.* *(-) **Banks having a low funding risk profile** on the one hand benefit from a further improvement in the stability of their funding but, on the other hand, the adjustment costs that they face are disproportionate compared to the marginal benefits.* *(+) **Supervisors** gain an additional instrument to monitor and limit the ongoing, structural dimension of funding risk that was not properly captured so far.* *(+) **Companies and households** benefit from this requirement as more stable*

	Impact on stakeholders
	funding sources increase banks' resilience at times of funding stress, reducing the likelihood of systemic stress with adverse macroeconomic consequences, and enhancing the ability of banks to continue lending in a challenging liquidity environment.
Option 3 (A single NSFR requirement as per Basel with some adjustments for all banks)	*(++) Improves the stability of funding of **banks'** activities on an ongoing structural basis and reduces the maturity mismatches, while preserving the ability to run activities that would be disproportionately impacted, as not adequately recognised, by the introduction of the Basel standard.* *(+/-) **Banks having a low funding risk profile** on the one hand benefit from a further improvement in the stability of their funding but, on the other hand, the adjustment costs that they face are disproportionate compared to the marginal benefits if the adjustments to the Basel standard do not take enough account of their specific business models.* *(+) **Supervisors** gain an additional instrument to monitor and limit the ongoing, structural dimension of funding risk that was not properly captured so far. Adjustments applicable to all institutions are unlikely to have a significant impact on supervisory work.* *(++) **Companies and households** benefit from this requirement as more stable funding sources increase banks' resilience at times of funding stress as described in option 2. Moreover, the adjustments to the Basel NSFR standard prevent a negative impact on the financing of the economy in the activities that would otherwise be disproportionately affected.*

On leverage ratio

	Effectiveness			Efficiency
Option 1 (baseline)	*n.a.*			*n.a.*
Option 2 A single leverage ratio requirement as per Basel for all institutions	*(+) would act as a backstop to model risks and the build-up of excessive leverage* *(-) one size fits all implies that the leverage ratio is more constraining on institutions with low risk business models*			*(+) same measure and method of calculation applies to all banks* *(+) common backstop irrespective of the type of business model*
Option 3 A leverage ratio requirement differentiated for business models or adjusted for	*(+)Would not have disproportionate effects on low risk business models* *(+) would prevent undesirable impact on other prudential policy*	*(+)Would not have disproportionate effects on low risk business models* *(+) would prevent undesirable impact on other prudential policy*	*(+)Would not have disproportionate effects on low risk business models* *(+) would prevent undesirable impact on other prudential policy*	*(-)users of leverage ratio information would need to take into account varying calibrations of the leverage ratio* *(-) definition of*

		Effectiveness		Efficiency
exposure types	*objectives such as the LCR, or central clearing or specific types of lending (public sector , .* *(-)potentially reduces the backstop function of the leverage ratio*	*objectives such as the LCR, or central clearing or specific types of lending (public sector , .* *(-)potentially reduces the backstop function of the leverage ratio*	*objectives such as the LCR, or central clearing or specific types of lending (public sector , .* *(-)potentially reduces the backstop function of the leverage ratio*	*business models would need to be developed* *(-) makes the calculation of the leverage ratio slightly more complex* *(-) would create a divergence from the international agreed leverage ratio*

	Impact on stakeholders
Option 1 (no policy changes)	*n.a.*
Option 2 (A single leverage ratio requirement as per for all institutions)	*(+) Improves the financial stability of **banks'** due to underestimating risks in particular during economic upswings* *(-) **Banks** with low risk weighted business models may be disproportionally affected by a one size fits all leverage ratio requirement* *(+) **Supervisors** will have an additional minimum benchmark for assessing risk of excessive leverage of institutions during their supervisory review process.* *(+) **Companies and households** benefit through enhanced financial stability of the banking system* *(-) for some **companies** loans and other services provided by institutions may become more expensive due to capiadditonal capital charges stemming from the leverage ratio.*
Option 3 A leverage ratio requirement differentiated per business model or exposure type	*(+) Would prevent creating disproportionate effects from the leverage ratio requirement for **banks** with low risk weighted business models due to enhanced risk sensitivity of the leverage ratio.* *(-) would water down the main feature of the leverage ratio for **banks** as a non-risk based back-stop to risk sensitive capital requirements* *(-) **Supervisors** have to deal with differently calibrated leverage ratios which lessen supervisory effectiveness due to reduced comparability of the leverage ratio of supervised entities* *(+) **Companies and households** would benefit from enhanced financial stability without unnecessarily increasing costs for banking business that have a truly low risk character.* *(-) comparing leverage ratios across banks would become more complex for **investors***

	Impact on stakeholders
Option 4 (A leverage ratio adjusted to prevent undermining other policy objectives	*(+/-) Improves the financial stability of **banks'** due to risk of excessive leverage albeit to a lesser extent than under option 2 and 3 because more adjustments to the leverage ratio would be made.* *(+) The leverage ratio requirement as a prudential measure would not have unintended or unwanted adverse impacts on other prudential objectives or jobs and growth policy objectives to the benefit of **companies and households.*** *(--) **Supervisors** have to deal with differently calibrated leverage ratios and adjusted leverage ratio exposure measures which lessen supervisory effectiveness due to reduced comparability of the leverage ratio of supervised entities* *(+) **Companies and households** would benefit from enhanced financial stability without unnecessarily increasing costs of for banking business that have a truly low risk character.* *(-) comparing leverage ratios across banks would become more complex for **investors***

On SME exposures

Comparison of the impact of policy options on stakeholders

			Impact on stakeholders
Option 1 (no policy changes)	*n.a.*		
Option 2 Alignment with the Basel rules	*(-) **Banks using standardised approach for SME exposures** would be worse off. While on average the change is only 0.16% difference in the capital ratios, there is a high variation among individual banks. The effect could be partially offset by the new Basel Standardised Approach, which is currently being revised, as BCBS intends to reduce exposures to SME loans from the 100% to 85%.* *(– –) **Banks using internal ratings-based approach for SME exposures** would be worse off. While on average the change is only 0.16% difference in the capital ratios, there is a high variation among individual banks. Moreover, currently BCBS does not foresee any change to the internal ratings-based approach.* *(–/≈) **Companies and households** might be affected by the additional funding constraints by banks, particularly from the most capital constraint banks.* *(≈) Some **regulators/supervisors** might see the benefit of aligning risk weight calibration with the Basel rules, while others might be concerned by moving back to Basel rules which could go against the evidence seen on the actual riskiness of SME loans in the EU.*		
Option 3 Introducing additional capital reduction for SME	*(+) **Banks using SA and IRBA.** Both banks using SA and IRBA would be better off as they would obtain additional capital relief and thus would have incentives to provide more financing to the economy and, in particular, SMEs.* *(+/≈)**Companies and households.** They might benefit, in terms of both volume and price,*		

			Impact on stakeholders
exposures above €1.5 million	*from increased incentives for banks, particularly the most capital-constraint banks, to provide additional financing of the economy,* *(≈) Some **regulators/supervisors** might be concerned by moving back to Basel rules which could go against the evidence seen on the actual riskiness of SME loans in the EU, while others might see the benefit of aligning risk weight calibration with the Basel rules.*		

On loss absorption and recapitalisation capacity

		Effectiveness	Efficiency
Option 1: No policy change		*n.a.*	*n.a.*
Option 2: Integrate TLAC standard in MREL for EU G-SIIs		*(+) Enhances global financial stability by promoting implementation of framework for bail-inable liabilities across jurisdictions* *(+) Enhances level playing field and enhances clarity* *(-) Depending on calibration of MREL, this could represent an additional funding cost for banks*	*(+) Common backstop for all G-SIIs* *(+) Clarity on applicable regulatory framework*
Option 3: Integrate TLAC standard in MREL for EU G-SIIs and O-SIIs		*(+) Enhances global financial stability by promoting implementation of framework for bail-inable liabilities across jurisdictions* *(+)Enhances level playing field and enhances clarity* *(-)Disproportionate to impose specific G-SII standards to O-SIIs and additional funding cost impact compared to option 2*	*(+) Common backstop for all SIIs* *(+) Clarity on applicable regulatory framework* *(-)Would be disproportionate for a large number of banks as TLAC standard developed for G-SIIs and minimum calibration might overshoot actual needs based on resolution strategy*

Stakeholder / Policy option	**Banks**	**Bank debt- and shareholders**	**Supervisors**	**Companies and households**

Option 1: No policy change	0	0	*0*	*0*
Option 2: Integrate TLAC standard in MREL for EU G-SIIs	+	+	+	+/-
Option 3: Integrate TLAC standard in MREL for EU G-SIIs and O-SIIs	+/-	+	+	+/-

	Impact on stakeholders
Option 1 (no policy changes)	*n.a.*
Option 2 (Integrate TLAC standard in MREL for EU G-SIIs)	*(+) Improves the financial stability of **banks'** due to increased loss absorption and recapitalisation capacity in the global banking system and avoids overlaps in regulation between EU MREL and international TLAC* *(+)Provides increased clarity for b**ank debt- and shareholders** on the order in which instruments could be bailed in* *(+) **Supervisors** will have a minimum benchmark to set loss absorption and recapitalisation capacity* *(+/-) **Companies and households** benefit through enhanced financial stability of the global banking system but loans and other services provided by institutions may become more expensive due to increased funding costs.*
Option 3 (Integrate TLAC standard in MREL for EU G-SIIs and O-SIIs)	*(+/-)As under option 2 banks' benefit from increased financial stability in the global banking system but for O-SIIs this could have disproportionate effects* *(+)Provides increased clarity for b**ank debt- and shareholders** on the order in which instruments could be bailed in* *(+) **Supervisors** will have a minimum benchmark to set loss absorption and recapitalisation capacity.* *(+/-) **Companies and households** benefit through enhanced financial stability of the banking system but loans and other services provided by institutions may become even more expensive compared to option 2 due to a further increase in funding costs stemming from the disproportionate impact on O-SIIs.*

On remuneration

Problem 1

	Impact on stakeholders
Option 1: No policy change	*n.a.*
Option 2: Allow Member States or supervisory authorities to exempt some institutions and staff from the rules on deferral and pay-out in instruments	(+) *Positive effect on **Regulators / supervisory authorities**, as the level of supervision would be tailored to the riskiness of institutions and staff; some Regulators / supervisory authorities may find it an advantage that they could fix their own exemption criteria and thresholds* (+) *Positive effect on **Institutions and Employees**, as the rules would be more proportionate* (?)*Uncertain effect on **Taxpayers / Consumers**, as the effectiveness of the future different national criteria for exemptions in terms of coverage of the prudentially-relevant entities and staff cannot be assessed*
Option 3: Exempt small and non-complex institutions and staff with low variable remuneration from the rules on deferral and pay-out in instruments, based on harmonised exemption criteria defined at EU level	(+) *Positive effect on **Regulators / supervisory authorities**, as the level of supervision would be tailored to the riskiness of institutions and staff; some Regulators / supervisory authorities may prefer that the exemption criteria and thresholds be established at EU level* (++) *Very positive impact on **Institutions**, as the rules would be more proportionate and also uniform across the EU* (+) *Positive effect on **Employees**, as the rules would be more proportionate* (≈) *Neutral effect on **Taxpayers / Consumers**, as the prudentially-relevant entities and staff will continue to be covered*

Regulators / supervisory authorities

Under **Option 1** (baseline), regulators / supervisory authorities are not in a position to allow for a proportionate application of the rules on deferral and pay-out in instruments, in the sense of going below or dis-applying the *de minimis* thresholds of the Directive. This lack of flexibility would put them in a position whereby they would need to enforce requirements vis-à-vis institutions and staff where this might not be warranted from a prudential supervision perspective.

Options 2 and 3 are positively assessed, as they would bring about a level of supervision better tailored to the prudential riskiness of those supervised (institutions and staff). Regulators / supervisory authorities may find it an advantage that under **Option 2** they could fix their own exemption criteria and thresholds. Others could, however, see an added value in having the exemption criteria defined at EU level as proposed under **Option 3**, in particular when these EU harmonised exemption criteria would be combined with a possibility for supervisory authorities to adopt a stricter approach.

Institutions / Shareholders

Under **Option 1** (the current CRD IV provisions), institutions are required to comply with the deferral and pay-out in instruments requirements in a manner which for some of them triggers costs/burden disproportionate when compared to the prudential benefits.

Options 2 and 3 are positively assessed from an institutions' perspective, as they would bring about a higher level of proportionality and a reduction in the institutions' compliance burden. Under **Options 2 and 3**, small and non-complex institutions would still need to ensure that their remuneration practices do not have a negative impact on their long term interest and sound risk management. However, they would have more flexibility when setting their remuneration schemes and practices, thereby potentially benefiting from one-off and on-going savings on the costs, currently estimated to range from € 50 000 to € 500 000. Also large institutions would benefit from savings on costs currently estimated between € 400 000 and € 5 million with regard to staff with non-material levels of variable remuneration.

Under **Option 2**, different national exemption regimes would exist, thereby potentially creating regulatory complexity and unwarranted compliance costs for cross-border activities. **Option 3,** is in principle not associated with such risks and therefore is assessed as strongly positive.

Employees

Under **Option 1** (baseline), all Identified Staff need to comply with the deferral and pay-out in instruments requirements, regardless of their level of variable remuneration and the incentives for excessive risk-taking this may or may not entail. As a result, in cases of staff with low levels of variable remuneration, there can be instances of perceived decrease of the overall value of remuneration (because of its deferral in time and its pay-out in instruments, as opposed to cash), and resulting from this detrimental motivational effects, without this being associated with clear prudential benefits.

Options 2 and 3 would ensure an application of the remuneration rules that is proportionate given the rather limited prudential usefulness of deferral and pay-out in instruments in the case of these staff with low levels of individual variable remuneration. **Option 3** has the advantage of ensuring that staff with low levels of remuneration is in principle subject to equal treatment across the EU.

Tax payers / Consumers

Option 1 (current CRD IV provisions), by requiring institutions and their Identified Staff to comply with certain remuneration rules, contributes to enhancing risk management through remuneration policies and thus contributes to fostering financial stability to the benefit of tax-payers / consumers.

The impact of **Option 2** is uncertain, as the effectiveness of the future different national criteria for exemptions in terms of coverage of the prudentially-relevant entities and staff cannot be assessed.

Option 3 is expected to also preserve the interests of tax-payers and consumers, by ensuring that all the prudentially-relevant (potentially risky) institutions and staff will continue to be subject to the rules. They are therefore assessed as having a neutral effect on tax-payers / consumers compared to the baseline scenario.

Problem 2

	Impact on stakeholders
Option 1: No policy change	*n.a.*
Option 2: Allow listed institutions to use share-linked instruments in addition or instead of shares in fulfilment of the requirement under Article 94(1)(l)(i) CRD IV	(≈) *Neutral impact on Regulators / supervisory authorities, as the extent of supervision stays the same* (++) *Very positive effect on Institutions, as listed firms will be allowed to reach the same prudential results through the less costly means of using share-linked instruments instead of or in addition to shares; moreover, shareholders will no longer be faced with shareholdings dilutions each time shares are issued for remuneration purposes* (+) *Positive impact on Employees through greater flexibility induced by share-linked instruments (e.g. Employees no longer faced with potential insider trading problems when selling their shares)* (≈) *Neutral impact on Taxpayers / Consumers, as the prudential objectives of the rule will be met to the same extent*

Regulators / supervisory authorities

Under **Option 1**, regulators / supervisory authorities would not be in a position to allow listed institutions a proportionate application of the rule on pay-out in shares.

Option 2 is assessed as having a neutral effect on regulators / supervisory authorities, as the extent of supervision and the risk profile of supervised entities would not change compared to the current situation.

Institutions / Shareholders

Under **Option 1** (current CRD IV provisions), listed institutions are required to comply with the pay-out in instruments requirement by means of shares only. This triggers difficulties and administrative burden for the institution and its shareholders. Institutions would need to either create new shares or purchase them in the market. Both are complex processes.

Existing shareholders can be confronted with a dilution of their rights. The staff members that receive shares can be confronted with problems of insider trading (e.g. problems with selling shares received as remuneration).

Under **Option 2**, allowing listed institutions to use share-linked instruments in addition to or instead of shares in fulfilment of the requirement under Article 94(1)(l)(i) CRD IV would reduce compliance cost and administrative burden for these institutions. Moreover, **Option 2** is positively assessed from the shareholders' perspective, as it prevents the dilution of shareholdings and the disruption of shareholding structures through repeated awards of shares for remuneration purposes.

Employees

Under **Option 1**, all Identified Staff of listed institutions would receive part of their variable remuneration in shares. Depending on their role in the institution, they might be confronted with insider dealing problems if trying to sell these shares. This method of paying out variable remuneration might not be the most flexible/convenient from the employees' perspective, and might lead to a perceived deterioration in the overall value of remuneration and/or detrimental motivational effects.

Option 2 would allow Identified Staff to be remunerated in share-linked instruments in addition to or instead of shares. This would provide staff with more flexibility in benefitting from the awarded instruments (for instance by avoiding a potential situation in which staff may not be able to sell the shares after the retention period because of insider dealing concerns).

Tax payers / Consumers

Option 1, by requiring listed institutions to pay part of their variable remuneration in shares, contributes to enhancing risk management through remuneration policies and thus contributes to fostering financial stability to the benefit of tax-payers / consumers.

Option 2 is expected to preserve the interests of tax-payers and consumers, as the prudential objectives of the pay-out in instruments requirement are reached to the same extent through pay-out in shares as they are through pay-out in share-linked instruments.

ANNEX 5. BACKGROUND TO CUMULATIVE IMPACT ASSESSMENT

Annex 5.1. Estimation of costs of FRTB and LR using the QUEST model

Introduction

Table A11. Regulatory measures and their impact on bank capital requirements.

		Policies	
	Baseline	FRTB only (change in RWA calculation method)	FRTB + Leverage Ratio (at 3% Total Assets)
Average capitalization as a share of RWA	10.50%	10.77%	11.17%
average absolute variation in PP wrt baseline (share of RWA)		0.27	0.67
Average capitalization as a share of TA	3.81%		4.05%
average absolute variation in PP wrt baseline (share of TA)			0.24

Source: Commission calculations

The QUEST model is well suited to assess the costs of regulatory constraints but is less developed to also assess the benefits. For this purpose the model would need to be extended to

allow for a better modelling of how regulation affects risk taking by banks. By taking into account the risk taking channel the model could also be used to assess how regulations affect the probability of the economy being hit by large negative shocks (financial crises). The model can still be used to look at the cost of regulation in normal times. The major effect of regulation which is captured by the model is the impact of bank funding costs which are then transmitted onto lending rates and increase capital costs for non-financial firms with negative effects on their investment. There is a cost effect because an increase in capital requirements shifts funding from deposits to bank capital and the cost of capital for banks is larger than the cost on deposits.

The size of this cost effect from changing the financing structure of banks is, however, not undisputed among economists. For example Admati and Hellwig (2012)[136] argue that because of the change in the composition of liabilities of the bank does not fundamentally change the riskiness of lending a larger share of bank capital should reduce the risk premium since the total risk of the bank is now borne by a larger equity base. This argument is based on the Modigliani Miller (MM)[137] theorem. However, others argue that MM does not apply for banks because of an implicit bail out subsidy. Therefore increasing the capital base is shifting the risk from the public to shareholders. Assessments of bank regulations carried out by the BIS (BIS (2010a[138], 2010b[139], 2010c[140]) follow this argument and they assume that there is no offsetting effect on risk premium. There are also many micro banking studies who look at this effect. They usually come to the result that there is at least a partial reduction of the risk premium on capital if capital requirements are increased (see, for example, Miles et al. (2013) and Kashyap et al. (2010)). The relatively detailed study by Miles et al. suggests that the risk premium effect is such that it offsets about 50% of the increase in funding costs compared to a situation where the equity premium is kept unchanged.

To calibrate the key features of the model the following assumption have been made: the ratio of loans to GDP is set at 108%; the ratio of bonds to loans is set at 28%; the ratio of bank capital to total assets (leverage ratio) is set at 3.81% and the ratio of bank capital to risk-weighted assets at 10.5%. In the simulations shown below, the combined effect of the change in FRTB and leverage is presented. We consider two scenarios. In the first scenario it is assumed that the equity premium of bank capital remains unchanged and in the second scenario we present results where the equity premium is reduced in such a way that the funding cost increase under the first scenario is halved. Notice, under the first hypothesis discussed above, namely that MM holds fully, there would be no macroeconomic cost associated with an increase in capital requirements. In principle the macroeconomic effects from changes in RWA and changes in TA should be very similar, since the change in the two ratios represents identical policy measures which are only expressed in a different metric. We have conducted the policy experiment both w. r. t a change in RWA and a change in TA but in the note we only report results related to the RWA experiment, which gives a slightly larger cost estimate in terms of GDP.

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136 Admati, A., DeMarzo, P., Hellwig, M. and Pfleiderer, P. (2010). "Fallacies, irrelevant facts, and myths in capital regulation: why bank equity is not expensive". Stanford University Working Paper no. 86.

137 Modigliani, F. and Miller, M. (1958). "The cost of capital, corporation finance and the theory of investment", American Economic Review, vol. 48(3), pp. 261-97.

138 BIS (2010a). "An assessment of the long-term economic impact of stronger capital and liquidity requirements", Basel Committee on Banking Supervision, Bank for International Settlements.

139 BIS (2010b). "Assessing the macroeconomic impact of the transition to stronger capital and liquidity requirements", Basel Committee on Banking Supervision, Bank for International Settlements.

140 BIS (2010c). "Results of the comprehensive quantitative impact study", Basel Committee on Banking Supervision, Bank for International Settlements.

Scenario 1: Increase in capital requirements with constant equity premium on bank capital

The regulation induces banks to increase capital relative to deposits. This has two opposing effects on funding costs. Shifting to bank capital and paying an equity premium, increases funding costs, while lowering the demand for deposits reduces the deposit rate, which lowers funding cost. The latter effect is, however, extremely small, this applies especially in the current juncture with effectively zero deposit rates, thus the first effect dominates. Optimising banks shift the higher funding costs onto the non-financial private sector in the form of higher loan rates. This increases capital costs for firms which partly finance their investment with loans. Consequently the cost of the regulatory measures affect the real economy via reduced investment. Since capital costs are permanently increased the economy moves to a lower capital output ratio and a permanently lower (relative to the baseline) level of GDP. As shown in Table A12, higher capital requirements in terms of risk weighted assets of 0.67pp reduces the level of GDP in the long run by 0.06%. This effect is mostly generated by a decline of investment, which is reduced by 0.15%. GDP falls less than investment (capital) in the long run since long run employment levels are hardly affected. This is due to the fact that real wages are adjusted downward (relative to the baseline) because of the decline in productivity associated with a fall in capital, this wage behaviour stabilises employment.

Table A12. Increase in ratio of bank capital-to-risk-weighted assets (FRTB+leverage, 0.67pp)

	2014	**2015**	**2016**	**2017**	**2020**	**2030**	**2050**	**2150**
Y	-0.02	-0.01	-0.01	-0.02	-0.02	-0.04	-0.06	-0.06
I	-0.14	-0.19	-0.2	-0.2	-0.2	-0.17	-0.16	-0.15
C	0.01	0.03	0.03	0.02	0.01	-0.02	-0.05	-0.06
LO	-0.04	-0.07	-0.07	-0.07	-0.08	-0.11	-0.14	-0.15
L	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
RLO	2.71	0.59	3.72	2.91	2.61	2.64	2.69	2.71

Note: Y: GDP, I: Investment, C: Consumption, LO: Stock of loans, RLO: Loan rate, L: employment.
Y, C, I, LO, L are % deviations from baseline levels. RLO is the deviation from the baseline level in BP.

In the simulation experiment where the capital requirement in terms of total assets is increased by 0.24pp yields a long term GDP effect of -0.05%.

Table A13. Increase in ratio of bank capital-to-risk-weighted assets (FRTB+leverage, 0.67pp) (with 50% MM offset)

	2014	**2015**	**2016**	**2017**	**2020**	**2030**	**2050**	**2150**
Y	-0.01	-0.01	-0.01	-0.01	-0.01	-0.02	-0.03	-0.03
I	-0.07	-0.1	-0.1	-0.1	-0.1	-0.09	-0.08	-0.08
C	0.01	0.02	0.02	0.01	0.01	-0.01	-0.02	-0.03
LO	-0.02	-0.04	-0.04	-0.03	-0.04	-0.06	-0.07	-0.08
L	-0.01	-0.01	0	-0.01	0	0	0	0
RLO	1.37	0.3	1.89	1.48	1.33	1.34	1.36	1.38

Note: Y: GDP, I: Investment, C: Consumption, LO: Stock of loans, RLO: Loan rate, L: employment.
Y, C, I, LO, L are % deviations from baseline levels. RLO is the deviation from the baseline level in BP.

Annex 5.2. Estimation of benefits of FRTB and LR using the SYMBOL model

This report is an assessment of the effects of the implementation of the fundamental review of the trading book (FRTB, henceforth) as envisaged by CRR 2 proposals and of requirements on leverage ratio (LR, henceforth). This analysis includes the following steps:

1. Estimation of average risk-weights for trading activities and non-trading activities. This analysis grounds on a panel regression methodology already developed for the impact assessment of bank structural separation.
2. Estimation of impacts of the FRTB on RWAs for banks based on expected changes to risk-weights (the median impact estimated by the EBA is used as input).
3. RWAs estimated as per points 1 and 2 are used as inputs to run simulations of bank losses through the SYMBOL model.

We aim to estimate the potential benefits for public finances of implementing:

1. the new rules established by the FRTB
2. the new binding requirements concerning LR.

Benefits for public finances are measured as a decrease in the potential costs due to bank defaults and recapitalization needs that would remain uncovered by the available tools setup in the EU legislation, thus potentially hitting Public Finances.

Section 1 - Panel analysis to estimate risk weighted assets for trading activities and non-trading activities

In this section, we provide the description of the dataset and the empirical application in order to estimate risk weighted assets. This panel regression analysis builds on a work developed for the impact assessment of bank structural separation.

Dataset

In order to predict individual banks' RWAs, we identify 9 categories of assets and liabilities, summarised in Table A14.

Table A14. List of assets and liabilities included in the preferred model to estimate RWAs

Short name	Description
LB	Net loans to banks
NCL	Net loans to customers
AMZ	Total assets held at amortised cost excluding loans to banks and customers held at amortised cost
HTM	Securities held to maturity
AFS	Available for sale assets excluding loans
FV	Assets held at fair value excluding loans
TSA + TSL	Securities held for trading excl. derivatives (volume in assets and liabilities side)
DA+DL	Derivatives held for trading (volume in assets and liabilities side)
DHV	Derivatives held for hedging purposes (volume in assets and liabilities side)

Empirical results

$$\begin{aligned} RW_{i,t} = \alpha_i &+ \beta_1 LB_{i,t} + \beta_2 NCL_{i,t} + \beta_3 AMZ_{i,t} + \beta_4 HTM_{i,t} + \beta_5 AFS_{i,t} + \beta_6\, FV_{i,t} \\ &+ \beta_7\, 0.5\left(TSA_{i,t} + TSL_{i,t}\right) \\ &+ \beta_8\, 0.5\left(TSA_{i,t} + TSL_{i,t}\right) d_t^{B3} + \beta_9\, 0.5\left(DA_{i,t} + DL_{i,t}\right) \\ &+ \beta_{10}\, 0.5\left(DA_{i,t} + DL_{i,t}\right) d_t^{B3} + \beta_{11} DHV_{i,t} + \sum_{j=1}^{8} \gamma_j d_{t,j}^{year} + u_{i,t}, \end{aligned} \quad (1)$$

where $d_t^{B3} = \begin{cases} 1 & if\ year = 2014 \\ 0 & otherwise \end{cases}$ is the dummy variable that represents the entry into force of Basel III, and $d_{t,j}^{year}$ are dummy variables for time-fixed effects. We estimate the model by running a fixed-effect regression and we build standard errors through a robust clustered variance estimator on the 194 banks. Table **A15**A15 reports estimated coefficients of Equation (1) from panel regression of RWAs on the categories of assets listed in Table A1A14. The coefficients for net loans to banks and customers, and the total assets held at amortised cost are positive and statistically significant (i.e., p-value are less than 1%). The estimated coefficients $\hat{\beta}_4$ and $\hat{\beta}_6$ for the securities held to maturity, and for assets held at a fair value, have a positive effect on RWA but they are not significant at a statistical significant level of 10%. As expected by the economic theory, the available for sale assets are positive. We observe that the estimated coefficient for the volume of trading assets gets a positive small value: it decreases from 14% to 3% when we introduce the interaction with the dummy variable for Basel III. However, this estimate is not significant. The volume of derivatives for trading is always positive and significant. Finally, the coefficient for the derivatives held for hedging indicates a negative relation w.r.t. the RWA.

In order to save space, the estimates for the dummies $d_{t,j}^{year}$, with $j = 1, \ldots, 8$, are not reported. The estimated coefficients $\hat{\gamma}_j$ are all statistically significant at a level of 10%. (Results are available on request). In table A15, the coefficient of determination R-squared is also reported.

Since the dependent variable RWA is built on the balance sheet values, R-squared of regression (1) is very high.

Table A15. Coefficients from the panel regression, P-values are reported in parentheses and *, **, *** denote significance at 10, 5 and 1 percent significance level, respectively. Moreover, $^{+}$ denote significance at 20 percent.

	Eq. (1)
LB	0.3378***
	(0.001)
NCL	0.4409***
	(0.000)
AMZ	0.5022***
	(0.000)
HTM	0.4640
	(0.355)
AFS	0.1649*
	(0.084)
FV	0.1426^{+}
	(0.113)
0.5 * (TSA + TSL)	0.1369^{+}
	(0.161)
0.5 * (TSA + TSL) * d^{B3}	0.0348
	(0.684)
0.5 * (DA + DL)	0.0670***
	(0.001)
0.5 * (DA + DL) * d^{B3}	0.1184***
	(0.005)
DHV	-1.292***
	(0.000)
Number of obs	1.462
Number of groups	194
R-squared:	
within	0.6760
between	0.9590
overall	0.9491

Considering a significance level of at least 20 percent, the coefficients of $HTM_{i,t}$ and $\left(TSA_{i,t} + TSL_{i,t}\right) d_t^{B3}$ can be dropped. Thus, let us consider the following hypothesis: H_0: $\beta_4 = \beta_8 = 0$, the constrained model used to predict RWAs is:

$$RW_{i,t} = \alpha_i + \beta_1 LB_{i,t} + \beta_2 NCL_{i,t} + \beta_3 AMZ_{i,t} + \beta_5 AFS_{i,t} + \beta_6\, FV_{i,t} + \beta_7\, 0.5\left(TSA_{i,t} + TSL_{i,t}\right) + \beta_9\, 0.5\left(DA_{i,t} + DL_{i,t}\right) + \beta_{10}\, 0.5\left(DA_{i,t} + DL_{i,t}\right) d_t^{B3} + \beta_{11} DHV_{i,t} + \sum_{j=1}^{8} \gamma_j\, d_{t,j}^{year} + u_{i,t}. \quad (2)$$

Model (2) is nested within model (1). That is, model (2) has a smaller number of parameters than (1). We compute the F-test in order to ensure that the model (2) fit to the data. We test the null hypothesis H_0: $\beta_4 = \beta_8 = 0$, and we do not reject it. The

estimation results from regressions (2) and (1) are very similar. Models (1) and (2) fit in a similar way the data.

Estimation of trading activities RWA and non-trading activities RWA

This step of the analysis builds on the results of the panel regression to estimate the portion of RWA that can be affected by the FRTB (proxied by "market risk RWA"). To this end, each category of assets is attributed to one of the two lines of activities (i.e. trading and all the rest) and RWAs of each activity are predicted according to the relevant coefficients obtained in the econometric model.

Table A16. Allocation of assets and liabilities categories to trading and non-trading activities

Short name	Category	Approach for RWA allocation
LB	Net loans to banks	non-trading
NCL	Net loans to customers	non-trading
AMZ	Total assets held at amortised cost excl. loans to banks and customers held at amortised cost	non-trading
HTM	Securities held to maturity	non-trading
AFS	Available for sale assets excluding loans	non-trading
FV	Assets held at fair value excl. loans	non-trading
TSA + TSL	Securities held for trading excl. derivatives (assets & liabilities)	trading
DA+DL	Derivatives held for trading (assets & liabilities)	trading
DHV	Derivatives held for hedging purposes (assets & liabilities)	Proportional allocation

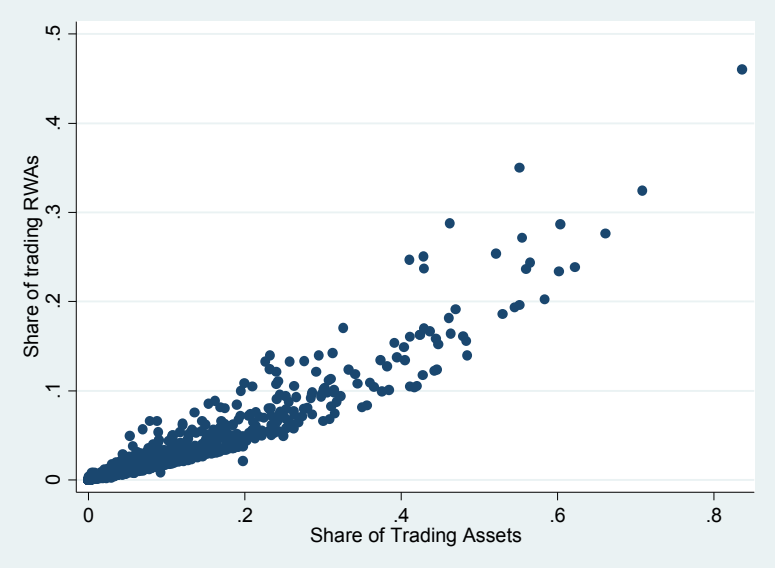
Predicted trading and non-trading RWAs are calculated for each bank and are then re-normalised to sum up to the total RWAs as reported in balance sheet.

Results

As shown in Figure 1, the scatterplot shows an increasing relationship between the dimension of trading assets (X-axis) and the related RWAs (Y-axis). Moreover, the share of trading RWAs ranges from 0 to 10%/15% of total RWSs for most of the institutions analysed, and only few of them present higher shares, from 15% to around 40%. Figure A12 complements this information: the vast majority of small and medium size banks have a share of trading RWAs below 5%, while large banks are the ones most involved in trading activities. It can also be observed that the share of trading RWAs is in general quite steady over time, with the exception of 2014 where it seems to be increased, especially for the banks in the sample (this is probably due to the increased coefficient for 2014 wrt the previous years, which is confirmed by alternative model specifications). Figure A13 focuses on the 2014 by showing the frequency distribution of the share of trading RWAs. The histograms confirms that the distribution is very skewed: most of the considered sample has a share below 5% and only few outliers present a share of trading RWAs that spans from 10% to 35%.

These results are in line with the composition of RWAs reported by the EBA in the "CRD IV–CRR/Basel III monitoring exercise report".[141] The EBA splits total RWA into 5 components: credit risk (attributable to non-trading activities), CVA (trading activities), market risk (trading activities), operational risk (that can be proportionally attributed to trading and non-trading activities) and other RWA. In 2014 the sum of market risk, CVA and the share of operational risk is around 10% for group 1 banks (roughly 4% for group 1 banks). This number is consistent with the average share of trading RWA as estimated by our model for the large banks (13%) and for medium/small banks (around 3%).

Figure A11. Scatter plot of estimated share of trading assets and estimated share of trading risk weights (2006-2014).



[141] https://www.eba.europa.eu/documents/10180/950548/CRD+IV++CRR+-+Basel+III+monitoring+exercise+report.pdf/f414a01e-4f17-4061-9b88-4e7fb89cc355

In particular, see figure 7

Figure A12. Box plots of share of trading RWAs by groups of institutions: small (total assets below 30 bn €), medium (total assets from 30 to 500 bn €) and large (total assets above 30 bn €). One box-plots for each year from 2006 to 2014.

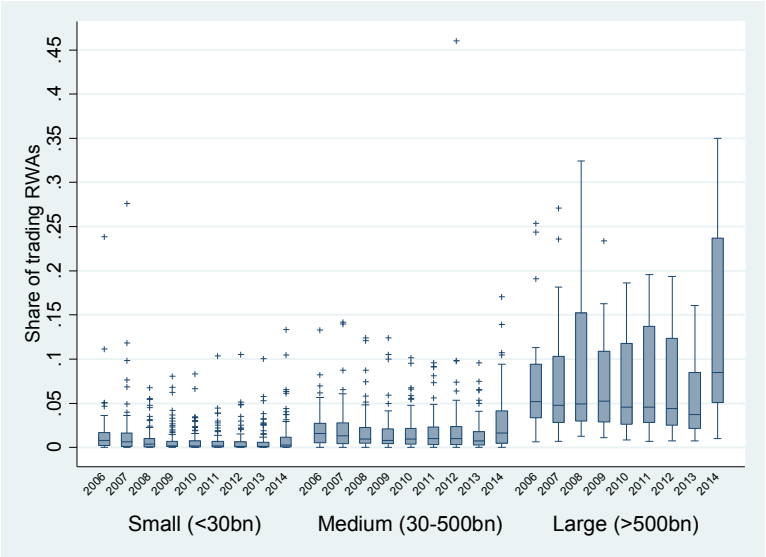
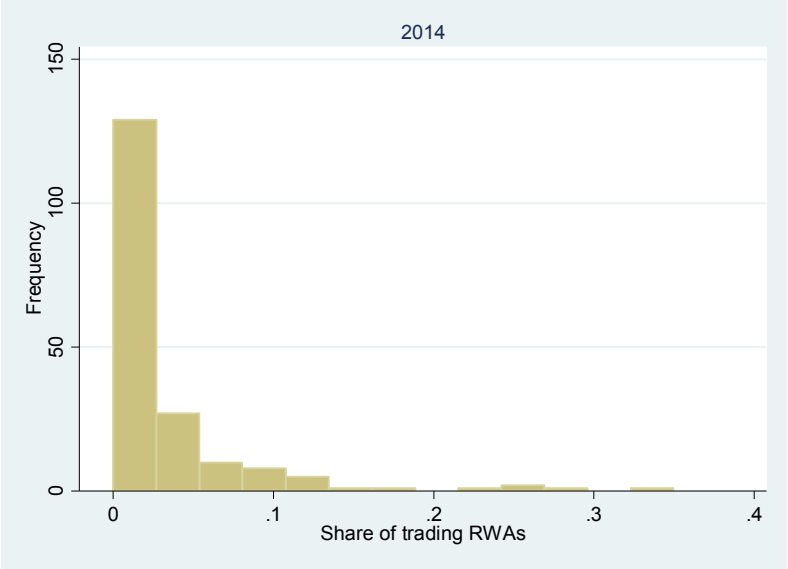


Figure A13. Histogram of the share of trading RWAs in 2014



Share of trading RWAs (predicted, 2014)

liiksizeclass	variable	min	p25	mean	p50	p75	max	iqr	N
Small (<30bn)	rwatrb..	0	.0002282	.0111138	.002609	.0118071	.1332347	.0115789	92
Medium (30-500bn)	rwatrb..	0	.0043999	.0296267	.0161946	.0411101	.1706299	.0367101	76
Large (>500bn)	rwatrb..	.0099959	.0500465	.1251117	.0850369	.2369824	.3500271	.1869359	18
Total	rwatrb..	0	.0012238	.0297103	.0099578	.0354806	.3500271	.0342568	186

Total trading RWAs (predicted, 2014)

liiksizeclass	variable	min	p25	mean	p50	p75	max	iqr	N
Small (<30bn)	r~rb_fvc	0	392.4134	66632.49	10242.5	64110.25	874550.4	63717.84	92
Medium (30-500bn)	r~rb_fvc	0	99195.16	1729398	508756	2214900	1.86e+07	2115704	76
Large (>500bn)	r~rb_fvc	2326904	1.48e+07	5.55e+07	2.30e+07	1.22e+08	1.52e+08	1.07e+08	18
Total	r~rb_fvc	0	7776.5	6107522	86899.3	893023	1.52e+08	885246.5	186

Total Trading RWAs (predicted, 2014)

liiksizeclass	variable	N	sum
Small (<30bn)	r~rb_fvc	92	6130189
Medium (30-500bn)	r~rb_fvc	76	1.31e+08
Large (>500bn)	r~rb_fvc	18	9.98e+08
Total	r~rb_fvc	186	1.14e+09

Section 2 - Estimation of impacts on RWAs based on expected changes to risk-weights due to the introduction of the FRTB and LR requirements

RWAs can also be modified to obtain a counterfactual scenario representing the full implementation of CRD IV–CRR requirements.

In order to develop a scenario representing the full implementation of Basel III rules, we apply correction factors to RWA and Total capital of banks in the sample. Such correction factors come from the EBA's report "CRD IV–CRR/Basel III monitoring exercise report". The study conducted by the EBA analyses that banks are still subject to transitional arrangements at the current[142] implementation stage of CRD IV–CRR. This results in a reduction in the level of capital for both Group 1 and Group 2 banks and a slight increase in RWAs under full implementation.

Table A17. Changes in total capital and RWA relative to the current amounts

	Total Capital	RWA
Group 1	-12.8%	0.1%
G-SIBs	-13.3%	0.0%
Group 2	-7.0%	0.9%
Large Group 2	-7.1%	1.3%
Medium Group 2	-7.2%	0.6%

[142] as of December 2014

Small Group 2	-6.1%	0.0%

Source: EBA

Potential impact of FRTB on market risk RWAs

The EBA estimated the potential impact on RWAs coming from the new requirements of the FRTB. According to the EBA, the median impact is a 27% increase of market risk RWAs.

Simulations are conducted using input data as of 2014. This analysis is based on the expected changes to risk-weights due to the introduction of the FRTB and LR.

Section 3 - Potential impact on public finances

The analysis presented in this section estimates the potential benefits for public finances of implementing the new rules established by the FRTB and of the new requirements on LR. Benefits for public finances are measured as a decrease in the potential costs due to bank defaults and recapitalization needs[143] that would remain uncovered by the available tools (i.e. the safety-net) setup in the EU legislation, thus potentially hitting Public Finances.

We assume that the safety-net that can intervene to cover losses and recapitalization needs includes the bail-in tool, Resolution Funds (RF), as well as the improved standards on minimum capital requirements and capital conservation buffer set up in the CRR/CRD IV package.

Banking losses are simulated using the SYMBOL model (Systemic Model of Banking Originated Losses). SYMBOL simulates losses for individual banks using information from their balance sheet data. Capital is the first source to absorb losses. We assume that a bank goes into insolvency when simulated losses are larger than the available level of capital (the difference between the loss and capital is the excess loss). Moreover, we also consider recapitalization needs to reflect the minimum capitalization under which a bank can be considered viable. We refer to excess losses plus recapitalization needs as *financing needs* hereafter. In case capital is not sufficient, the bank makes use of its bail-in-able liabilities. Since data on the actual amount of bail-in-able liabilities held by banks are not available, we assume that each bank has a total loss absorbing capacity that is twice the minimum capital requirement. In other terms, banks are assumed to hold an amount of bail-in-able liabilities that is equal to the minimum amount of capital. In a next step, in case there would be financing needs after the bail-in intervention, the RF can intervene. We assume that a single RF has at its disposal a target fund equal to 1% of the amount of covered deposits of banks in the sample. Moreover, the RF can cover financing needs up to a ceiling equal to 5% of each bank's total assets. The remaining financing needs will remain uncovered.

Dataset

Data used for the present exercise are as of 2014. The sample has 183 banks in EU and covers 83% of the EU TA.[144]

Scenarios

The scenarios implemented in this analysis aim to represent the case where the FRTB and LR requirement are not in place (baseline), the implementation of the FRTB (scenario 1), and a final situation where both FRTB and LR requirements are in force (scenario 2 and scenario 3).
In all scenarios, the real riskiness of bank assets is assumed to be in line with an RWA amount fully compliant with Basel III rules and the FRTB. This means that the balance sheet value of RWA is adjusted by applying the following correction:

$$RWA^{FRTB} = RWA^{non-tr} \cdot QIS^{RWA} + RWA^{tr} \cdot QIS^{RWA} \cdot (1.27)$$

The baseline and the alternative policy scenarios differ from each other by the assumed level of capital held by banks and the amount of recapitalisation needs.

[143] The recapitalization need is the amount necessary to allow banks suffering from losses to continue operating on an on-going basis.

[144] We use the amount of total assets in the banking sector excluding branches as provided by ECB as reference for the population.

Baseline: all banks are assumed to be fully compliant with Basel III rules only. This implies the Basel III correction to the definitions of risk-weighted assets and capital, as per Table A17A17. As for the initial capital, we consider both the case where all banks hold the minimum capital requirement (MCR) plus the capital conservation buffer (CCB), as per CRR/CRD IV (i.e. 10.5% of RWA under a full implemented Basel III environment) and an alternative case where each bank is assumed to hold at least 10.5% of RWA, while keeping any excess buffer (topping the capital up to 10.5% of RWA). As for the recapitalisation needs, the viability requirement is set to 8% of RWA.
Scenario 1: The FRTB is in place. The amount of capital has been set both to the minimum (i.e. 10.5% of RWA fully compliant with the FRTB) and to the maximum between the actual level and the minimum. The viability requirement for recapitalisation is 8% of RWA under FRTB.
Scenario 2: The leverage ratio requirement is in place in addition to the FRTB. All banks hold the minimum regulatory requirement for total capital (10.5% of RWA compliant with the FRTB) or an amount in line with the minimum requirement for the LR (i.e. 3% of total assets[145]), whichever is higher. Also in this scenario two alternative options have been considered: staying at the minimum and topping up actual capital. The level of recapitalisation takes into account also the LR requirement (i.e. recapitalisation is at the highest of 8% RWA FRTB and 3% TA).
Scenario 3: This scenario differs only in the chosen level of the LR requirement from scenario 2. We assume that banks may hold an extra buffer on top of the 3% minimum, that we set to 4%[146] of total assets.

Table A18. Scenarios implemented

Scenario	Total regulatory capital		Recapitalization levels
Baseline	No buffers	10.5% $RWA^{no\ FRTB}$	8% $RWA^{no\ FRTB}$
	Top up	Max{K, 10.5% $RWA^{no\ FRTB}$ }	
Scenario 1	No buffers	10.5%·RWA^{FRTB}	8% RWA^{FRTB}
	Top up	Max{K, 10.5% RWA^{FRTB} }	
Scenario 2	No buffers	Max{10.5%·RWA^{FRTB}, 3%TA}	Max(8% RWA^{FRTB}, 3%TA)
	Top up	Max{K, 10.5%·RWA^{FRTB}, 3%TA}	
Scenario 3	No buffers	Max{10.5%·RWA^{FRTB}, 4%TA}	Max(8% RWA^{FRTB}, 3%TA)
	Top up	Max{K, 10.5%·RWA^{FRTB}, 4%TA}	

Results

[145] The policy refers to Tier 1 capital. However, due to technical reasons, the current version of the SYMBOL model is not able to keep track separately of T1 and T2 capital. The requirement is thus considered with respect to Total Regulatory Capital, leading to a slight under-estimate of the increase in capital needs.

[146] 4% is close to the same amount of "relative" buffer afforded by the CCB on the 8% MCR (i.e. 3*10.5/8=3.9)

A set of simulations has been run for each scenario. The resulting distributions are presented showing percentiles of the simulated distribution in the tables below, both in terms of share of EU GDP and in billion Euro.

The simulation model runs on a representative sample of EU banks. In order to show results related to the entire population of banks, results based on the sample are upscaled by using a sample coverage ratio based on total assets.

Table A19. Distributions of financing needs *FN* (i.e. potential costs for public finances due to bank defaults and recapitalization needs) for all scenarios, *no buffers*. *FN* are reported as a share of EU GDP

Percentiles	Baseline:			Scenario 1			Scenario 2			Scenario 3		
	FN after capital	FN after bail-in	FN after RF	FN after capital	FN after bail-in	FN after RF	FN after capital	FN after bail-in	FN after RF	FN after capital	FN after bail-in	FN after RF
80	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
82	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
84	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
86	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
88	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
90	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
92	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
95	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
97.5	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
99	0.34%	0.01%	0.00%	0.33%	0.01%	0.00%	0.60%	0.01%	0.00%	0.28%	0.01%	0.00%
99.5	0.81%	0.04%	0.00%	0.79%	0.03%	0.00%	1.17%	0.04%	0.00%	0.70%	0.02%	0.00%
99.9	1.90%	0.23%	0.01%	1.87%	0.21%	0.01%	2.38%	0.25%	0.02%	1.72%	0.15%	0.01%
99.91	1.98%	0.24%	0.02%	1.95%	0.22%	0.01%	2.47%	0.26%	0.02%	1.79%	0.16%	0.01%
99.92	2.11%	0.26%	0.02%	2.08%	0.24%	0.02%	2.63%	0.28%	0.02%	1.91%	0.17%	0.01%
99.93	2.24%	0.30%	0.02%	2.21%	0.28%	0.02%	2.76%	0.32%	0.03%	2.02%	0.19%	0.01%
99.94	2.36%	0.32%	0.03%	2.32%	0.30%	0.03%	2.89%	0.34%	0.03%	2.14%	0.22%	0.02%
99.95	***2.52%***	***0.37%***	***0.04%***	***2.49%***	***0.34%***	***0.03%***	***3.08%***	***0.39%***	***0.05%***	***2.29%***	***0.25%***	***0.02%***
99.96	2.75%	0.41%	0.05%	2.71%	0.38%	0.05%	3.32%	0.44%	0.06%	2.50%	0.28%	0.03%
99.97	3.05%	0.50%	0.09%	3.01%	0.47%	0.08%	3.64%	0.53%	0.10%	2.78%	0.35%	0.05%
99.98	3.47%	0.62%	0.16%	3.43%	0.58%	0.13%	4.10%	0.65%	0.17%	3.19%	0.44%	0.08%
99.985	3.80%	0.74%	0.24%	3.75%	0.70%	0.21%	4.44%	0.78%	0.26%	3.50%	0.54%	0.13%
99.99	4.27%	0.88%	0.34%	4.23%	0.82%	0.29%	4.93%	0.92%	0.37%	3.95%	0.64%	0.18%
99.995	5.23%	1.20%	0.63%	5.18%	1.13%	0.57%	5.93%	1.25%	0.68%	4.87%	0.89%	0.35%
99.999	8.36%	2.74%	2.16%	8.31%	2.62%	2.05%	9.13%	2.85%	2.27%	7.92%	2.11%	1.53%
99.9999	9.49%	3.32%	2.75%	9.43%	3.19%	2.61%	10.28%	3.45%	2.88%	9.03%	2.58%	2.00%
100	9.61%	3.38%	2.81%	9.55%	3.25%	2.67%	10.40%	3.52%	2.94%	9.14%	2.63%	2.05%

Table A20. Distributions of financing needs *FN* (i.e. potential costs for public finances due to bank defaults and recapitalization needs) for all scenarios, no buffers. *FN* are reported in billion Euro

Percentiles	Baseline:			Scenario 1			Scenario 2			Scenario 3		
	FN after capital	FN after bail-in	FN after RF	FN after capital	FN after bail-in	FN after RF	FN after capital	FN after bail-in	FN after RF	FN after capital	FN after bail-in	FN after RF
80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
97.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
99	46.65	1.52	0.03	45.21	1.47	0.03	82.76	1.62	0.03	38.32	0.90	0.02
99.5	111.40	5.15	0.11	108.87	4.57	0.11	159.86	5.98	0.12	95.76	2.82	0.09
99.9	260.61	31.63	1.98	256.61	28.91	1.73	326.45	34.12	2.35	235.49	20.02	1.04
99.91	271.66	33.60	2.16	267.53	30.72	1.94	338.64	35.84	2.56	245.45	21.73	1.15
99.92	289.83	35.27	2.42	285.43	32.31	2.18	360.13	37.90	2.97	261.40	23.04	1.36
99.93	307.21	41.27	3.15	302.70	37.83	2.66	379.24	43.83	3.78	277.54	26.41	1.55
99.94	323.14	44.12	4.23	318.45	40.48	3.66	396.48	46.63	4.55	293.00	29.65	2.47
99.95	***346.32***	***50.68***	***5.49***	***341.48***	***46.64***	***4.67***	***421.91***	***53.55***	***6.23***	***314.49***	***34.36***	***2.87***
99.96	377.11	56.21	7.47	371.99	51.96	6.48	455.75	59.82	8.46	343.47	37.92	4.06
99.97	418.29	68.89	12.85	412.92	64.19	11.24	499.87	72.79	14.31	381.74	47.93	7.24
99.98	476.28	85.19	21.27	470.45	79.36	18.39	562.68	89.61	23.67	437.26	60.37	11.24
99.985	520.92	102.11	32.52	514.93	95.53	28.65	608.49	106.66	35.86	479.85	74.08	18.05
99.99	586.12	120.76	46.29	579.72	113.13	40.38	676.47	126.66	51.10	541.81	87.14	24.66
99.995	717.66	164.13	86.31	710.64	155.14	77.69	814.00	171.12	93.20	667.65	121.67	48.43
99.999	1,147.55	375.45	296.93	1,139.57	359.28	280.68	1,253.08	390.35	311.87	1,087.12	289.24	210.51
99.9999	1,301.90	455.82	377.25	1,293.64	437.12	358.43	1,409.92	473.60	395.07	1,238.38	353.86	274.30
100	1,317.90	464.18	385.60	1,309.61	445.21	366.51	1,426.18	482.26	403.72	1,254.06	360.59	280.94

Table A21. Distributions of financing needs *FN* (i.e. potential costs for public finances due to bank defaults and recapitalization needs) for all scenarios, *top up of capital*. *FN* are reported as a share of EU GDP

Percentiles	Baseline:			Scenario 1			Scenario 2			Scenario 3		
	FN after capital	**FN after bail-in**	**FN after RF**	**FN after capital**	**FN after bail-in**	**FN after RF**	**FN after capital**	**FN after bail-in**	**FN after RF**	**FN after capital**	**FN after bail-in**	**FN after RF**
80	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
82	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
84	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
86	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
88	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
90	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
92	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
95	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
97.5	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
99	0.10%	0.00%	0.00%	0.11%	0.00%	0.00%	0.18%	0.00%	0.00%	0.13%	0.00%	0.00%
99.5	0.35%	0.00%	0.00%	0.37%	0.00%	0.00%	0.51%	0.01%	0.00%	0.42%	0.01%	0.00%
99.9	1.04%	0.07%	0.00%	1.09%	0.08%	0.00%	1.33%	0.10%	0.00%	1.19%	0.08%	0.00%
99.91	1.10%	0.08%	0.00%	1.15%	0.09%	0.00%	1.40%	0.11%	0.00%	1.26%	0.08%	0.00%
99.92	1.17%	0.09%	0.00%	1.22%	0.09%	0.00%	1.49%	0.12%	0.01%	1.34%	0.09%	0.00%
99.93	1.24%	0.10%	0.00%	1.30%	0.11%	0.00%	1.58%	0.14%	0.01%	1.42%	0.10%	0.00%
99.94	1.34%	0.11%	0.01%	1.40%	0.12%	0.01%	1.68%	0.15%	0.01%	1.52%	0.11%	0.01%
99.95	***1.44%***	***0.13%***	***0.01%***	***1.51%***	***0.14%***	***0.01%***	***1.81%***	***0.18%***	***0.02%***	***1.64%***	***0.13%***	***0.01%***
99.96	1.59%	0.16%	0.01%	1.66%	0.17%	0.02%	1.99%	0.20%	0.02%	1.81%	0.16%	0.01%
99.97	1.79%	0.20%	0.03%	1.86%	0.21%	0.03%	2.22%	0.25%	0.04%	2.03%	0.20%	0.03%
99.98	2.08%	0.25%	0.04%	2.16%	0.27%	0.04%	2.55%	0.31%	0.06%	2.35%	0.26%	0.04%
99.985	2.31%	0.31%	0.06%	2.39%	0.32%	0.07%	2.80%	0.38%	0.09%	2.60%	0.32%	0.07%
99.99	2.64%	0.39%	0.09%	2.74%	0.40%	0.09%	3.19%	0.47%	0.12%	2.97%	0.39%	0.09%
99.995	3.35%	0.55%	0.15%	3.46%	0.58%	0.16%	3.99%	0.66%	0.21%	3.75%	0.56%	0.15%
99.999	5.92%	1.38%	0.84%	6.06%	1.42%	0.87%	6.77%	1.60%	1.04%	6.49%	1.43%	0.88%
99.9999	6.86%	1.70%	1.12%	7.01%	1.75%	1.17%	7.78%	1.97%	1.38%	7.49%	1.77%	1.19%

100	6.96%	1.73%	1.15%	7.11%	1.78%	1.20%	7.88%	2.01%	1.42%	7.59%	1.80%	1.22%

Table A22. Distributions of financing needs *FN* (i.e. potential costs for public finances due to bank defaults and recapitalization needs) for all scenarios, *top up of capital*. *FN* are reported in billion Euro

Percentiles	Baseline:			Scenario 1			Scenario 2			Scenario 3		
	FN after capital	FN after bail-in	FN after RF	FN after capital	FN after bail-in	FN after RF	FN after capital	FN after bail-in	FN after RF	FN after capital	FN after bail-in	FN after RF
80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
97.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
99	13.51	0.31	0.01	14.69	0.31	0.01	24.41	0.39	0.01	17.36	0.34	0.01
99.5	47.35	0.66	0.03	50.73	0.67	0.03	69.30	0.88	0.03	57.82	0.75	0.03
99.9	142.80	10.00	0.28	149.73	10.65	0.28	182.12	13.64	0.34	163.50	10.30	0.32
99.91	150.68	11.35	0.44	158.02	12.10	0.47	192.15	15.31	0.68	172.41	11.25	0.48
99.92	159.96	11.90	0.50	167.69	12.70	0.54	204.60	16.02	0.84	183.66	11.74	0.55
99.93	170.70	13.64	0.58	178.64	14.69	0.60	217.36	18.95	1.09	195.48	13.44	0.63
99.94	183.30	15.49	1.25	191.68	16.43	1.36	230.37	20.20	1.83	208.93	15.40	1.10
99.95	***198.22***	***18.46***	***1.50***	***207.04***	***19.58***	***1.65***	***248.15***	***24.03***	***2.35***	***225.60***	***18.43***	***1.33***
99.96	217.76	22.04	2.02	227.30	23.22	2.24	272.38	27.96	3.05	248.14	21.60	1.67
99.97	245.13	27.19	4.01	255.39	28.62	4.23	304.79	34.43	5.25	279.12	27.60	3.71
99.98	285.29	34.83	5.51	296.72	36.57	5.95	350.05	43.17	7.70	322.74	35.25	5.07
99.985	316.24	42.57	8.86	328.28	44.40	9.47	384.65	51.58	11.89	356.99	43.98	8.93
99.99	362.40	53.30	12.12	375.58	55.52	12.89	437.64	64.34	15.87	407.93	54.10	11.75
99.995	460.12	76.09	20.70	475.27	78.92	22.11	547.75	90.67	28.29	514.54	77.51	21.06
99.999	812.21	188.98	114.68	831.77	194.61	119.64	928.45	220.01	142.77	890.80	196.09	121.18
99.9999	941.14	232.95	153.98	962.16	239.58	160.23	1,066.63	270.06	189.64	1,027.66	242.20	162.84
100	954.52	237.53	158.09	975.69	244.27	164.47	1,080.96	275.28	194.53	1,041.86	247.01	167.19

As a reference point, a crisis comparable to the last global one is approximately placed on percentile 99.95 when considering excess losses and recapitalization needs based on pre-crisis data.

Table A23. Variation in financial needs when moving between scenarios, percentile 99.95, no buffers

	Baseline to Scenario 1	Baseline to Scenario 2	Baseline to Scenario 3	Scenario 1 to Scenario 2	Scenario 1 to Scenario 3	Scenario 2 to Scenario 3
Financial needs after capital	-1.40%	+21.83%	-9.19%	+23.55%	-7.90%	-25.46%
Financial needs after bail-in	-7.97%	+5.67%	-32.20%	+14.81%	-26.33%	-35.83%
Financial needs after RF	-14.95%	+13.30%	-47.85%	+33.21%	-38.68%	-53.97%

Table A24. Variation in financial needs when moving between scenarios, percentile 99.95, top up capital

	Baseline to Scenario 1	Baseline to Scenario 2	Baseline to Scenario 3	Scenario 1 to Scenario 2	Scenario 1 to Scenario 3	Scenario 2 to Scenario 3
Financial needs after capital	+4.45%	+25.19%	+13.81%	+19.86%	+8.96%	-9.09%
Financial needs after bail-in	+6.05%	+30.18%	-0.17%	+22.75%	-5.86%	-23.31%
Financial needs after RF	+10.19%	+56.33%	-11.24%	+41.87%	-19.45%	-43.22%

By looking at the results for the "no buffers" scenarios at percentile 99.95, Table reports the split of financing needs into losses and recapitalisation needs, the amount of total financing needs absorbed by capital, bail-in-able liabilities and the RF, and the

Table A25. Initial Financing needs and absorbed by the safety-net tools, "no buffers" scenarios, percentile 99.95, billion Euro

	Baseline	Scenario 1	Scenario 2	Scenario 3
Financing needs = Losses + Recap needs (FN = L+R)	862.40	862.37	945.32	850.84
of which: Losses (L)	*595.20*	*595.20*	*595.20*	*595.20*
of which: Recap (R)	*267.19*	*267.17*	*350.12*	*255.63*
FN absorbed by Capital	516.07	520.89	523.41	536.35
FN absorbed by bail-in-able liabilities	295.64	294.84	368.36	280.13
FN absorbed by RF	45.18	41.97	47.32	31.49
Leftover FN after RF intervention	5.49	4.67	6.23	2.87

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ANNEX 6. IMPLEMENTATION OF PROPOSED MEASURES

Indicative list of amendments to the CRR, CRD IV and BRRD per topic addressed in the impact assessment

Area	Problem definition / Origin of the problem	Solution	Level 1 text to be amended and relevant articles	Level 2 measures (Delegated, implementing acts, RTS, ITS) envisaged to be created or amended
Core issues analysed in the main body of the impact assessment				
Funding Risk	Excessive reliance by institutions on short-term wholesale funding to finance their long term activities. Existing requirements in the CRR do not provide an adequate framework to ensure that institutions' assets are sufficiently stably funded by their liabilities Origin of the problem: BCBS, review clause in article 501 CRR, responses to the Consultation on the impact of CRR and CRD IV on bank financing of the economy, responses to the	A single NSFR requirement as per Basel with some adjustments for all banks. Some adjustments are recommended by the EBA NSFR report to take into account European specificities and relate mainly to specific treatments for: -Pass-through models in general and covered bonds issuance in particular; -Trade finance and	Amending CRR Articles 6, 412, 413, 414, 415 New Title IV in CRR Part 6	New RTS on pass-through models and extendable maturities New Delegated Act on Derivatives future funding risk

Area	Problem definition / Origin of the problem	Solution	Level 1 text to be amended and relevant articles	Level 2 measures (Delegated, implementing acts, RTS, ITS) envisaged to be created or amended
	Call for Evidence	factoring activities; -Centralised regulated savings; -Residential guaranteed loans; -Credit unions. Other adjustments needed not to hinder the good functioning of EU financial markets and the liquidity of sovereign bonds markets relate to the treatment of: - derivatives transactions; - short term transactions with financial counterparties; - Level 1 High Quality Liquid Assets as defined		

Area	Problem definition / Origin of the problem	Solution	Level 1 text to be amended and relevant articles	Level 2 measures (Delegated, implementing acts, RTS, ITS) envisaged to be created or amended
		in the LCR.		
Excessive leverage	Institutions' leverage can increase to unsustainable levels and have a pro-cyclical effect on the financial system Existing risk-based capital measures are not sufficiently reliable to address systemic risk and calls for the introduction of a simpler and non-risk-sensitive back-stop measure In the EU, the leverage ratio was introduced in the prudential framework in 2013 but not as specific capital requirement that	A leverage ratio requirement differentiated for business models (e.g. public development banks' lending to the public sector) or adjusted for exposure types (export credits)	CRR Articles 92, 429 to 430 and 511	Maintaining empowerment for delegated act under Article 456(1)(j)

Area	Problem definition / Origin of the problem	Solution	Level 1 text to be amended and relevant articles	Level 2 measures (Delegated, implementing acts, RTS, ITS) envisaged to be created or amended
	banks must meet. Origin of the problem: G-20 declarations[147], BCBS, review clause in CRR, responses to the consultation on the impact of CRR and CRD IV on bank financing of the economy, responses to the Call for Evidence			
SME exposures	The current calibration of the requirement to address the credit risk of exposures to SMEs is not sufficiently risk-sensitive and reduce the ability of bank to lend to SMEs Origin of the problem: review clause under CRR,	Maintaining the SF for exposures in its current form (i.e. up to €1.5 million for SA and IRB banks) and complementing it with a discount of 15% in capital charges for loans to SMEs above €1.5 million euros.	CRR (Articles 123, 147, 505)	

[147] "Risk-based capital requirements should be supplemented with a simple, transparent, non-risk based measure which is internationally comparable, properly takes into account off-balance sheet exposures, and can help contain the build-up of leverage in the banking system", Declaration on strengthening the financial system, London summit, 2 April 2009. London; "developing the leverage ratio as element of the Basel framework", Declaration on Further Steps to Strengthen the Financial System, September 5, 2009, London

Area	Problem definition / Origin of the problem	Solution	Level 1 text to be amended and relevant articles	Level 2 measures (Delegated, implementing acts, RTS, ITS) envisaged to be created or amended
	responses to the consultation on the impact of CRR and CRD IV on bank financing of the economy, responses to the Call for Evidence			
Loss absorption and recapitalisation capacity	In the EU there's no harmonised minimum requirement on loss absorption and recapitalisation capacity, to ensure that G-SIBs hold a sufficient amount of bail in-able liabilities and make sure that they can absorb losses internally without worldwide societal implications or a fiscal intervention in their favour. Origin of the problem: Financial Stability Board, responses to the consultation on the impact of CRR and CRD IV on	Integrate TLAC standard in MREL rules for EU G-SIIs	CRR (new Articles on eligibility criteria, deduction, holdings and TLAC requirement)	

Area	Problem definition / Origin of the problem	Solution	Level 1 text to be amended and relevant articles	Level 2 measures (Delegated, implementing acts, RTS, ITS) envisaged to be created or amended
	bank financing of the economy, responses to the Call for Evidence			
Market risk	The scope of application of the market risk capital requirements which is not defined sufficiently clearly. This allows institutions to engage in regulatory arbitrage, i.e. they can allocate some of their instruments to the regulatory book that generates the lower capital requirements. Many features of market risk are not reflected in the capital requirement. As a consequence, the amount of capital required for certain instruments is not aligned with the real risks that institutions face for these	Adopt FRTB standards with a) adjustments to the calibration and to reflect European specificities and ensure consistency with other parts of the CRR (e.g. STS securitisations and sovereign exposures)and b) a revised regime for small trading book businesses	CRR (Articles 102-106, 325-377), CRD IV (Articles 83-101)	New technical standards on technical issues

Area	Problem definition / Origin of the problem	Solution	Level 1 text to be amended and relevant articles	Level 2 measures (Delegated, implementing acts, RTS, ITS) envisaged to be created or amended
	instruments. Internal models used by institutions to calculate capital requirements for market risk may generate very different estimates of the amount of capital required for similar portfolios. Origin of the problem: BCBS			
Remuneration	Excessive compliance costs for institutions arising from the rules on deferral and pay-out in instruments. Excessive compliance costs arising from the requirement for listed institutions to pay out part of the variable remuneration in shares. Origin of the problem:	1) Exempt small and non-complex institutions and staff with low variable remuneration from the rules on deferral and pay-out in instruments, based on harmonised exemption criteria defined at EU level, combined with a possibility for competent authorities to adopt a	CRD IV (Articles 92, 94)	

Area	Problem definition / Origin of the problem	Solution	Level 1 text to be amended and relevant articles	Level 2 measures (Delegated, implementing acts, RTS, ITS) envisaged to be created or amended
	review clause in CRD IV, responses to the consultation on the impact of CRR and CRD IV on bank financing of the economy, responses to the Call for Evidence	stricter approach; 2) Allow listed institutions to use share-linked instruments in addition or instead of shares in fulfilment of the requirement under Article 94(1)(l)(i) CRD IV		
Insolvency ranking	MS implement divergent approaches to the statutory insolvency ranking of bank creditors which create uncertainty for issuers and investors alike and makes more difficult the application of the bail-in tool for cross-border institutions. This uncertainty can also result in competitive distortions in the sense that unsecured debt holders could be treated differently in different jurisdictions and	Creation of a non-preferred senior debt category. This approach would result in two categories of unsecured debt, both ranking above subordinated debt: a newly created category of non-preferred unsecured senior and a preferred unsecured senior category. As opposed to subordinated debt which can be written-down or	BRRD (Article 108)	

Area	Problem definition / Origin of the problem	Solution	Level 1 text to be amended and relevant articles	Level 2 measures (Delegated, implementing acts, RTS, ITS) envisaged to be created or amended
	the costs to comply with the TLAC and MREL requirement for banks may be different from jurisdiction to jurisdiction. Origin of the problem: issues in consistent implementation of BRRD, responses to the Call for Evidence	converted into equity outside resolution as well as during resolution, the new non-preferred senior category would be bailed-in only in resolution		
Moratorium	The diversity of national approaches to the implementation of the tool as well as the lack of clarity of certain elements reduces the effectiveness of this tool in resolution and of resolution tools in a cross-border scenario. Origin of the problem: issues in consistent implementation of BRRD	Further harmonisation of moratorium tools.	BRRD (Articles 27, 29a-new article, 63)	

Area	Problem definition / Origin of the problem	Solution	Level 1 text to be amended and relevant articles	Level 2 measures (Delegated, implementing acts, RTS, ITS) envisaged to be created or amended
Proportionality (see also below counterparty credit risk, supervisory reporting and disclosure)	The current EU regulatory framework does not sufficiently differentiate between the very large institutions and very small institutions, particularly as regards reporting and disclosure obligations. In addition, compliance costs due to the complexity and large volume of rules are more burdensome for smaller banks. Some of the prudential requirements in the CRR and CRD IV impose a disproportionate burden on smaller and less complex institutions. Origin of the problem: responses to the consultation on the impact of CRR and CRD IV on bank financing of the economy, responses to the	Specific reporting and disclosure framework for smaller institutions with reduced frequency and content. In addition, the EBA would be mandated to develop an IT tool to guide credit institutions through the rules which are relevant to their size and business model. Finally, it is proposed to introduce tailored measures for different metrics (e.g. TLAC, lending to SMEs, trading book, leverage ratio, NSFR and remuneration) that take into account the size and business model of credit institutions.	Targeted measures on market risk: CRR (Article 94) plus new CRR article for the application of the simplified standardised approach; New article on mandate for the EBA to set up an IT tool; See below for counterparty credit risk	

Area	Problem definition / Origin of the problem	Solution	Level 1 text to be amended and relevant articles	Level 2 measures (Delegated, implementing acts, RTS, ITS) envisaged to be created or amended
	Call for Evidence			
Issues included in the annexes				
Counterparty credit risk framework	The standardised approaches to calculate the exposure value of derivative transactions under the counterparty credit risk framework suffer from several limitations: they do not recognise appropriately the risk-reducing nature of collateral in the exposures (an issue in light of the forthcoming international clearing/margin obligations); their calibrations are outdated and do not reflect the high level of volatility observed during the recent financial crisis; they do not recognise appropriately netting benefits.	Under the proposed amendment, institutions would use the SA-CCR recently developed by the BCBS in the counterparty credit risk framework while, under revised conditions, institutions with small trading activities would have the possibility to use a revised version of OEM. A simplified version of SA-CCR will also be available for banks that would face some operational difficulty to implement SA-CCR but have sizeable derivative activities that would not warrant them the use of	CRR (Articles 272-282, 298-299, 429a)	

Area	Problem definition / Origin of the problem	Solution	Level 1 text to be amended and relevant articles	Level 2 measures (Delegated, implementing acts, RTS, ITS) envisaged to be created or amended
	Origin of the problem: BCBS, responses to the consultation on the impact of CRR and CRD IV on bank financing of the economy, responses to the Call for Evidence	the revised OEM.		
Disclosure	The lack of harmonised disclosure formats hampers the comparability of disclosures between institutions and over time thereby reducing market discipline. The existing disclosure requirements are mainly a "one size fits" allowing for hardly and differentiation based on the size of the institution and are therefore not optimally proportionate. Origin of the problem: BCBS, responses to the consultation on the impact	In order to alleviate the current disproportionate operational burden and to be aligned with the revised Basel Pillar 3 disclosure framework institutions will be categorised on the basis of their significance. Institutions would either be significant, small or "other" with or without being "listed". The disclosure requirements will be a sliding scale with differentiations in the substance and frequency of disclosures	CRR (Articles 13, 431 – 455) Plus additional delegated act power on disclosure requirements CRR Article 456	Broaden EBA ITS mandate to all disclosure articles in Part Eight

Area	Problem definition / Origin of the problem	Solution	Level 1 text to be amended and relevant articles	Level 2 measures (Delegated, implementing acts, RTS, ITS) envisaged to be created or amended
	of CRR and CRD IV on bank financing of the economy, responses to the Call for Evidence	whereby for all types of institutions disclosure templates developed by the EBA will be mandatory.		
Supervisory reporting	High administrative burden caused by 1) disproportionate reporting requirements generally and for smaller banks in particular in terms of content and reporting frequency and 2) supervisors requiring additional reporting on top of the regular EU reporting requirements. Origin of the problem: responses to the consultation on the impact of CRR and CRD IV on bank financing of the economy, responses to the	The frequency of reporting for smaller institutions will be reduced leading to less reporting burden without undermining overall the supervisory effectiveness or financial stability risk. Additionally the extant body of reporting requirements will be reduced for some or all institutions depending on their size or other quantitative criteria.	CRR: (Articles 99 – 101), Study on ad hoc reporting requirements (Article 519a), EBA report on enhanced proportionality (Article 519b) CRD IV Article 104 clarification of ad hoc reporting powers	

Area	Problem definition / Origin of the problem	Solution	Level 1 text to be amended and relevant articles	Level 2 measures (Delegated, implementing acts, RTS, ITS) envisaged to be created or amended
	Call for Evidence			
Pillar 2 additional capital	The current text of the CRD IV sets the broad parameters of the exercise of Pillar 2 powers, whilst leaving to supervisory authorities a wide margin of discretion when exercising their powers. This leads to discrepancies and weaknesses in the way Pillar 2 capital requirements are applied across jurisdictions and to the sometimes not transparent way supervisors' decisions on the additional capital imposed on individual banks are made. Origin of the problem: responses to the consultation on the impact of CRR and CRD IV on bank financing of the	The relevant articles of the CRD IV and CRR will be modified to clarify the nature of Pillar 2 capital add-ons, the cases in which these should be imposed as requirements or as non-binding expectations and their relationship with other capital requirements (buffers and Pillar 1).	CRR (Articles 28, 428) – CRD IV (Articles 104, 104a new, 104b new, 113, 140a new, 141) IRRBB: CRR (art. 448), CRD IV (art. 84, 98)	New RTS on additional own fund requirements (art. 104a) New RTS on the standardised approach for IRRBB (CRD IV art. 84); New RTS on the calculation of NII for reporting purposes (CRR art. 448); Update guidelines (CRD IV art. 84) for the capture of IRRBB

Area	Problem definition / Origin of the problem	Solution	Level 1 text to be amended and relevant articles	Level 2 measures (Delegated, implementing acts, RTS, ITS) envisaged to be created or amended
	economy, responses to the Call for Evidence			
Equity investments into funds	The current framework for the credit risk attached to exposures in the form of units or shares in collective investment undertakings (CIUs) [basically undertakings for collective investment in transferable securities (UCITS) and alternative investment funds (AIFs)] lacks risk sensitivity and transparency. The framework lacks risk sensitivity notably in the sense that it does not require banks to reflect a fund's leverage when determining capital requirements associated with their investment, even though leverage is a very important risk driver. This creates undesirable incentives by	A new Basel standard will be implemented. The proposed framework consists of three approaches, which would apply to both SA and IRB banks' exposures. The look-through approach (LTA) requires banks to risk weight the fund's underlying exposures as if they were held directly; the mandate-based approach (MBA) assumes that the underlying portfolios are invested to the maximum extent allowed (as per the mandate, regulations, or other disclosures) in the assets attracting the highest risk weights; and the fall-back approach	CRR Articles 128, 132, 152	

Area	Problem definition / Origin of the problem	Solution	Level 1 text to be amended and relevant articles	Level 2 measures (Delegated, implementing acts, RTS, ITS) envisaged to be created or amended
	encouraging investments in higher-risk funds and may result in an insufficient capitalisation of such higher-risk exposures. Also, the framework does not promote transparency and appropriate risk management of the relevant exposures, as there is no clear rank ordering between the different approaches, with different degrees of prescriptiveness for SA banks compared to IRB banks and insufficient incentives to apply the look-through approach. Origin of the problem: BCBS, responses to the consultation on the impact of CRR and CRD IV on bank financing of the economy, responses to the	(FBA) – used for funds with insufficient transparency – requires the application of a 1,250% risk weight. It provides a hierarchy of approaches as a function of the degree of due diligence performed by banks, with an appropriate incentive structure, whereby the degree of conservatism increases with each successive approach as risk sensitivity and transparency decrease. This promotes appropriate risk management of bank exposures to funds by providing incentives to use the more risk sensitive and transparent approaches.		

Area	Problem definition / Origin of the problem	Solution	Level 1 text to be amended and relevant articles	Level 2 measures (Delegated, implementing acts, RTS, ITS) envisaged to be created or amended
	Call for Evidence			
Bank financing of infrastructure projects	The existing capital requirements on exposures for infrastructure projects lacks risk-sensitivity and hamper the capacity of banks to finance high-quality, sound infrastructure projects Origin of the problem: responses to the consultation on the impact of CRR and CRD IV on bank financing of the economy, responses to the Call for Evidence	A specific 'population' of specialised lending exposures will be identified which aim at funding infrastructure projects and fulfil certain criteria able at reducing the different risks a bank would incur in providing such funding (financial, political, legal, operating, etc.). This new asset class of qualifying specialised lending exposures would benefit from a discount factor of 25% The criteria will denote safer infrastructure projects and ensure that lending banks understand the associated risks.	CRR (new Article)	
	The current general limit to large exposures of 25% of	Three main measures are	CRR (Articles 4(1)(71) and (91),	

Area	Problem definition / Origin of the problem	Solution	Level 1 text to be amended and relevant articles	Level 2 measures (Delegated, implementing acts, RTS, ITS) envisaged to be created or amended
Large exposure framework	institutions' eligible capital (which is the sum of Tier 1 capital and an amount of Tier 2 capital equal to one third of Tier 1 capital) is not sufficiently prudent, especially for larger banks, since it only capture a small part of the overall large exposures that European institutions have. Moreover, it results in a higher limit for smaller banks since larger banks have usually more Tier 2 capital than smaller ones. Moreover, the current limit doesn't take into account the higher risks carried by the exposures that globally systemically important Banks (G-SIBs) have to single counterparty or groups of connected clients and, in particular, as regards exposures to other	proposed: - reduced capital base (only Tier 1) for calculating the large exposures limit; - lower large exposures limit for exposures of G-SIIs v. G-SIIs (15% of Tier 1 capital); - use of the new developed SA-CRR method for the calculation of the exposure value of exposures towards derivatives.	390, 391, 394, 395, 399, 400, 401, 403)	

Area	Problem definition / Origin of the problem	Solution	Level 1 text to be amended and relevant articles	Level 2 measures (Delegated, implementing acts, RTS, ITS) envisaged to be created or amended
	G-SIBs. Origin of the problem: BCBS, responses to the consultation on the impact of CRR and CRD IV on bank financing of the economy, responses to the Call for Evidence			
Exemptions on large exposures	Article 400 (2) of the CRR lists a number of exposures that competent authorities may fully or partially exempt from the scope of application of the large exposures limit. These exposures can only be exempted if the conditions laid down in paragraph 3 of the same article are met. By way of derogation the CRR provides for a temporary possibility for Member States to grant an exemption from the large exposures	To end the transitional period allowing Member States to grant exemptions for certain exposures to the large exposure limit set out in Article 493(3) of CRR.	CRR (Articles 493, 507)	

Area	Problem definition / Origin of the problem	Solution	Level 1 text to be amended and relevant articles	Level 2 measures (Delegated, implementing acts, RTS, ITS) envisaged to be created or amended
	limit for the same exposures listed in Article 400 (2) of CRR, however without having to meet the conditions set out in paragraph 3 of Article 400 of CRR.The concurrent possibility of Members States and competent authorities of granting exemptions to the same exposures has proved to be problematic after the introduction of the Single Supervisory Mechanism (SSM) and can interfere with the ability of the SSM to perform its tasks in a consistent and coherent manner. Origin of the problem: BCBS, responses to the consultation on the impact of CRR and CRD IV on bank financing of the			

Area	Problem definition / Origin of the problem	Solution	Level 1 text to be amended and relevant articles	Level 2 measures (Delegated, implementing acts, RTS, ITS) envisaged to be created or amended
	economy, responses to the Call for Evidence			
Rules on exposures to CCPs	The Mark-to-Market Method does capture risks sufficiently well, i.e. either leading to too low or too high requirements. The current framework does not take a sufficiently holistic view of how the different types of exposures to a Qualifying CCP interrelate and are therefore not sufficiently sensitive to the aggregate risk of those exposures and how that risk is distributed. Origin of the problem: BCBS, responses to the Call for Evidence	The revised standards adopted by the Basel Committee will be implemented. Notable revisions to the Basel standards include the use of a single method for determining the capital requirements for exposures to QCCPs stemming from default fund contributions, an explicit floor for those requirements, as well as an explicit cap on the overall capital requirements applied to exposures to QCCPs (i.e. those charges will not exceed the charges that would otherwise be applicable if the CCP were a non-qualifying	CRR Articles 300 to 311 and 497, EMIR Articles 50a to 50d	Maintaining empowerment for delegated act under Article 456(1)(h), update of RTS mandated by Article 304(5) of CRR and update of ITS mandated by Article 50c(3) of EMIR

Area	Problem definition / Origin of the problem	Solution	Level 1 text to be amended and relevant articles	Level 2 measures (Delegated, implementing acts, RTS, ITS) envisaged to be created or amended
		CCP).		
Contractual recognition of bail-in (article 55 BRRD)	Compliance with Article 55 BRRD raises two types of difficulties. First, certain third country counterparties refuse to include a contractual clause recognising a Union bail-in power in financial contracts concluded with Union banks. These third country entities often have a high degree of negotiating power against Union banks, or apply internationally agreed standard contractual terms in their banking contracts, e.g. with respect to liabilities to non-Union financial market infrastructures or trade finance liabilities (letters of credit, bank guarantees and performance bonds). Secondly, even when third	Article 55 BRRD will be amended in order to enable the resolution authority to exclude the obligation by means of a waiver if it determines that this would not impede the resolvability of the bank, or that it is legally, contractually or economically impracticable for banks to include the bail-in recognition clause for certain liabilities. In these cases, those liabilities should not count as MREL and should rank senior to MREL to minimize the risk of breaking the No-Creditor-Worse-Off (NCWO) principle. In this regard, the proposal will not to	BRRD (Article 55)	

Area	Problem definition / Origin of the problem	Solution	Level 1 text to be amended and relevant articles	Level 2 measures (Delegated, implementing acts, RTS, ITS) envisaged to be created or amended
	country counterparties are prepared to accept bail-in related clauses in their contracts with Union banks, in some cases the local supervisor may forbid this.	weaken the bail-in.		
Changes to MREL	The incorporation of TLAC in the EU legislative framework should not materially affect the burden of non G-SIBs to comply with the current MREL framework. Fundamentally, TLAC and MREL aim to achieve the same policy objective of ensuring that banks hold a sufficient amount of bail in-able liabilities that allow for smooth and quick absorption of losses and bank recapitalisation. Some technical differences exist however between the 2 frameworks regimes in	MREL will be amended to address some shortcomings, notably to (1) create 1 set of eligibility criteria for MREL/TLAC eligible instruments (except for subordination), (2) clarify the internal loss absorbing capacities within banking groups, independent of the chosen resolution strategy through introduction of the concepts of resolution groups, resolution entities and material subgroups, and (3) the alignment of the basis for calculation	BRRD Articles 2, 12, 13, 16, 18, 45, 59, 60, 89); SRMR Article 12	Existing RTS on MREL to be aligned with the new level 1 provisions

Area	Problem definition / Origin of the problem	Solution	Level 1 text to be amended and relevant articles	Level 2 measures (Delegated, implementing acts, RTS, ITS) envisaged to be created or amended
	terms of eligibility criteria (excl. subordination) and in terms of basis of calculation of the requirement. Additionally, MREL is not specific as to how bail-in capacity should be allocated within groups depending on the choses resolution strategy. Origin of the problem: Financial Stability Board, responses to the consultation on the impact of CRR and CRD IV on bank financing of the economy, responses to the Call for Evidence	on the RWA and the leverage ratio exposure measure.		

Area	Problem definition / Origin of the problem	Solution	Level 1 text to be amended and relevant articles	Level 2 measures (Delegated, implementing acts, RTS, ITS) envisaged to be created or amended
Application of IFRS 9 by the EU banks	The move from IAS 39 to IFRS 9 will affect CRR capital requirements. The impact will depend on: 1. the amount of the increase in provisions due to the change in accounting; 2. the type of regulatory approach the bank follows to calculate its capital requirements; 3. for IRB banks, their present level of provisions compared to the regulatory expected loss. There is uncertainty about the impact of the difference in levels of provisioning between current IAS 39 and IFRS 9 on CET1 capital of EU Banks	To introduce in CRR a transitional regime so that IFRS 9 changes will be phased-in progressively over a few years	CRR Article 473a new	

Area	Problem definition / Origin of the problem	Solution	Level 1 text to be amended and relevant articles	Level 2 measures (Delegated, implementing acts, RTS, ITS) envisaged to be created or amended
	Origin of the problem: responses to the consultation on the impact of CRR and CRD IV on bank financing of the economy, responses to the Call for Evidence			