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THE EVOLUTION OF THE PILLAR 2 FRAMEWORK FOR BANKS: SOME THOUGHTS AFTER THE FINANCIAL CRISIS

by M. Bevilacqua, F. Cannata, S. Cardarelli, R. Cristiano, S. Gallina and M. Petronzi (*)

Abstract

This paper examines the evolution of the Pillar 2 framework for banks, introduced by the Basel 2 Accord, and discusses the main issues at stake in the current policy debate. The main objective of Pillar 2 was to complement the minimum requirements established by regulators (Pillar 1) with tailored supervisory measures based on a thorough assessment of banks' risk profiles. However, its implementation coincided in most jurisdictions with the outbreak of the global financial crisis: the main policy objective became to restore the stability of the global financial system. In this context, Pillar 2 contributed significantly to enhance supervisory action, in particular by raising capital requirements. Nevertheless, a number of issues still remain. Today, in the run-up to the completion of the post-crisis regulatory reform, the debate has regained momentum and a sound supervisory framework can be finalized under more favorable conditions, to avoid that Pillar 2 loses its key properties.

JEL Classification: G21,G28
Keywords: Pillar 2, SREP, Single Supervisory Mechanism, Basel, Stress Test, ICAAP.

Contents

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1. Introduction

The concepts of Pillar 2 and Supervisory Review Process were introduced into the international prudential regulation for banks in 2004. The objectives were ambitious: to incentivize financial institutions to better measure and manage their risks, and to make capital requirements more risk-sensitive than under the previous rules.([1]) Indeed, the key idea underpinning the second Basel Capital Accord was rather simple: to complement the minimum requirements prescribed by regulators (Pillar 1) with tailored supervisory measures based on a thorough analysis of the bank's riskiness, including a review of its self-assessment (Pillar 2). International standard-setters had recognized that the banking business is so complex and the risks are so heterogeneous that the first line of defence is proper risk quantification and management by the banks themselves. Specific disclosure requirements (Pillar 3) completed the picture, with the aim to promote market discipline.

The Capital Requirements Directive (CRD) – bringing the Basel principles into European law – entered into force in 2006; the Directive, among other things, implemented Pillar 2 by distinguishing the ICAAP (Internal Capital Adequacy Assessment Process, i.e. the bank self-assessment) from the SREP (Supervisory Review and Evaluation Process, i.e. the evaluation of bank risk profile carried out by the supervisor). Therefore, Members States and supervisory authorities began working on implementation right before the outbreak of the financial crisis (which erupted with the failure of Lehman Brothers). However, priorities for regulators and supervisors rapidly changed in responding to and as a result of the unprecedented storm. The objective became to restore the stability of the financial system, along the lines indicated by the G20 Leaders. In such a context, the implementation of Pillar 2 principles slowed - in relative terms with respect to other priorities - from both a supervisory and the banks' perspectives.

Today, in the run-up to the completion of post-crisis regulatory reform, the debate has regained momentum and the finalization of a sound supervisory framework can be done under more favourable conditions. This holds true in Europe in particular. On the regulatory

[1] Even though very innovative at international level, the principles embedded in Pillar 2 had already been implemented in a number of jurisdictions well before Basel 2. In Italy, for example, non-binding target capital ratios had been set in 2001 for the largest banks and the 'supervisory dialogue' between supervisors and institutions was a cornerstone of national supervisory practices.

side, the EBA Guidelines complement the EU rules with the aim of facilitating their application across different jurisdictions; on the supervisory side, the construction of a common framework for banks' risk assessments in the euro area has been a priority for the Single Supervisory Mechanism (SSM) since 2014. Further developments are currently under way: the review of the CRR/CRD IV and the experience gained by the SSM in its first few years of activity offer an opportunity to further enhance the SREP framework.

Against this background, the objective of this paper is to discuss the evolution of Pillar 2, starting from the Basel principles up to the current framework, and argue whether and to what extent these changes are to be considered as necessary improvements to make Pillar 2 work effectively or, on the contrary, as unjustified deviations from the Basel paradigm. The paper is organized as follows: Section 2 goes through the evolution of Pillar 2: the Basel principles, the EU implementation, the SSM framework and a brief overview of the UK and US approaches; Section 3 discusses the open issues of the current policy debate: the content of Pillar 2, the role of capital measures, the relationship between the bank's responsibility and the supervisory perspective, the role of stress testing and disclosure. Section 4 concludes.

2. The evolution: from Basel 2 to the SSM implementation

2.1 Basel 2

The Basel Committee on Banking Supervision (BCBS) set forth the Pillar 2 principles and objectives for the first time in 1999; after five years of discussion, those principles were consolidated in the final version of the Accord, confirming the strong commitment of regulators to giving a prominent role in the prudential framework to the supervisory review process and to the interaction between banks and supervisors. The Basel Accord acknowledged that – although more complex and risk-sensitive than before – Pillar 1 requirements for credit, counterparty, market and operational risks were not (and could not be) fully sufficient to capture a bank's risk profile.

The Pillar 2 framework has been built around four principles, the first one addressed to banks, the remaining ones to supervisors.

Bank's own assessment of capital adequacy. Banks have to demonstrate that internal capital targets are well founded and consistent with the overall risk profile and the operating environment. Developing an ICAAP process is key to measuring all material risks to which the bank is exposed and to putting in place a monitoring and reporting system, which includes the results of rigorous, forward-looking stress testing. Only internal stress tests are mentioned, whereas there is no explicit reference to supervisory exercises.([2]) Proper internal controls are crucial to ensure the soundness and reliability of the capital assessment process.

Supervisory review process. Supervisors should regularly evaluate the degree to which the bank has in place a sound internal process to assess its capital adequacy and risk position. The periodic review can rely on a wide set of supervisory tools.([3])

Capital above regulatory minima. Supervisors should expect banks to operate above Pillar 1 minimum capital requirements and should have the ability to require banks to hold capital in excess of such minima, to integrate the Pillar 1 with a second layer to cover bank-specific issues or particular features of the markets. The text of the rules acknowledges there might be several ways to comply with this principle, including by setting trigger and/or target ratios.

Supervisory intervention. Supervisors are required to intervene at an early stage to prevent capital from falling below the minimum levels required. To this purpose, they should consider a range of options including, among other things, restricting the payment of dividends, requiring the bank to implement a capital restoration plan and requiring the bank to raise additional capital. The Basel text acknowledges that capital is not the solution to address all of a bank's difficulties; however, since implementation of some of the measures (e.g. such as improving systems and controls) may take time, requiring more capital could be an *interim* measure to encourage banks to rapidly address their weaknesses. Once specific measures have been put in place and have been deemed effective by supervisors, the higher capital requirements can be removed.

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[2] Indeed, in the Basel 2 environment, the stress test had not yet been developed as a supervisory tool to assess a bank's resilience to withstand hypothetical and adverse scenarios; it was rather a bank risk management tool, to be developed under both Pillar 1 (to ensure the robustness of the validated internal model for IRB banks) and Pillar 2. However, the Basel 2 framework lacked a clear set of recommendations for stress testing practices (e.g. scenario selection, risk coverage, integration in risk governance, IT infrastructure), leaving most of the choices to the banks' discretion. Only after the financial crisis has there been a growing interest in stress tests, leading the Basel Committee and the CEBS to issue the *Principles for sound stress testing practices and supervision* (2009) and *Guidelines on Stress Testing* (2010) in order to harmonize the stress testing framework among banks and the supervisory assessment.

[3] Any possible combination of on-site examinations or inspections, off-site review, discussions with the bank's management, review of work done by external auditors and the assessment of any useful information on the bank's current and perspective risk profile.

2.2 EU implementation

The high-level and non-binding nature of the Basel principles with regard to Pillar 2 implies the need for an adequate degree of harmonization across jurisdictions. Nevertheless, such process has clearly slowed down because of other major challenges in the aftermath of the financial crisis. Indeed, the priorities of policymakers have shifted to the need to avoid the collapse of the global financial system and, in parallel, repair the regulatory framework.

Implementation of the Pillar 2 framework has been rather heterogeneous, both globally and in the EU, in light of different supervisory models and cultures in the single jurisdictions. In Europe, the transposition of the Basel Pillar 2 framework (Directive 2013/36/UE or 'Capital Requirements Directive IV', in force since 17 July 2013, hereafter 'CRD') ([4]) is spelled out in relatively general terms, leaving room for different solutions. For this reason, the issuance of the EBA SREP Guidelines (EBA GL) – entered into force in 2016 – represented an important step in the harmonization process.

Article 97 CRD provides the legal basis for carrying out the SREP.([5]) On the basis of the SREP, supervisors shall determine *whether the arrangements, strategies, processes and mechanisms implemented by institutions and the own funds and liquidity held by them ensure a sound management and coverage of their risks.* It is then left to the EBA to further specify the *'common procedures and methodologies for the supervisory review and evaluation process'* [Art. 107(3) CRD].

Should the assessment point to an insufficient coverage of risks, Art. 104 CRD envisages a wide set of supervisory powers, including both quantitative and qualitative measures. Nonetheless, the Directive seems to put special emphasis on the power to require institutions to hold own funds in excess of Pillar 1 requirements [104(1)(a)], when *risks or elements of risks are not covered by the (Pillar 1) own funds requirements* [104(2)(b)] or when *risks are likely to be underestimated despite compliance with the applicable requirements* [104(2)(e)].

[4] The CRDIV repealed the Directive 2006/48, that transposed for the first time the Basel Accord into EU law. The 2006 Directive contained very broad outlines for both ICAAP (Art. 123) and SREP (Art. 124), with more details provided in the annexes.

[5] Competent authorities *shall review the arrangements, strategies, processes and mechanisms implemented by the institutions* in order to assess the *risks to which the institutions are or might be exposed* including – importantly – those *revealed by stress testing.* Article 97(1)(b) also refers to the risks that the institution poses to the financial system (as a whole); this wording paved the way for the potential macroprudential use of Pillar 2 requirements (see also Section 3.2).

The outcome of the SREP process is explicitly mentioned [104(3)(c)] as one the elements to be taken into account when deciding whether additional own funds are necessary to properly capture current and future risks.

The EBA GL extensively describe the supervisory powers, providing a non-exhaustive list of measures that can be applied. A number of examples are given for each of the four SREP elements (business model; internal governance and controls; capital adequacy; risks to liquidity and liquidity adequacy) and – within capital adequacy – for each of the risks to capital (credit, market, IRRBB and operational), consistently with the concept that qualitative measures are meant to *address specific deficiencies identified in the assessment of SREP elements.* In addition, supervisors may also rely upon *[measures provided for under] national law, and, when applicable, early intervention measures as specified in Article 27 of Directive 2014/ 59/EU, or any combination of the above.*

On top of that, a major innovation introduced in the CRD lies in the nature of Pillar 2: indeed, the capital add-on to be held in excess of Pillar 1 has become a binding requirement. The EBA GL on SREP state that Pillar 2 requirements (P2R) are to be met *at all times*, thus representing a groundbreaking element in comparison with the Basel framework, where additional capital requirements (on top of Pillar 1) were treated as supervisory expectations (e.g. trigger/target ratios). Indeed, in the EU an institution failing to meet P2R could even face, in a worst-case scenario, the withdrawal of its authorization (Art. 18 CRD). By the same token, Art. 32 of BRRD considers an infringement of the requirements for continuing authorization (i.e., among other things, the P2R) as one of the circumstances that identify an institution as failing or likely to fail (FOLTF). In the EBA GL the overall SREP score expresses the *viability* of a bank, i.e. the potential for risks to cause its failure, thus indicating the need for early intervention measures ([6]) and/or for determining whether the institution can be considered to be FOLTF. Supervisory measures can be quantitative (e.g. addressing capital or liquidity) or qualitative in nature.

After considering the outcome of the assessment of risks-to-capital, supervisors quantify the additional own funds needed to cover material risks. This allows them to define size and

[6] Total SREP Capital Demand (TSCR): P1R + P2R, is binding at all times; the EBA GL provide that P2R must be met with Common Equity Tier 1 Capital (CET1) for at least 56% and with Tier 1 Capital (T1) for at least 75%. Overall Capital Demand (OCR): P1R+P2R+Combined buffer requirement. The OCR in terms of CET1 coincides with the MDA trigger, which represents the CET1 ratio threshold that, if breached, would lead to automatic restrictions on capital distributions and variable remunerations.

composition of the regulatory ‘capital demand’. According to the EBA GL, there are three macro-drivers that are to be considered in this phase: *i*) the risk of unexpected losses, and of expected losses insufficiently covered by provisions, over a 12-month period; *ii*) the risk of underestimation of risk due to model deficiencies; *iii*) the risk arising from deficiencies in internal governance and controls.

Focusing on unexpected losses, the GL indicate that banks’ internal capital adequacy assessment (ICAAP) should be the starting point for determining additional requirements on a risk-by-risk basis[7]. This is fully consistent with the principle stated by the Basel Committee. In all cases, internal calculations should be challenged by risk-specific supervisory benchmarks and supplemented with other relevant inputs gathered during the SREP. Benchmarks are expected to play a larger role when internal estimates are deemed unreliable; the high degree of heterogeneity in the quality of ICAAP across banks and jurisdictions has been one of the main drivers of the diversity of supervisory approaches in Europe so far.

As regards stress testing, a generic reference as one of the core SREP ingredients is included in the CRD (Art. 97), whereas Art. 100 explicitly introduces supervisory stress testing as a tool *to facilitate the review and evaluation process*. The EBA GL clarify that supervisors should use stress testing to assess the adequacy of institutions’ own funds and to contribute to setting Pillar 2 requirements.([8]) Nevertheless, the way the results of stress tests are incorporated in the SREP process is not addressed in detail.

A revised version of the guidelines on common procedures and methodologies for SREP and supervisory stress testing (EBA/GL/2018/03) entered into force on 1 January 2019. The new text includes, among other things, the framework for the Pillar 2 Guidance, which is defined as follows: ‘a *non-legally binding capital expectation at level over and above overall capital requirements (OCR) based on the SREP findings, in particular: i) the ability*

[7] The GL read as follows: ‘Competent authorities should determine additional own funds requirements on a risk-by-risk basis, using supervisory judgment supported by the following sources of information:

a. the ICAAP calculations;
b. the outcome of supervisory benchmark calculations; and
c. other relevant inputs, including those arising from interaction and dialogue with the institution.’

[8] The GL read as follows: ‘competent authorities should determine the adequacy of the institution’s own funds (quantity and composition) to cover volatility over the economic cycle and whether measures are required to address potential inadequacies. To do so, competent authorities should use stress testing (the institution’s own and/or supervisory testing) to determine the impact of a baseline and adverse scenarios on available own funds and whether these are sufficient to cover capital requirements (OCR and TSCR) or any other relevant target ratio set by competent authorities for system-wide stress tests.’

to meet the applicable own funds requirements in stressed conditions, or (ii) supervisory concerns over the (excessive) sensitivity of an institution towards scenarios assumed in supervisory stress testing.'

A number of changes to the EU rules on Pillar 2 will be introduced by the review of the CRD/CRR, to be published in 2019: the introduction of a stronger 'risk-by-risk' perspective in the assessment of banks, a fully-fledged framework for the Pillar 2 Guidance and the use of Pillar 2 requirements to address bank-specific risks reflecting the impact of economic and market developments.

First, a new article (104a) that aims to clarify the conditions for setting additional own funds requirements was introduced, emphasizing their 'tailored', risk-based nature. The EBA noted that *in a number of cases, the additional capital requirements were set in a holistic way without decomposing the capital requirements on the basis of the underlying risk drivers*.([9]) To this end, the proposed text stresses the link between supervisory assessment and the ICAAP; the proposal intends to reinforce the link between risk drivers and supervisory measures – and additional own funds in particular – in line with the EBA SREP Guidelines. This seems key to closing the gap between the original Basel framework and its current implementation.

Second, specific rules on the Pillar 2 Guidance (P2G) have been introduced in the Directive, along the lines of the EBA clarification. The key features of the P2G are spelled out in the new Art. 104b, which would allow supervisors to require institutions to hold own funds in excess of their capital requirements (including buffers) in order to ensure that a bank's capital can absorb potential losses resulting from stress scenarios, including those identified under the supervisory stress test. It is also clarified that the P2G is not to be taken into account when computing the MDA trigger.

Finally, it has been observed over time that the power to impose additional own funds requirements has been interpreted in very different ways, including for macroprudential purposes. This has produced a frequent decoupling of additional own funds required vis-à-vis the underlying SREP assessment and an unwarranted heterogeneity in the level of the MDA trigger. It is argued that the macroprudential use of Pillar 2 requirements might also undermine the effectiveness of macro tools. Despite the new CRD text does not fully clarify

[9] EBA (2016).

that the SREP is meant to serve microprudential purposes only, the possibility to use Pillar 2 to address system-wide risks will be limited to the cases where they would have an impact on individual banks.

2.3 The SSM approach

Since its launch in November 2014, the Single Supervisory Mechanism (SSM) has devoted considerable effort to the development of a harmonized Pillar 2 framework. This has been a true challenge, given the diversity of national practices across jurisdictions.([10]) Significant progress has been achieved so far and a fully-fledged methodological setup has been developed, taking into account EU law and the EBA guidelines. Analytical tools have been produced for supervisors in order to conduct the annual assessment of banks′ risk profiles; a structured process has been defined to properly organize both the planning and execution phases of the assessment and the interaction between the ECB and national supervisors; finally, a preliminary methodology has been devised to integrate the supervisory perspective with banks′ internal quantification.

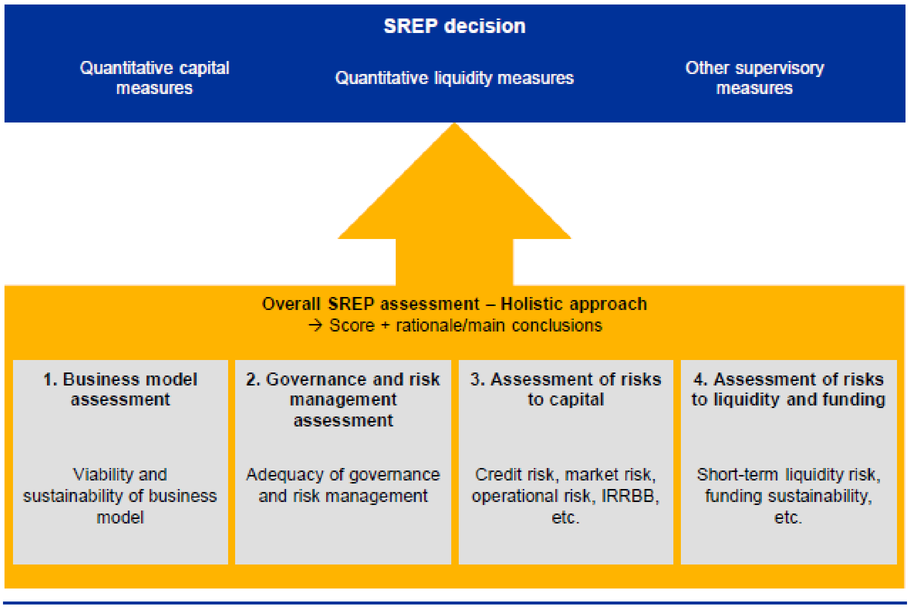
The SSM Supervisory Manual represents the main result of this work. The document, which was published in 2018 to make market participants aware of the toolkit used to conduct ongoing supervisory activity and comply with the SSM accountability principles,([11]) provides supervisors with a comprehensive guide on how off- and on-site supervisory activities are conducted. In this context, SREP is one piece of a broader framework. According to the Supervisory Manual, *Joint Supervisory Teams are required to review, at least annually, the arrangements, strategies, processes and mechanisms implemented by the institutions they supervise. The SREP assessment is continuously carried out. It forms the basis for a decision on the adequacy of the levels of capital and liquidity and for additional supervisory measures to be adopted at least on an annual basis and updated whenever necessary.*

More recently, a staggered approach has been conceived to foster a gradual harmonization of the SREP frameworks adopted at national level for the risk assessment of

[10] Nouy (2017).
[11] ECB (2018a).

Less Significant Institutions (LSIs) and align policies and methodologies to the ones used by the SSM for Significant Institutions.([12])

Chart 2 - The SREP in the SSM



Source: ECB Banking Supervision.

In line with the EBA Guidelines, the SSM SREP is organized around the four above-mentioned main elements, which cover all major drivers of bank riskiness: business model; governance and risk management; risks-to-capital; liquidity. The SSM recognizes that the overall risk profile of a financial institution is multifaceted and that the single risk factors are closely interrelated. For this reason, the four elements are looked at together when drawing up the overall assessment and preparing the SREP decision:([13]) in other words, adopting what the ECB calls a 'holistic approach'.

All four elements are assembled to get an overall assessment and, in turn, a consistent supervisory decision that might include the quantification of a capital add-on - divided into a binding requirement (Pillar 2 Requirement, P2R) and a non-binding component (Pillar 2 Guidance, P2G) - liquidity needs and qualitative measures.

[12] ECB (2018b).
[13] The SREP decision is a decision issued by the SSM at the end of the SREP cycle to communicate to the bank the outcome of its assessment as well as the areas of improvement identified.

As of today, further work is under way in two major and interrelated areas. First, the SSM is working to enhance the role of the ICAAP and develop a methodology to better integrate the supervisory, bank and forward-looking perspectives.([14]) In accordance with this objective, the SSM has launched a multi-year plan for ICAAP and ILAAP to foster improvements and set out supervisory expectations for banks' internal capital adequacy assessment processes. Second, consistently with the new EBA Guidelines on SREP, the SSM is strengthening the risk-by-risk assessment perspective in the SREP by leveraging banks' estimates of ICAAP. An enhanced risk-by-risk methodology will provide institutions with a higher degree of disclosure on how the supervisory measures adopted as a result of the SREP are determined so as to strengthen the link with the deficiencies identified in the supervisory assessment and incentivize banks to address them promptly.

Regarding the approach to the disclosure of Pillar 2 requirements, the SSM neither forces banks to nor prevents them from publishing them; however, a more productive interaction with other relevant legislation (i.e. the Market Abuse Regulation, which requires the disclosure of information considered price-sensitive), together with the approach of ESMA and the other national market authorities, might be carefully considered in order to reduce the current fragmentation of the approaches adopted so far.

[14] ECB (2018d).

The evolution of Pillar 2 in a nutshell			
	Basel	**EU approach**	**SSM approach**
Objective	Ensuring that banks have adequate capital to support all risks in their business	Ensuring that banks have adequate capital, also in stressed conditions	Ensuring that banks have adequate capital, also in stressed conditions
Nature	Pillar 2 is not a binding requirement; trigger or target ratios reflect such a flexibility	The Pillar 2 is divided in two major components: • P2R: Binding requirement, to be met at all times. The quality of capital used to meet the P2R reflects the same minimum composition of P1R (i.e. 56% CET1, 75% Tier 1) • P2G: Non-binding requirement, with the main objective to incorporate the results of stress testing. It can be covered by CET1 only	The Pillar 2 is divided in two major components: • P2R: Binding requirement, to be met at all times. It can be covered by CET1 only • P2G: Non-binding requirement, with the main objective to incorporate the results of stress testing. It can be covered by CET1 only
ICAAP	Key component	Key component; according to the EBA GL, the ICAAP is the starting point for the determination of capital requirements	Work is currently under way to further strengthen its role in the SREP
Stress testing	One of the tools of the ICAAP framework. Supervisory stress tests are not explicitly mentioned.	Both internal and supervisory stress tests can contribute to SREP assessment	For the time being, supervisory stress tests play a key role in the SREP Assessment, via Pillar 2 Guidance

Interplay with other requirements/ buffers	Not specified (capital buffers have been introduced in Basel 3)	Capital used to meet P2R cannot be used to meet any of the CRD IV buffers; the stacking order is structured as follows: binding requirements to be met at all times (P1R + P2R), Combined buffer requirement (subject to capital restrictions if breached), P2G (non- binding requirement)	Capital used to meet P2R cannot be used to meet any of the CRD IV buffers; the stacking order is structured as follows: binding requirements to be met at all times (P1R + P2R), Combined buffer requirement (subject to capital restrictions if breached), P2G (non- binding requirement)

2.4 The Pillar 2 framework in the UK and the US approach

The Pillar 2 framework has been developed quite differently in two major jurisdictions outside the SSM, i.e. the UK and US, specifically with regard to a number of aspects, such as the methodology, the degree of disclosure, the type of capital to be used to meet the Pillar 2 requirements and the incorporation of the results of stress testing.

The UK approach, set forth by the Prudential Regulation Authority, builds on two requirements under the SREP, which is consistent with the EU law as described above:

- Pillar 2A: binding requirement, with the purpose of covering risks that are either not captured or not fully captured under Pillar 1 (e.g. IRRBB and concentration risk);
- Pillar 2B/PRA buffer: non-binding requirement, with the purpose of covering risks to which the bank may become exposed over a forward-looking horizon (e.g. losses that may arise under a severe stressed scenario).([15])

The framework is similar to the SSM approach to the extent that it maintains a sufficient degree of flexibility: the Pillar 2A is the amount of capital that a bank should hold at all times in addition to Pillar 1; the PRA buffer serves the objective of increasing banks' resilience to stressed scenario so that institutions can continue to meet their minimum capital requirements during a stress period.

[15] Bank of England, PRA (2018a).

The PRA sets the Pillar 2A capital requirements in light of both the calculations included in a firm's ICAAP and the results of the PRA's own Pillar 2A methodologies. Setting a Pillar 2A capital requirement is subject to peer group reviews to ensure consistency of decisions across banks. Furthermore, a number of factors inform the size of the PRA buffer: the firm's leverage ratio; Tier 1 and total capital ratios; the extent to which potentially significant risks are not captured fully as part of the stress; weak risk management and governance. Unlike the SSM, Pillar 2A has to be met with at least 56% CET1, no more than 44% AT1 capital and no more than 25% Tier 2.([16]) On the contrary, the PRA expects firms to meet the PRA buffer with 100% CET1.

Importantly, the use of the PRA buffer does not represent a breach of capital requirements. However, where a bank has a PRA buffer in place, it should only use it to absorb losses or meet increased capital requirements if certain adverse circumstances materialize; in any case, institutions should immediately notify the PRA of their intention to use Pillar 2B and, accordingly, provide a restoration plan.

The UK approach differs from that of the SSM with regard to two further aspects. First, the stress test results are used not only to set the PRA buffer but also the countercyclical capital buffer and/or possible sectoral capital requirements: the competent national authorities (i.e. PRA and Financial Policy Committee) provide a good example of micro-macro coordination from this point of view. Second, PRA expects Pillar 2A to be publicly disclosed by banks, whereas Pillar 2B should remain confidential (unless banks are required to disclose it by law).

The US approach to the assessment of banks' risks relies on two distinct frameworks: the CCAR (Comprehensive Capital Analysis and Review) and a 'capital rule'.

The former, ([17]) which is targeted at the largest banks of the system (i.e. with total assets greater than $100 billion), consists of: i) a quantitative assessment, that is, the FED evaluates the ability of banks to withstand severe market conditions. In particular, in order to 'pass the test', banks' capital ratios have to remain above the minimum Pillar 1 requirements (CET1: 4.5%, T1: 6%, TC: 8%) and the minimum leverage requirement (T1 leverage: 4%; supplementary leverage ratio, applied only for 'advanced approaches' firms: 3%). In

[16] Bank of England, PRA (2018b).
[17] Board of Governors of the Federal Reserve System (2018a).

addition, planned capital distributions, such as any dividend payments and common stock repurchases, are subject to quantitative evaluation; ii) a qualitative assessment, i.e. the FED assesses banks' capital planning processes from a forward-looking perspective.

Unlike the European approach, the CCAR is a supervisory led top down exercise based on dynamic balance sheet, where banks' capital plans, including dividend distributions or common stock repurchases, are embedded into the assessment. If the CCAR results are not deemed adequate, the FED requires that the capital plan be resubmitted, presenting – for instance – amendments to dividend distributions or a capital issuance. Both quantitative and qualitative assessments are publicly disclosed. The CCAR assesses capital adequacy based on two stressed scenarios (severely adverse and adverse). Therefore, the CET1 capital to be held after the CCAR assessment is linked to the excess/shortfall with respect to the minimum P1 requirements.

As regards the latter (capital rule), a bank is subject to restrictions on its capital distributions and certain discretionary bonus payments if it does not maintain a buffer of CET1 capital of at least 2.5% above minimum risk-based capital requirements (expanded by any applicable GSIB surcharge and any applicable countercyclical capital buffer amount). Therefore, it does not envisage an explicit Pillar 2 capital expectation.([18])

3. Open issues

As previously discussed, Pillar 2 represents one of the most significant innovations in financial regulation in the last twenty years. Regulators and supervisors in all jurisdictions have been working intensively to define a proper operational framework; most features of the Basel framework have been confirmed at EU level. Nevertheless, a number of issues are still open, partly in light of the evolving policy discussion.

[18] A proposal issued by the FED in April 2018 aims to simplify the framework. The proposal would integrate the CCAR with the capital rule, creating an approach that would have the merit of eliminating the need for banks to meet simultaneously two different requirements. In particular, a stress buffer requirement would replace the 2.5% of standardized risk-weighted assets component of a firm's capital conservation buffer requirement. The GSIB surcharge and countercyclical capital buffer would also be kept under the new framework. Board of Governors of the Federal Reserve System (2018b).

3.1 Content of Pillar 2

Pillar 2 is often identified with capital add-ons, rather than as a process for identifying and addressing risks. This is likely due to miscommunication by supervisors and the media, not least because capital add-ons are easier to report than other remedial measures. The emphasis on capital in recent years is an understandable one in the light of policymakers' response to the financial crisis. Nonetheless, things might be different under 'normal' conditions where the entire range of potential supervisory measures should be implemented: as highlighted in the Basel rules, capital is a key response tool available to supervisors to address a bank's weaknesses, but cannot be used as a substitute for other measures. In a nutshell, capital is not a panacea, i.e. its function is not to fix flaws in areas such as governance and business models, nor does it help curb liquidity mismatches or risks stemming from a poor management system. Therefore, **Pillar 2 has to be interpreted in its broader sense.**

Indeed, supervisors should assess several of the bank's characteristics, i.e. risks which do not directly constitute risks to capital, such as the organizational structure and processes, the risk control and management framework, the business model and liquidity. For these elements, a separate quantification is clearly needed and might be facilitated by a risk-by-risk assessment perspective in the SREP (as the SSM has already embarked on). This is the direction the SSM has already taken. In case of deficiencies, a penalty could be imposed to incentivize banks to take appropriate mitigating action. To determine this penalty, the full range of supervisory powers should be used: requiring the strengthening of arrangements, processes, mechanisms and strategies; presenting a plan to restore compliance with supervisory expectations; restricting or limiting business activities that pose excessive risk to the soundness of an institution. A capital add-on should be considered only as a last resort, as an interim requirement to be reassessed based on the progress made by the institution.

3.2 Role of Pillar 2 capital requirements

Even though applied in a broad sense (i.e. not only capital-oriented), Pillar 2 *capital requirements* do represent an important part of the overall framework. As discussed above, in these post-crisis years Pillar 2 has helped to enhance the resilience of the banking system on top of (enhanced) Pillar 1 capital requirements. The debate has been very intense as to the adequate level of capital for banks.([19]) Nevertheless, what is discussed in this paper is the need to define, in a clear and uncontroversial way, the nature of all Pillar 2 capital measures, as opposed to Pillar 1.

In this regard, Pillar 2 should have two objectives: i) address risks to capital not covered or insufficiently covered by Pillar 1; and ii) incentivize banks to overcome a specific and well-defined deficiency. The former typically produces capital measures to be imposed in relation to risk exposures not included in the scope of Pillar 1 or insufficiently covered by it. As stated in the previous paragraph, the latter would instead serve as a contingent measure, to be reconsidered as soon as such deficiencies have been resolved in a satisfactory manner.

In such a context, **the risk that Pillar 2 becomes a new Pillar 1 must be avoided**. Pillar 2 should maintain a clear, bank-specific focus, i.e. covering idiosyncratic risks for which knowledge of individual banks is crucial. Therefore, if supervisory activity reveals a significant and persistent risk that stretches across the entire banking sector, the possibility for regulators of including it in a Pillar 1 framework should be carefully considered.

Having said that, it is essential that all tools available under Pillar 2 should be properly used, in line with their different objectives and degrees of flexibility: *Pillar 2 add-ons* should be seen as contributors to the binding capital demand and thus calibrated to reflect to the extent possible banks' actual exposure to risks; CRD 4 *capital buffers* as flexible tools to be accumulated before risks materialize and to be used the other way round (thus, not to be crystalized as binding capital requirements themselves); *Pillar 2 Guidance* as a supplementary, non-binding buffer aimed at covering potential risks stemming from hypothetical economic scenarios. The supervisory response (particularly in case of a breach) should thus be fine-tuned to take into account features and objectives of the different components of capital demand. Therefore, supervisors should be able to swiftly raise but also to lower the bar to respond to the bank's actions and their effect on the risk profile under scrutiny; accordingly, **the 'stacking order' of capital components must always be respected**, especially in the case of supervisory response to breaches.

[19] Views were (and still are) rather divergent: some claim that Basel 3 requirements point in the right direction to make the system safer; others that the reform is insufficient and bank capital must be raised to 30% or more of risky assets; finally, others argue that the combination of higher quality and quantity of capital required by regulators will make the banking business impossible and therefore jeopardize the economic recovery. See, among others, Admati and Hellwig (2013), Calomiris (2013), Ratnovski (2013) and Vickers (2017).

Some degree of flexibility might also be introduced as regards the quality of capital needed to cover Pillar 2 capital requirements. On the one hand, it is widely recognized that CET1 capital is the one with the strongest loss-absorbing properties; on the other hand, we cannot ignore that the Basel framework has always envisaged a broad spectrum of capital instruments, not limited to CET1 only, with the twofold objective of increasing the degree of banks' capitalization and developing a secondary market. In addition, the latter is also incentivised by the MREL framework, which will push banks in the coming years to issue capital instruments other than CET1 capital. In this context, the debate over the type of capital needed to cover Pillar 2 risks, especially those that have a limited impact if they materialize, is still open. This is also confirmed by the new CRD text, clearly stating that supervisory authorities will have the power to require that P2R must be met solely with CET1 capital where necessary and having regard to the specific circumstances of the institution.

3.3. Banks' responsibility and supervisory perspective

The Basel Accord states that the bank's management must be primarily responsible for understanding the nature and level of risks being taken on and how these risks relate to capital levels. To accomplish this, a sound incentive structure is necessary. Banks should be made more aware of the benefits of better integrating the internal capital adequacy process into risk management and strategic decision making. This integration is likely to produce, among other things, an enhanced monitoring of the capital adequacy system (so as to take preventive actions or determine capital allocation), an ICAAP-based risk-adjusted performance framework (that will enrich the risk culture and contribute to the determination of variable remuneration) and a clearer link between risks, capital adequacy and the strategic objectives of a bank.

The ongoing initiatives in the EU to further **improve the reliability of banks' ICAAP**, e.g. at the SSM level, seem to be moving in the right direction and are fully consistent with the Basel concept. In our view, this remains the sole feasible option to continue developing a risk-based prudential framework. It is fair to say that, for banks with a complex banking business, risks cannot be captured by simplified supervisory models. This does not mean that supervisors should abdicate their role. Indeed, they need to intensify their assessment. This should be done via a targeted interaction with institutions to improve the quality of the ICAAP estimates, by launching supervisory campaigns (e.g. on-site inspections, deep dives, thematic reviews) to gain a better understanding of banks' capital allocation process, and through a rigorous process for challenging banks' estimations to prevent opportunistic behaviours. In this regard, proper tools for understanding, assessing and back-testing banks' estimates are needed. Such tools should be able to identify potential outliers, triggering discussion about the possible underlying reasons in the context of the supervisory dialogue: they should never be applied mechanistically nor should they substitute supervisory judgement. An adequate balance between flexibility (that accommodates a tailor-made calculation of the risks) and comparability (that enables a level playing field) is therefore needed.

3.4 Disclosure

The debate on Pillar 2 disclosure centres around two distinct dimensions: the disclosure of the methodology used by supervisors to assess banks' risks and the disclosure of the results of the supervisory assessment (SREP).

As for the first dimension, in recent years most supervisors have increased the degree of disclosure of their SREP methodology. With regard to the SSM, in 2018 the ECB published a comprehensive version of the SSM Supervisory Manual (ECB, 2018b), although is it an abridged version of the text used by supervisory analysts. Disclosure is meant to accomplish two objectives: first, accountability towards the market and the relevant stakeholders, which is particularly important when a degree of judgement is exercised in making the supervisory assessment; second, the need to make banks aware of the rationale underlying the supervisory assessment so they can improve and be encouraged to correct possible deficiencies.

With regard to the second dimension, the approaches currently adopted across jurisdictions vary greatly. UK authorities expect banks to communicate the P2A to the public, the US supervisors publish CCAR results (playing a key role in the determination of the capital requirements), while the SSM neither prevents nor dissuades institutions from disclosing SREP capital requirements, leaving whether to do so to the banks' discretion. At the same time, the European Market Abuse Regulation (MAR) states that institutions with publicly traded securities are expected to evaluate whether Pillar 2 requirements meet the criteria of inside information (e.g. price-sensitive) and should be publicly disclosed.

The issue is critical from a supervisory perspective: while transparency fosters accountability towards the market and ensures a level playing field across banks, full disclosure of the Pillar 2 components would expose weak banks to severe market discipline,([20]) further hampering their ability to access capital markets. Therefore, a clear trade-off between accountability and negative reactions on the market comes into play.

In the light of the above, the competent authorities (e.g. the ESMA in Europe) should take a clear stance on this issue, in part to avoid that national supervisors and banks take different approaches. Indeed, institutions would have the incentive to fully disclose the SREP assessment only if they thought it would be beneficial in terms of share price or lower funding costs. In addition, based on different interpretations of the relevant regulation (e.g. 'price-sensitive information' as defined in the MAR in Europe), banks could be forced to publish Pillar 2 information, hampering the level playing field. A possible way forward is to require banks to disclose the binding Pillar 2 requirement (P2R), given its direct impact on the MDA determination and thus its importance to investors.

3.5 Stress testing

In recent years stress testing has taken on an increasingly important role in banking, going from being an internal risk management tool for assessing the potential vulnerability of a financial institution under hypothetical conditions to become one of the tools used by supervisors to strengthen their forward-looking view on banks.([21]) The 1996 Market Risk Amendment and the 2004 Basel 2 Accord confirmed the role of stress testing in prudential regulation, both in a Pillar 1 context (i.e. to set minimum capital to be held by banks to cover potential losses under adverse scenarios) and in the Pillar 2 framework. As for the latter, several jurisdictions – such as the US, UK and the euro area – make use of supervisory stress tests to evaluate capital adequacy and/or to set capital buffers above minimum capital requirements.

In the EU this tool has been used in very different ways over time ([22]): starting as a recapitalization exercise (as it was in 2011 and 2014), its nature has changed, becoming a

[20] European Parliament (2018).
[21] Financial Stability Institute (2018).
[22] Enria (2018).

key tool for identifying potential vulnerabilities in the banking system (as it was in 2016 and 2018) and contributing to the (non-binding) Pillar 2 Guidance for banks. In addition, the results of stress testing have an express role in the crisis management framework under the BRRD, in particular to determine whether a precautionary recapitalization is warranted. Stress testing is therefore a powerful tool that can serve a number of purposes. As a result, a clear idea of what the objectives should be and what the limitations are of stress testing in a Pillar 2 context is needed.

Regarding the objectives, it is widely accepted that the SREP assessment should incorporate a forward-looking perspective, which is not necessarily captured by ordinary supervisory models (i.e. Risk Assessment System in the SSM taxonomy). The definition of an adequate supervisory response to the specific deficiencies of a bank over a pre-defined time horizon cannot disregard the potential evolution of all risk profiles. At the same time, such exercise can be used to gather more specific information on the bank's risk management capability system. As for the limitations, a large range of empirical literature is available on the shortcomings of stress testing models,([23]) serving to emphasize that – regardless of the specific methodologies used – stress tests are always based on models, which are *by construction* a simplified representation of what could happen in the near future and therefore capture a high degree of uncertainty: scenarios, data, metrics, communication and risk managers' skills are among the major drivers that contribute to determining overall reliability of a stress testing framework.

The idea of using stress testing in a Pillar 2 context goes back to Basel, although within the ICAAP framework and not as an explicit supervisory tool. Nevertheless, as used in the euro area, stress testing methodologies in the ICAAP are not advanced enough at this stage. So called 'bottom-up' supervisory stress tests somehow fill the gap, even though the pros and cons have to be kept clearly in mind in using the results.([24]) On the one hand, all banks in the same jurisdiction are subject to the same methodology and scenarios, and are therefore assessed in a fully comparable way; in addition, the quality of submitted data and information is closely scrutinized and challenged by supervisors to ensure the reliability and

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[23] Financial Stability Institute (2018), Thun (2012).

[24] In this type of exercise, the supervisors define the scenario and the methodology, while banks are allowed to use their own models to project the results, subject to quality assurance. As an alternative to the bottom-up approaches, the supervisors can make use of top-down exercises; in this context, supervisors collect data to use in their models to assess banks' performance under stress, with limited involvement of institutions.

the comparability of the results. On the other hand, common methodologies and scenarios (even though potentially calibrated to reflect some specific characteristics, such as those of the country) cannot take into consideration all idiosyncratic risks that banks are exposed to; in addition, if the 'static approach' is adopted, no management actions by the bank in response to the adverse scenarios can be considered, therefore making the exercise less realistic.

A supervisory stress test – from a bottom-up perspective – seems to still be the most valuable option at this juncture, since banks are incentivized to further improve their own data aggregation and stress test capabilities. However, in the near future, following further development of banks' internal stress testing, we would expect an approach combining the two perspectives (supervisory exercises and banks' ICAAP frameworks) to be taken. Such a medium-term solution could better inform the supervisory assessment, integrating institution-specific features with the current stress testing approach. In particular, with the ICAAP framework, the bank would tailor methodologies and scenarios to its own risk appetite and business strategy; accordingly, supervisors would gain a comprehensive view of its vulnerabilities that might not be fully captured under the bottom-up perspective.

In any case, **no automatic incorporation of stress test results should be considered in a Pillar 2 context**. Currently, the EBA GL provide for a mechanistic rule to derive the P2G, although some adjustments can be made. We believe that supervisory judgement must be fully exercised to this regard, in part to ensure that, in addition to having a complementary view on capital adequacy, both banks and supervisors are in a position to extract informative value from stress testing (from a qualitative perspective as well) and to better inform their respective (management and supervisory) actions.

4. Conclusions

Pillar 2 represents one of the major innovations in international regulation in the last twenty years. The Basel principles, introduced in the 2004 Accord, have been confirmed through the subsequent development of the Basel framework: focus on risks, incentives for banks to improve risk management, an enhanced dialogue between banks and supervisors. Nevertheless, the concrete implementation of those principles has been rather heterogeneous across jurisdictions, in part owing to different institutional and economic contexts as well as market developments in recent years.

In general terms, the content of Pillar 2 has mutated from the original Basel concept. This is not surprising given that the implementation of Pillar 2 has coincided with the eruption of the financial crisis and the greatest regulatory reform of the financial sector in the last few decades.

Indeed, the Basel principles were designed in a pre-crisis environment, when a set of key concepts seemed to be rock solid: market-friendly regulation and (in some cases) light-touch supervision, reliance on banks' self-assessment, and the idea that major banking risks are adequately covered by Pillar 1 capital requirements and that possible capital add-ons can intervene in a flexible way only when the latter are insufficient. In the post-crisis environment, Pillar 2 implementation (at least in the EU) has moved in a direction where: Pillar 2 requirements are as binding as those of Pillar 1, capital measures represent the main response to banks' shortcomings, it has been a struggle to integrate banks' self-assessments (ICAAP) into the framework, and Pillar 2 risks that are not covered in Pillar 1 are material.

This approach is understandable for the time being, given the context in which supervisory authorities have had to intervene to make the system safer. The high-level framework for Pillar 2 designed by Basel has been used by supervisors in a very pragmatic way in the aftermath of the financial crisis to enhance their action with regard to banks' risks. This confirms per se the soundness of the original Basel idea. Against this background, the open issues identified in the paper should be closely monitored and possibly fixed in order to avoid Pillar 2 losing its key properties: flexible, comprehensive and well balanced across two dimensions, i.e. bank's vs supervisor's perspective and current vs forward-looking approach. At the same time, special attention should be paid to ensure that supervisory measures are comparable in order to preserve one of the main objectives of international regulation, which is of special importance within the Euro area, namely, a level playing field.

In conclusion, the Pillar 2 framework has proven to be resilient in *bad times*, with a due level of flexibility to allow for more severe measures. The same margin for flexibility is expected to be used to adapt the supervisory response to the improved economic environment.

References

Admati A., Hellwig M. (2013), *The Bankers' New Clothes*, Princeton University Press.

Bank of England, PRA (2018a) *The Prudential Regulation Authority's approach to banking supervision*.

Bank of England, PRA (2018b) *The Internal Capital Adequacy Assessment Process (ICAAP) and the Supervisory Review and Evaluation Process (SREP).*

Basel Committee on Banking Supervision (1999), *A new capital adequacy framework*, Consultative document.

Basel Committee on Banking Supervision (2001), *Basel II – The new Basel capital accord*, Second consultative document.

Basel Committee on Banking Supervision (2004), *International Convergence of Capital Measurement and Capital Standards*.

Basel Committee on Banking Supervision (2009), *Principles for sound stress testing practices and supervision*.

Basel Committee on Banking Supervision (2015), *Corporate Governance Principles for Banks*, July.

Basel Committee on Banking Supervision (2016), *Regulatory Consistency Assessment Programme (RCAP) - Assessment of Basel III G-SIB framework and review of D SIB frameworks - European Union*.

Basel Committee on Banking Supervision (2017), *Supervisory and bank stress testing: range of practices*.

Board of Governors of the Federal Reserve System (2018a), *Comprehensive Capital Analysis and Review 2018: Assessment Framework and Results*.

Board of Governors of the Federal Reserve System (2018b), 'Staff memo on Proposed rule regarding the stress buffer requirements'.

Calomiris C. (2013), 'Is a 25% bank equity requirement really a no-brainer?', voxeu.org.

Cannata F., Quagliariello M. (2009), 'The role of Basel II in the subprime financial crisis: guilty or not guilty?', Carefin Working Paper.

Committee of European Banking Supervisors (2006), *Guidelines on the Application of the Supervisory Review Process under Pillar 2*.

Committee of European Banking Supervisors (2010), *Guidelines on Stress Testing.*

Enria A. (2018), ‘What we have learnt from EU-wide stress tests’, National Bank of Romania, speech by the Chairperson of the European Banking Authority, 15 November.

European Banking Authority (2014), *Guidelines on common procedures and methodologies for the supervisory review and evaluation process (SREP).*

European Banking Authority (2016), *Report on convergence of supervisory practices*, July.

European Banking Authority (2017a), ‘EBA Pillar 2 Roadmap’, April.

European Banking Authority (2017b), *Report on convergence of supervisory practices*, November.

European Central Bank (2018a), *SSM Supervisory Manual – European banking supervision: functioning of the SSM and supervisory approach*.

European Central Bank (2018b), *SSM LSI SREP Methodology*.

European Central Bank (2018c), *SSM thematic review on profitability and business models*, September.

European Central Bank (2018d), *ECB Guide to the internal capital adequacy assessment process (ICAAP)*, March.

European Central Bank (2016), *SSM supervisory statement on governance and risk appetite*, June.

European Parliament (2018), ‘Review of the 2017 SREP results’.

Financial Stability Institute (2018), ‘Stress-testing banks - a comparative analysis’, *FSI Insights on policy implementation*, No. 12.

Group of Thirty (2013), ‘A New Paradigm: Financial Institution Boards and Supervisors’, October.

Huizinga H. (2017), ‘Review of the 2017 SREP results’, European Parliament.

Jackson P. (1999), ‘Capital requirements and bank behavior: the impact of the Basel accord’, BIS Working Papers, No. 1, April.

Lautenschlager S. (2017), ‘Bank business models: keeping pace?’, Seventeenth Annual Conference on Policy Challenges for the Financial Sector, Washington D.C., 1 June.

Nouy D. (2017), ‘Banking union – safe and sound finance for Europe’, Speech by the Chair of the Supervisory Board of the ECB, at the RZB EU Sky Talk, Vienna, 2 May.

Nouy D. (2018), ‘Good governance - an asset for all seasons’, speech by the Chair of the Supervisory Board of the ECB, Amsterdam, 21 June.

Ratnovski L. (2013), ‘How much capital should banks have?’, voxeu.org.

Resti A. (2018), ‘Review of the 2017 SREP results’, European Parliament.

Saidenberg M., Schuerman T. (2003), ‘The New Basel Capital Accord and Questions for Research’, Federal Reserve Bank of New York.

Thun C. (2012), ‘Common Pitfalls in Stress Testing’, Moody’s Analytics.

Vickers J. (2017), ‘Banking reform nine years on’, voxeu.org.