SPA/2021/02 May 2021

SEACEN POLICY ANALYSIS

MAKING SENSE OF PILLAR 2 (PANDEMIC EDITION)

Glenn Tasky

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Level 5 Sasana Kijang, Bank Negara Malaysia,
2 Jalan Dato' Onn, 50480 Kuala Lumpur, Malaysia
Tel. No.: +603 9195 1888
Fax. No: +603 9195 1801
Email: enquiries@seacen.org

For enquiries, please contact:
Glenn Tasky
Director
Financial Stability and Supervision & Payment and Settlement Systems (FSS&PSS)
The SEACEN Centre
Email: glenn@seacen.org

Notes:

The SEACEN Centre recognizes "China" as People's Republic of China; "Hong Kong, SAR" as Hong Kong, China; and Korea as "Republic of Korea".

FOREWORD

This paper is the fifth in a series of publications titled SEACEN Policy Analysis. The series is intended to provide in-depth analysis of topical policy issues in macroeconomics, monetary policy, financial stability, and payments systems, with a particular emphasis on contextualizing these issues to the SEACEN stakeholder space. The papers look at the contours of cutting-edge issues that arise with ever-changing macroeconomic environments and technological possibilities and focus more on policy options than on more technical analysis such as econometric modeling.

The current paper, "Making Sense of Pillar 2 (Pandemic Edition)," by Glenn Tasky, Director of Financial Stability and Supervision / Payment and Settlement Systems at The SEACEN Centre, attempts to demystify The Second Pillar – The Supervisory Review Process of the Basel II/III Capital Standards by demonstrating that there are very few tasks in a Pillar 2 review that are not already contained in a fully-articulated program of risk-based supervision. Throughout its 15-year history, Pillar 2 has been implemented by jurisdictions around the world in a great variety of ways, ranging from no implementation to a checklist approach to a voluminous review of banks' risk management policies, processes, procedures, and limits. Depending on the jurisdiction, supervisory authorities may recommend or even require higher capital and liquidity buffers than the Pillar 1 and other minimum requirements, or they may not – or they may not even address liquidity at all in Pillar 2. But although Pillar 2 guidance as it has evolved has been unclear, underlying it is a deep appreciation for the need for supervisors to continue a dialogue with the banks under their supervision concerning the sufficiency of capital and liquidity with respect to the risks that the banks have been taking. After all, sufficient capital and liquidity, together with proper risk management, gives resiliency to the banks in the face of a wide variety of unfavorable developments in the macroeconomy and the state of competition in the financial sector.

It is hoped that the paper may serve as a starting point for supervisory authorities in the SEACEN stakeholder space to continue to apply the valuable requirements of Pillar 2 even under the COVID-19 pandemic conditions. It remains a very difficult time as the world tackles this unprecedented health crisis and its toll on human lives along with its economic and financial consequences. At the SEACEN Centre, we continue to maintain a flexible strategy by providing online learnings of the pandemic, while carrying out policy analysis of the responses on the macroeconomic, monetary, and financial front. We stand ready to provide assistance to members in building and strengthening their capacity during this time.

Mangal Goswami
Executive Director
The SEACEN Centre

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ABSTRACT

This paper takes the reader through the history of Pillar 2 of Basel II/III, draws parallels between Pillar 2 and the (only slightly) broader concept of risk-based supervision, proposes an application of Pillar 2 that can be conducted under pandemic conditions, advocates for the institutionalization of the Internal Liquidity Adequacy Assessment Process (ILAAP) during the quiescent liquidity conditions of the pandemic, and reviews a few Pillar 2 documents in selected Asian jurisdictions.

TABLE OF CONTENTS

MAKING SENSE OF PILLAR 2 (PANDEMIC EDITION)

Introduction and Executive Summary: congruence between risk-based supervision and Pillar 2

It has been fifteen years since the Basel Committee on Banking Supervision (BCBS) released Basel II: International Convergence of Capital Measurement and Capital Standards – A Revised Framework in November 2005, containing The Second Pillar – Supervisory Review Process, or Pillar 2. Banks and their supervisors (both central banks and stand-alone banking supervisory authorities, collectively "supervisory authorities" or SAs) have indeed had a long time to implement Pillar 2, but over the past decade and a half, three characteristics of the adoption period have stood out:

- **Especially compared with Pillars 1 and 3, there is a scarcity of materials guiding banks and their supervisors in operationalizing the general principles of Pillar 2.**
- **Partially as a result of that scarcity, there is a noticeable heterogeneity in the forms in which Pillar 2 has been implemented across jurisdictions**.
- **As it has been fleshed out in many jurisdictions, Pillar 2 has become very close to a practical, implementing "manual" of risk-based supervision (RBS).**

What makes Pillar 2 so open to various interpretations? After all, it seems that Pillar 2 specifies only two main questions to be answered first by banks, and then by their SAs, with much supporting detail and analysis, some of it redundant and repetitive:

- **Does the bank have enough capital relative to the risks it has undertaken, and if not, how much more is required? What are the threats to the bank's capital now and in the near future? Are these threats acknowledged and addressed by the bank?**
- **Does the bank have enough liquidity relative to the risks it has undertaken, and if not, how much more is required? What are the threats to the bank's liquidity now and in the near future? Are these threats acknowledged and addressed by the bank?**

As I argue in this Policy Analysis, part of the problem is that Pillar 2 is presented, and usually spoken about, as an "add-on," some extra supervisory task above and beyond what is required of an SA that practices RBS. Given that the aim of Pillar 2 is for SAs to reassure themselves that the bank has adequate capital (and, after Basel III, adequate liquidity) relative to the risks that it has assumed, what more does Pillar 2 ask for than what is already included in a fully-articulated RBS regime? Put differently, couldn't we say that Pillar 2, instead of being a separate supervisory program, is instead a substantially complete written-down constitution of RBS principles and procedures? Would it be correct to say that Pillar 2 and RBS are two sides of the same proverbial coin?[1]

I believe the answer is yes. If an SA is practicing RBS comprehensively and completely, then it is probably automatically fulfilling the demands of Pillar 2, whether or not it is consciously doing so.

And, turning back to the pandemic and what SAs should do in 2021, I believe that Pillar 2 reviews should not be delayed into 2022, but instead should be performed in an abbreviated fashion, focusing on:

- **An accurate inventory of current non-performing loans and loan-loss allowances, together with a projection of both until the end of 2022 and the implications for capital adequacy, and**

1. As a largely semantic point, I also think that there is no material difference, and no point in splitting hairs of difference, between Pillar 2, the Supervisory Review Process, and the Supervisory Review and Evaluation Process (the term the European Union uses for the SRP).

- **A start by the banks on the Internal Liquidity Adequacy Assessment Process, as an analogue and complement to the Internal Capital Adequacy Assessment Process, already a well-established exercise for the banks under Pillar 2.**
- **Continuous supervisory dialogue with directors and senior officers of banks, in person if possible, but remotely if necessary.**

Brief history of Pillar 2

Pillar 2 has a history of more than 15 years, with its implementation starting in 2005, thereby predating the Great Financial Crisis (GFC). During and after the crisis, however, international standard-setters and SAs paid more attention to Pillar 2 as part of an increased emphasis on risk management, the evaluation of which is central to RBS.

Over time, SAs in many jurisdictions expanded the role of Pillar 2 to include supervisory guidance (and later supervisory demands) on the amount of capital that must be held by individual banks, and continuing through in the 2010s, expanded the writ of Pillar 2 to include a focus on liquidity. A parallel approach to evaluating capital and liquidity adequacy is the hallmark of Pillar 2 in the early 2020s.

(See the Appendix for a more detailed description of the history of Pillar 2.)

Carrying out Pillar 2 under 2021 pandemic conditions

Knowing the history of Pillar 2 and having established it as an integral part – perhaps the major part -- of RBS, SAs should feel confident about carrying it out during the pandemic. Admittedly, some of the core supervisory activities contained in Pillar 2 in its most comprehensive formulations, such as evaluating the quality of a bank's risk management are difficult to perform when on-site examinations are conducted in an abbreviated fashion or not at all.

To begin, SAs should keep in mind in 2021 that risks to capital and the imperative of strong risk management have only intensified since the onset of the pandemic. (Risks to liquidity are not as pronounced during the current period, as I will explain below.) Therefore, the central order of business in a Pillar 2 evaluation of a bank should still include answering the fundamental questions posed at the beginning of Part 1 of this blog post, with one extra:

- Is the bank's business model still viable in a post-pandemic world?
- Does the bank have enough capital relative to the risks it has undertaken, and if not, how much more is required? What are the threats to the bank's capital now and in the near future? Are these threats acknowledged and addressed by the bank?
- Does the bank have enough liquidity relative to the risks it has undertaken, and if not, how much more is required? What are the threats to the bank's liquidity now and in the near future? Are these threats acknowledged and addressed by the bank?

Assessing the viability of the bank's business model in a post-pandemic world. Understanding and evaluating a bank's business model is an activity that can largely be performed off-site, and it fits squarely within the Pillar 2 ambit of activities. The COVID-19 pandemic has set in motion or accelerated some potentially irreversible restructuring and rechanneling of activity, not only within the financial sector, but also within the broader economy.

There are many dimensions to categorizing a bank's business model, and many combinations of characteristics that could be used: corporate v. retail in lending, deposit-based v. market-based in funding, dependent on net interest income v. dependent on commission and fee income, and so forth. But in the pandemic context, the most important consideration is the impact of the many changes on the bank's ability to remain profitable. Although Pillar 2 focuses mainly on capital and liquidity, profitability is always in the background as a major factor in a bank's financial strength, contributing to both capital and liquidity adequacy. Therefore, a business model review for Pillar 2 should ask the following questions:

- Is the bank's business model dependent on net interest income to the extent, and in such a way, that it will find it difficult to stay profitable over another two or three years of ultra-low interest rates?

- Is the bank's business model dependent on net interest income to the extent that its profitability may be eroded by a possible significant drop in outstanding loans caused by a poor recovery, loss of loan demand to online marketplace lenders, and/or significant increase in nonaccrual loans?

- Is the bank's business model dependent on fee and commission income from payment services to the extent that profitability will be eroded by a pandemic-accelerated shift to nonbank payment system providers?

- Is the bank's lending and provision of other financial services concentrated in industries that will continue to be damaged by the pandemic for years to come, such as the travel, hospitality, shipping, commercial real estate, and other vulnerable sectors?

If the answer to any of these questions is yes, the bank's business model may not be viable. The SA should note that in its Pillar 2 review and push for a gradual transition toward a more viable model.

Assessing capital adequacy under pandemic conditions. Not surprisingly, credit risk (and to a lesser extent, operational risk) are the primary threats to capital for most banks across most jurisdictions. To fulfill the mission of Pillar 2, a logical course of action for SAs would be to determine whether or not the bank

- Has accurately reported its *current* level of non-performing loans (NPLs) and accurately calculated its *current* required loan-loss allowances (LLAs),

- Has conscientiously *projected* its NPLs and required LLAs until the end of 2022 under various scenarios that take into account

    - Realistic assumptions about the level of direct government support to households and firms,

    - Plausible projections of the continuation of payment holidays,

    - A clear statement and incorporation of the bank's explicit policies on loan restructuring and rescheduling into the NPL projections,

    - A firm stance against restructuring loans in such a manner so that the modified terms do not require any payment of principal or interest for an extended period of time (say, three years or more), and

    - A transparent and consistently-applied methodology of setting LLAs (according to IFRS-9 and regulatory policies), and

- Has identified sources of additional capital, from retained earnings and share issuance, to support the bank's risk profile through the end of 2022.

It may be necessary for SAs to assist banks in preparing these projections by providing standard scenarios for the expected level of government support and the continuation of payment holidays, together with a suggested methodology for utilizing these scenarios to produce the NPL and LLA projections.

Assessing liquidity under pandemic conditions. So far during the pandemic, maintaining liquidity has not been a challenge for most banks; indeed, the opposite has been true, with robust customer deposit inflows and central banks standing ready to provide banks with whatever liquidity they need under stressed conditions that, fortunately, have not materialized.

Even so, SAs may elect to require banks to take advantage of this relatively quiescent period to introduce to their banks (if they have not done so already) the concept of the ILAAP. Setting initial, simplified standards for the ILAAP and working with the banks on the quality of their initial submissions will reassure SAs that the banks are taking steps forward in measuring and managing their liquidity risk, even under the challenging conditions of the pandemic.

Even in a simplified format, supervisory expectations for the ILAAP can be quite daunting. Here is, it is hoped, a useful summary:

<u>**Main objective of ILAAP**</u>

As the SA develops its ILAAP requirements and criteria for supervisory assessment of the ILAAP, it is worth keeping in mind the main objective of the ILAAP:

The main objective of the ILAAP is for the bank to determine whether it has an adequate buffer of unencumbered HQLA, and a sufficiently

prudent funding profile, to ensure that there is no significant risk, either in the short term, medium term, or long term, that required payments cannot be met. If the bank determines that the current buffer is inadequate, the ILAAP must include a plan to bring the buffer up to a sufficient level, reduce the risks, or both.

Notice that the burden is on the bank, not on the SA, to determine the adequacy of their current liquidity buffer. The SA's job is to evaluate the authenticity of the bank's calculations and methods in arriving at this conclusion.

Limitations of ILAAP

Although the ILAAP is an essential component of liquidity risk management for the banks, and it must be evaluated as such by the SA, it is not the only component. When the SA finishes its analysis, assigns a rating to net liquidity risk (if given separately, sometimes known as the "L-SREP"), and monitors compliance with any additional liquidity requirements it might impose, the following should be kept in mind:

The additional liquidity requirement must not be considered as the only measure capable of coping with banking risks. It is indispensable that attention also be paid to reinforcing internal control, improving the quality of risk management, defining internal limits and applying them, as well as establishing prudent policies for provisioning and reserves. An added buffer of HQLA cannot of itself be a substitute for the resolution of problems that are inherent to internal control or risk management.

Rather than simply producing a document to be reviewed by the SA, important as this may be, banks must have well-developed internal controls, risk management, limits that are enforced, and policies for maintaining liquidity buffers. It is not enough simply even to possess an ample stock of high-quality liquid assets (HQLA), without a process to determine whether this amount is adequate and controls to ensure that these HQLA are not required to be used up in a liquidity crisis that no one saw coming. After all, the holding of HQLA is expensive for the bank in terms of foregone income, and these assets must provide real protection, in order for the benefits to outweigh the costs.

Main supervisory expectations of ILAAP

The main supervisory expectations of a bank's ILAAP can be summarized as the following:

- The ILAAP must result in a clear and formal statement on liquidity adequacy, at least once a year.
- The calculations must be credible and understandable.
- The ILAAP must show that required payments will be able to be made under both normal and stressed conditions, in the short-term (liquidity risk view), and medium-term and long-term (funding risk view).
- The stressed conditions considered must be severe, but plausible.
- The ILAAP must take into account both generalized and bank-specific liquidity stress situations.
- The ILAAP must be consistent with the bank's business model and strategic plan.

Liquidity metrics in the ILAAP

The most important liquidity metrics in the ILAAP will be the LCR and NSFR. The LCR addresses liquidity risk under a stressed scenario, and the NSFR addresses funding risk, also under a stressed scenario. NBU should require these two ratios to be calculated and explained in the ILAAP, regardless of their status as regulatory ratios. The bank should also disclose its established limits for these key ratios, which may be above the regulatory requirement (if any), but not below.

Other liquidity metrics that should be calculated and explained in the ILAAP, with limits disclosed, are the following:

- ***Wholesale funding to total liabilities.*** Wholesale funding, in this context, can be defined as funding obtained from all sources except individuals and small businesses. "Large" deposits from individuals could also be included in wholesale funding.
- ***Retail funding, plus wholesale funding with remaining maturity > 1 year, to total liabilities.*** This deposit measure, which is often called "core" or "stable" deposits, has many uses and can

be defined in different ways. Retail funding, in this context, can be defined as funding obtained from individuals and small businesses. "Large" deposits from individuals could be excluded from retail funding.

- ***Secured funding to total liabilities.*** Secured funding includes collateralized borrowing from other banks or the central bank (including repo operations).
- ***Concentration of funding.*** The most important dimension of concentration is by source of funding. One possible measure is the ratio of funding obtained from the top 10 suppliers to total liabilities. Another possible measure is to define a "significant" counterparty as any supplier of more than 1 percent of the bank's total liabilities, and then calculate the share of total liabilities obtained from significant counterparties. If there are certain types of funding that are viewed as inherently risky for banks in that jurisdiction (product-based concentration), then the share of total liabilities represented by that risky type or types can also be calculated.

If the bank has a risk appetite statement (RAS), the liquidity metrics and limits in the ICAAP should be consistent with those in the RAS.

<u>Definition of HQLA as the liquidity buffer</u>

When the SA has settled on a definition of HQLA, as used in the LCR, that same definition should be used in the bank's ILAAP as the liquidity buffer. The key characteristic is that all of the components of HQLA should be available to be freely used in the making of required payments. ***The assumption is that the liquidity buffer really is used; therefore, the SA needs to decide if the reserve requirement for monetary policy purposes is available to banks in a rundown of liquid assets.*** Of course, this definition excludes any encumbered assets.

<u>Definition of counterbalancing capacity</u>

In the context of liquidity management, "counterbalancing capacity" means the sources of funds that can be used to make payments, without incurring excessive costs. HQLA, the defined liquidity buffer, can be viewed as a subset of counterbalancing capacity. Beyond HQLA, the bank should specify imperfect substitutes for HQLA in its ILAAP, such as assets that are ineligible for HQLA but still possess a degree of liquidity, a documented ability to raise unsecured funds, draw on commitments to borrow from other banks that it may have entered into, credibly roll out a marketing campaign to quickly gather retail deposits at reasonable cost, and other means.

<u>Survival horizon analysis</u>

Although there are many ways to demonstrate the adequacy of a bank's liquidity buffer, one of the best ways is through survival horizon analysis. It combines the basic, essential task of projecting net cash flows – probably the most essential task of routine liquidity risk management – with the stark imperative of a deadline, at which HQLA can be said to have "run out."

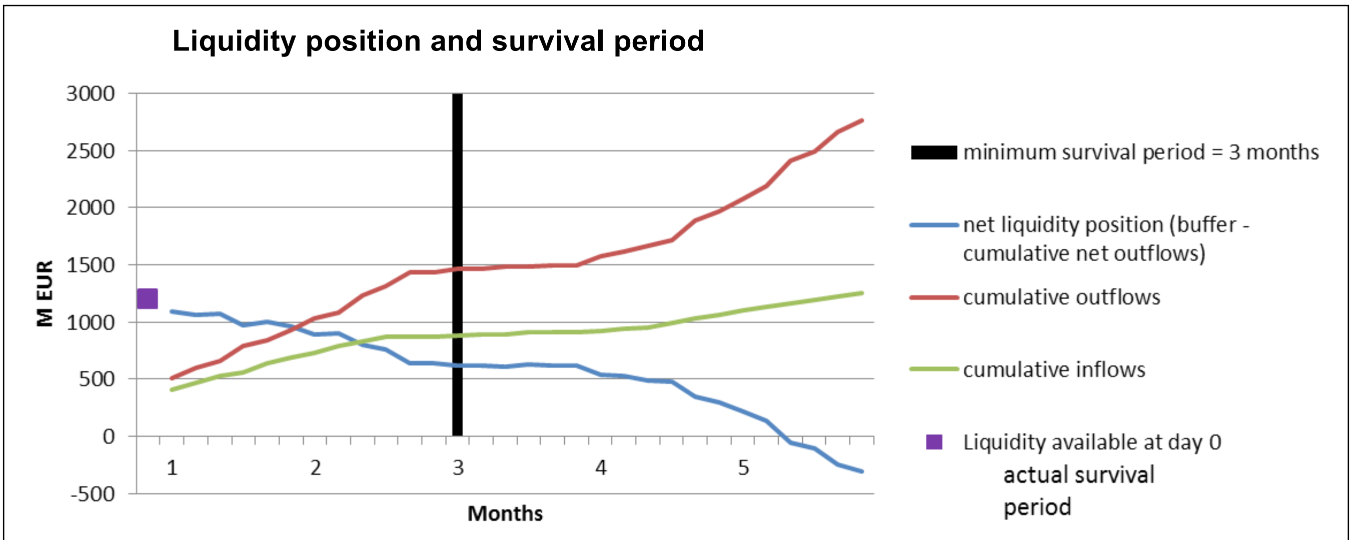
In constructing the projected net cash flows, the bank must take into account not only expected inflows and outflows of deposits and other borrowed money, loan originations and loan repayments, and cash income and cash expenses, but also expected drawdowns on lines of credit offered to customers and settlement of other off–balance sheet commitments. The projected loan repayments, in particular, must be realistic, given the bank's current asset quality position, including the quantity of non-performing loans.

The EBA, in its December 2014 SREP document, provides a succinct example of a survival horizon analysis:

Table 11. Illustrative example of benchmark for liquidity quantification

Time horizon in months	cumulative outflows	cumulative inflows	cumulative net outflows	net liquidity position (buffer cumulative net outflows)	Liquidity available at day 0
					1,200
1	511	405	106	1,094	
	598	465	133	1,067	
	659	531	128	1,072	
	787	563	224	976	
	841	642	199	1,001	
	933	693	240	960	
2	1,037	731	306	894	
	1,084	788	295	905	
	1,230	833	397	803	
	1,311	875	435	765	
	1,433	875	558	642	
	1,440	876	564	636	
3	1,465	882	583	617	
	1,471	889	582	618	
	1,485	891	594	606	
	1,485	911	574	626	
	1,492	916	576	624	
	1,493	916	577	623	
4	1,581	918	663	537	
	1,618	945	673	527	
	1,666	956	710	490	
	1,719	993	726	474	
	1,885	1,030	856	344	
	1,965	1,065	900	300	
5	2,078	1,099	980	220	
	2,192	1,131	1,061	139	Survival period
	2,415	1,163	1,252	-52	
	2,496	1,194	1,302	-102	
	2,669	1,224	1,445	-245	
	2,764	1,253	1,511	-311	

Figure 7. Illustrative example of setting specific quantitative liquidity requirement



In the above example, the bank will run out of liquidity in just over five months, which would be considered by most banks and bank regulatory authorities to be an unacceptably short timeframe (12 months is a safer minimum). There are too many negative events that could take place over the next five months to deplete the liquidity buffer before the bank could take steps to stem the drainage. In practice, most banks would set 12 months as the minimum limit in their risk appetite framework, but would display an survival horizon far in excess of 12 months.

Of course, in evaluating the survival horizon analysis, the SA should pay close attention to the veracity of the cash flow projections. These cash flow projections can themselves be stressed, to determine a survival horizon under adverse and even extremely adverse conditions.

Funding plan

The bank should be required to include in its ILAAP a detailed funding plan, in which the bank projects the evolution of the liability side of the balance sheet over the next three years. Ideally, the projections should be made quarterly, but at least twice a year.

In this funding plan, the "T-0" period should be the current balance sheet. The funding plan must specify the projected level of total assets at each future measurement date, in order to specify the sum of liabilities and capital that must also exist at each future date. These projections of basic balance sheet size must be consistent with the bank's business model and strategic plan, and that consistency must be documented.

The projections of the liability side of the balance sheet must cover the following sources of funds in detail:

- Unsecured interbank deposits
- Secured funding, such as collateralized borrowing from the central bank or other banks
- Funds obtained from related parties
- Deposits, categorized by those received from individuals, legal entities, and the government
- Deposits, categorized into deposits with and without a stated maturity
- Issued debt, such as subordinated debt
- Other liabilities (no detail required unless significant)
- Equity

For each future measurement date, the bank should show the percentage of each main source of funds that must contractually be redeemed or rolled over, and the expected interest rates that will be paid on those funds. (The expected interest rates could be the based on the prevailing interest rate environment; they need not be "shocked" up or down.) An overall projected cost of funds (interest expense as a percentage of average interest-bearing liabilities) should also be calculated for each future measurement date.

In evaluating the funding plan, the SA should ascertain whether or not it is consistent with the bank's current funding strategy. If it is, the SA should consider whether or not the current strategy has allowed the bank to maintain its asset base without incurring a burdensomely high cost of funds.

If the funding plan displays a notable shift in funding strategy (for example, substantially increasing deposits from individuals and decreasing deposits from legal entities, or substituting borrowings for deposits), the SA should require the bank to explain why the strategy has shifted, and whether or not that shift is consistent with its business model and strategic plan. If the funding plan envisions a substantial increase in deposits from individuals, the bank should explain how that is to be accomplished. – by expanding the branch network, encouraging higher balances from existing depositors, rolling out a marketing plan to attract new depositors, or some combination of the three. Inevitably, there will be administrative costs incurred from a shift in funding strategy, and the bank should make these costs explicit.

Finally, the bank should include in its funding plan ***projections of the LCR and NSFR*** over the same time period. The amounts, calculations, and assumptions in the basic funding plan and the LCR and NSFR projections should be consistent.

Stress testing

There are many attributes of the survival horizon analysis and the funding plan in providing clarity to the bank's liquidity needs in the future. But another important attribute is that these two frameworks are very convenient in organizing and reporting stress testing. (The LCR and NSFR, to a certain extent, are stress tests translated into regulatory mandates, but they alone are not sufficient for this purpose.)

For use in stress testing both the survival horizon and the funding plan, the SA may elect to provide the banks detailed guidance, including suggested adverse scenarios that are relevant in its jurisdiction. The SA can construct these scenarios from past experience and its own expert judgment about stresses that may appear, with some plausibility, in the future. However, these adverse scenarios should be customized by each bank to reflect the bank's own peculiar funding structure and other idiosyncrasies. For example, an adverse scenario that envisions an inability to renew deposits from other banks would not be relevant to a bank that does not use, and does not plan to use, this source of funds.

One key assumption that must be included in every liquidity stress test scenario is that ***the bank does not decrease its flow of loan originations.*** For the stress test to be credible, it must be assumed that the bank either maintains or increases its current flow.

There are some other assumptions that the SA may elect to specify in the adverse scenarios, in order for the scenarios to be meaningful:

- The stress period must persist for three months or longer.
- There is no ability to roll over or renew deposits from other banks, and no ability to seek new funding from other banks.
- At least 20 percent of core or stable deposits are withdrawn in the first month, at least 10 percent of the remaining deposits are withdrawn in the second month, and at least 5 percent are withdrawn in the third month. ***Note: this assumption requires a definition of core or stable deposits. See above under liquidity metrics. It should also not be assumed that deposits covered by the deposit insurance fund will not be withdrawn. During the most recent Global Financial Crisis, many banks in many different countries suffered substantial withdrawals of insured deposits.***
- At least 50 percent of outstanding commitments under lines of credit will be drawn down.
- There is a sharp slowdown in the pace of loan repayments. ***Note: The severity of this assumption could be made consistent with similar assumptions made in stress tests contained in the Individual Capital Adequacy Assessment Process (ICAAP).***

Both the survival horizon analysis and the funding plan should be subject to the stress tests, and the bank should adjust its estimate of required level of HQLA to accommodate the plausible adverse scenarios.

Contingency funding plan (CFP)

The final essential component of an adequate ILAAP is the CFP. The CFP is the statement that describes the specific course of action a bank will take in the event of an extreme shock to liquidity. Such a shock can arise from a breakdown in market conditions, a natural or man-made disaster, a severe economic recession, or other generalized events. It can also affect the bank specifically; for example, if there is extremely adverse publicity or a sharp rise in non-performing assets, leading to a crisis of confidence in the bank.

The essential components of a CFP can be described as follows:

- The CFP should identify and assess the adequacy of financial resources (source of funds) for contingent needs. The plan should identify all back-up facilities, the conditions related to their use, and the circumstances under which the bank might use them. Periodically, management should test all sources of its contingency funding plan with the goal of ensuring that there are no unexpected impediments or complications in case the bank needs to use its contingency lines. Management should understand the various conditions, such as notice periods, that could affect access to back-up funding sources.

- The CFP should distinguish between bank-specific and general market liquidity situations, and have appropriate responses to each situation.
- The CFP should define responsibilities and decision-making authority so that all personnel understand their role during a problem situation.
- The CFP should identify the sequence that the bank will mobilize and commit key sources of funds for contingent needs. The degree of uncertainty as to the magnitude, timing, and availability of recourses may call for different priorities in different situations.
- The CFP should address implementation issues such as procedures the bank should use to obtain emergency funds or release funds from one use to transfer to another. It must ensure that there are no constraints, such as blanket liens on all collateral, which may limit availability of other liquidity sources.
- The CFP should identify other actions necessary in the event of an unexpected contingency.
- The CFP should assess the potential for funding erosion (magnitude and rate of outflow) by source of funds under different scenarios.
- The CFP should assess the potential liquidity risk posed by other activities, such as asset sales and securitization programs.

What does risk-based supervision do that is beyond the scope of Pillar 2?

As can be seen in the chart below, there is a great deal of congruence between RBS and Pillar 2. Only a few tasks of RBS, mostly focusing on industry analysis rather than on individual institutions, are outside the scope of Pillar 2. One of the primary tasks of RBS is to evaluate the level of risk and the quality of risk management across each of the risk categories, in order to arrive at an estimate of "net risk," for both each risk category separately and for an aggregate, overall measure of risk and the direction in which it is headed.

Obviously, this task requires an enormous amount of supervisory effort. Some risks, such as credit risk, cannot easily be collapsed into a single metric. And evaluating the quality of risk management also requires considerable time, both on-site and off-site, reviewing documents, inventorying past risk events, and testing bank management's understanding and application of their own policies, procedures, and limits.

The conclusion is inescapable: for a supervisory authority that is carrying out RBS comprehensively, the only genuine Pillar 2 "add-ons" would be review of the ICAAP, ILAAP, and determining the additional capital and liquidity buffers needed to support the bank's risk-taking.

Topic	Risk-based supervision	Pillar 2
Industry analysis:		
Review of aggregate banking sector data and trends to determine emerging risks	√	
Cross-sectional review of Reports of Examination to uncover common weaknesses and risks	√	
Thematic examinations focusing on common weaknesses and risks	√	
Ranking of banks (or clusters of banks) by degree of risk of failure / cost to system of failure	√	
Determination of level of risk:		
Credit risk	√	√
Market risk	√	√
Operational risk	√	√
Interest rate risk in the banking book	√	√
Liquidity risk	√	√
Compliance/Legal risk	√	√
Strategic risk	√	√
Reputation risk	√	√

Topic	Risk-based supervision	Pillar 2
Determination of quality of risk management:		
Credit risk	√	√
Market risk	√	√
Operational risk	√	√
Interest rate risk in the banking book	√	√
Liquidity risk	√	√
Compliance/Legal risk	√	√
Strategic risk	√	√
Reputation risk	√	√
Determination of level of net risk:		
Credit risk	√	√
Market risk	√	√
Operational risk	√	√
Interest rate risk in the banking book	√	√
Liquidity risk	√	√
Compliance/Legal risk	√	√
Strategic risk	√	√
Reputation risk	√	√
Overall level of net risk	√	√
Direction of overall net risk	√	√
Analysis of business model viability		
Evaluation of profitability as a support to capital adequacy	√	√
Evaluation of viability of banks' target lending and investing markets	√	√

Topic	Risk-based supervision	Pillar 2
Evaluation of corporate governance		
Board composition	√	
Evaluation of methods and quality of Board involvement in risk management	√	√
Fitness and propriety of shareholders, directors, and senior officers	√	
Risk appetite framework	√	√
Compensation framework	√	√
Evaluation of current level of capital against all risks		
Evaluation of compliance with Pillar 1 capital requirements	√	√
Verification of correct valuation of financial instruments, including loans	√	√
Evaluation of bank's ICAAP and capital management	√	√
Stress testing	√	√
Determination of required CET1 capital above Pillar 1 minimum	√	√
Evaluation of current level of liquidity and funding structure relative to risks		
Evaluation of compliance with LCR, NSFR, other liquidity metrics	√	√
Evaluation of bank's ILAAP and liquidity management	√	√
Evaluation of trends in funding structure	√	√
Determination of required HQLA above LCR minimum	√	√
Transposing risk ratings into supervisory strategies and/or corrective action		
Preparation of supervisory strategies	√	
Proposals for mandatory corrective action	√	√
Prioritization of banks (by net risk or other criteria) for supervisory action and attention	√	

Pillar 2 implementation in selected Asian markets – some generalizations

In general, at least in the published guidelines reviewed in the preparation of this brief, Asian SAs have implemented a fairly standard Pillar 2 framework, covering most of the main points in the Basel guidance to date. The emphasis is overwhelmingly on capital adequacy, the ICAAP and its review by the SAs, and the evaluation of risk management.

Business model analysis generally not integrated. For the most part, business model analysis is not performed as part of a Pillar 2 review except in connection with the issuance of new products or the evaluation of specific business models, such as "originate to distribute" in the context of securitization risk. There are also reminders to the banks' boards to be aware of risks from new business models and reminders to examiners to consider business models when evaluating concentration risk. One guideline reminded both the banks and the examiners to anticipate changes in a bank's risk profile as reflected in the business plan. But it is not mentioned that the business model itself could be a current source of threats to capital and/or liquidity.

Liquidity risk evaluation generally not practiced. In general, SAs in Asia have not instituted a requirement for the banks to perform, nor for the SAs to review, an ILAAP. Indeed, liquidity is almost completely absent from the published guidelines, except in lists enumerating the various risks or in brief discussions of how increased capital can (possibly) reduce liquidity risk or how having a larger liquidity buffer can support an effort to increase capital through the market.

Miscellaneous observations. Other important and useful considerations are brought up across the sample of guidelines reviewed for this brief, including the following:

- The preparation of the ICAAP should not be a compliance exercise, but it should actually be used as a capital planning and management tool.
- Banks should explain differences between their ICAAP calculations and Pillar 1 capital requirements – and also explain if there are no differences, because the presumption is that there should be.
- Increases in required capital cannot by themselves effect needed improvements in risk management, but they can concentrate the attention of the Board and senior management.
- Remuneration should focus on long-term profitability, not on short-term gains.
- Having the tools to implement the Basel II/III advanced approaches can itself mitigate risk, even if the capital requirements are calculated only according to the standardized approaches.
- Credit risk mitigation tools can themselves give rise to risks, such as legal, operational, and market risks.

Conclusion

To summarize, this Policy Analysis has established that Pillar 2 and risk-based supervision are not distinct supervisory activities but rather one organic whole, and that Pillar 2 reviews can and should be carried out in a limited fashion even under pandemic conditions. The quality of a bank's risk management, across all risks, is indeed difficult to evaluate when examiners can't go onsite. But there are enough activities in which SAs can engage, and push their banks to initiate, that time will not be wasted waiting for the pandemic to subside.

APPENDIX

Detailed history of Pillar 2

Now that banks and their supervisors worldwide have found themselves caught in the unexpected storm of the COVID-19 pandemic, with all of its attendant uncertainty about the future trajectory of the virus (even after vaccine distribution has started), the policy responses of fiscal and monetary authorities, the responsiveness of the economy to those policy responses, the pharmaceutical and non-pharmaceutical measures remaining to be taken to stem the pandemic even after the vaccine is widely distributed, and, finally, the varied reactions of households and firms to all of the above (including paying back their loans or not), it might seem like Pillar 2 is something of an annoyance best put off for a better day. To many banks and supervisors that are still struggling with implementation of this complex and multifaceted standard, 2022 might seem like a better year to return to the task than 2021.

But do they need to do that? A step back into the history and evolution of Pillar 2 might give us some clues.

The November 2005 BCBS document. When the BCBS issued its November 2005 document, Pillar 2 was, and to a large extent still is, organized around four basic principles, one laying out obligations for the banks, and the remaining three spelling out responsibilities of the SAs. The obligation placed on the bank was to have a process for assessing overall capital adequacy relative to the risks the bank has taken, together with a strategy for maintaining capital levels commensurate with its risk profile. Taken together, this requirement was known as the Internal Capital Adequacy Assessment Process, or ICAAP.

It (almost) goes without saying that for a bank to assess its capital adequacy relative to its risks, those risks must be identified and measured. The November 2005 document then goes through the familiar list of risks (credit, operational, and market) that result in capital charges under Pillar 1, and it also adds interest rate risk in the banking book (IRRBB), liquidity risk, and other risks such as reputation risk and strategic risk to the palette of risks that banks must measure, monitor, and control.

The responsibilities assigned to the SAs (paraphrased) were 1) to review the ICAAP and the capital management process generally; 2) to expect (and have the authority to demand) that banks maintain capital above the minimum Pillar 1 requirement, if warranted; and 3) to intervene at an early stage to prevent capital from dropping below the level required to support the bank's risk profile.

Expanding on 2) above, the November 2005 document guides SAs on risk aspects that may warrant additional capital above the minimum Pillar 1 requirement: IRRBB, concentration risk, counterparty credit risk (pre-settlement risk and settlement risk), and risks associated with securitization.

The July 2009 BCBS document. Although the November 2005 document placed some emphasis on improved risk management in assuring capital adequacy, it was the BCBS's "Supplemental Pillar 2 Guidance," issued in July 2009, that expanded the scope of Pillar 2 to squarely place upon the banks the responsibility to manage its risks across a wide variety of areas. Following the GFC that began in August 2007 and that was continuing to manifest itself in the summer of 2009, an expanded focus on risk management was clearly warranted.

More specifically, the July 2009 guidance mandated that banks maintain, and supervisors evaluate, risk management policies and procedures covering the following:

- Concentration risk
- Off-balance sheet and securitization risk
- Reputation risk and implicit support (also known as "step-in risk") to non-bank financial entities set up or sponsored by the bank
- The valuation process for financial instruments

- Liquidity risk management and supervision (but the context at that time was only to the extent that liquidity risk can affect solvency risk)
- Stress testing, and
- Compensation practices (it was already recognized at that early stage that improper incentivizing had contributed to the crisis).

After that, the BCBS was largely silent on the issue of Pillar 2 until January 2019. (Interestingly, the revisions to the Core Principles for Effective Banking Supervision, released in September 2012, do not mention Pillar 2 at all, although the document contains tasks for supervision that can be traced back to Pillar 2 responsibilities.)

The January 2019 BCBS document. During that month, the BCBS released "The Basel Framework," the full set of BCBS standards in effect at that time, in all of their most current versions and organized thematically. Included is a 182-page section entitled "Supervisory Review Process," consisting of 13 modules, all of which could be considered part of a standard program of RBS: the importance of supervisory review, a restatement of the Four Key Principles, risk management, IRRBB, credit risk, market risk, operational risk, compensation practices, risk data aggregation and risk reporting, liquidity monitoring metrics, a transition period for Systemically Important Banks (SIBs), application guidance for IRRBB, and application guidance on supervisory transparency and cross-border cooperation. Much of the material consists of passages lifted from other BCBS documents in a compendium-style framework. However, the document did contain a very important statement of the aim of Pillar 2 which was obscured in earlier documents:

> ***"The Pillar 2 supervisory review process ensures that banks have adequate capital and liquidity to support all the risks in their business, especially with respect to risks not fully captured by Pillar 1, and encourages good risk management."***

This statement is about as clear a summary as exists anywhere, not only of the SRP, but also of RBS.

In the summer of 2019, two BIS-housed institutions, the BCBS and the Financial Stability Institute (FSI), each issued an important Pillar 2 stocktaking document. From the BCBS came "Overview of Pillar 2 supervisory review practices and approaches" in June, and from the FSI emerged "Proportionality under Pillar 2 of the Basel framework" in July.

The June 2019 BCBS document. In its June 2019 report, the BCBS reported on commonly-used techniques of applying the Supervisory Review Process (SRP).[1] While commenting that implementing Pillar 2 across jurisdictions has resulted in a "rich range in practices," the document does expand (without prescribing) the range of supervisory activities that could be viewed as falling under the rubric of Pillar 2. These supervisory activities can be summarized in three areas: techniques, risks addressed, and outcomes and actions:

<u>Techniques of the SRP</u>

- Making an assessment of the risks of the bank
- Understanding and evaluating the bank's risk appetite
- Judging whether the composition of the Board and senior management, as well as delineation of their roles, ensure adequate risk management
- In the case of cross-border banks, coordinating between home and host jurisdictions
- Ensuring communication and transparency between the SA and the bank and between the SA and the general public
- Converting the results of the SRP into supervisory workplans for the following period

<u>Risks addressed in the SRP</u>

- Risks considered but not fully captured in Pillar 1
- Factors not taken into account by Pillar 1, such as business model risk
- Factors external to a bank, such as the impact of the business cycle and climate change

1. Interestingly, this document equates Pillar 2 with the SRP. See BCBS, July 2019, p. 2

Outcomes and actions

- Corrective actions, if necessary
- Supervisory Pillar 2 capital expectations

The document focuses on capital adequacy and not liquidity, although liquidity is mentioned as a consideration in business model analysis. However, it is clear that by the summer of 2019, the scope of Pillar 2 reviews had widened considerably from what was promulgated in the November 2005 and July 2009 documents. In other words, jurisdictions (particularly the European Union) filled in the blank spaces left by the BCBS in its early declarations of Pillar 2 responsibilities.

The July 2019 FSI document. The other BIS-housed institution to come out with a major report on Pillar 2 in 2019 was the FSI. Their report is also a stocktaking, focusing on proportionality, of actual supervisory practices rather than a compendium of best practices. However, just like in the BCBS document that preceded it by one month, the FSI document also lays out some common themes that underpin the implementation of Pillar 2.

One theme stated in three brief paragraphs is the "linkage" between Pillar 2 and the SRP[2]. This formulation is odd, since the November 2005 BCBS document contains a section entitled "Part 3: The Second Pillar – Supervisory Review Process," which implies that Pillar 2 and the SRP are the same, and no examples are given in the FSI document of how Pillar 2 might require more activities than the SRP or vice-versa. A clue to the FSI's thinking is the footnote contained on the same page that describes the European Union's (EU's) Supervisory Review and Evaluation Process as "integrating Pillar 2 into ongoing supervision," implying that the SRP takes Pillar 2 and adds to it.

Another theme is more logical and expressed in the third of the brief paragraphs: "…the SRP in all surveyed jurisdictions includes a combination of on- and off-site supervision; and these methodologies are used to assess an institution's overall risk profile and to ensure that an institution's financial buffers [presumably capital and liquidity] and risk management practices are aligned with their overall risk profiles." Interestingly, if the SRP in *all jurisdictions* [emphasis added] includes a combination of on-site and off-site supervision, then this is another indication that Pillar 2 is the expression of a fully articulated risk-based supervisory regime, rather than merely one aspect of it.

2. FSI, p. 8

And finally, later in the document, the paper concludes by saying that "The adoption of Pillar 2 formalized the *supervision by risk approach* [emphasis added] internationally, by explicitly linking the need to assess a bank's risk profile and capital adequacy during the SRP."

The Supervisory Review and Evaluation Process (SREP) of the EU. The SREP, enshrined into EU law by the Capital Requirements Directive (CRD) IV of June 2013 (Section III, Articles 97—101), is probably the world's most comprehensive and detailed exposition of Pillar 2. The law explicitly integrates risk management and liquidity into the process by stating that "…the competent authorities shall determine whether the arrangements, strategies, processes, and mechanisms implemented by [credit] institutions and the own funds and liquidity held by them ensure a sound management and coverage of their risks." There could not be a more succinct statement of RBS than this one.[3]

3. The EBA's predecessor, the Committee of European Banking Supervisors (CEBS), in January 2006 published a very early version of the EBA's SREP guidance. It was called "Guidelines on the application of the Supervisory Review Process under Pillar 2" and contained a brief statement of principles for a "Risk Assessment System" (RAS), which was presented as a system for allocating scarce supervisory resources, a cornerstone of RBS. Therefore, early on in the process of developing guidelines for the SRP, the link between the SRP and RBS was established. Nowadays the term RAS is hardly ever used except in the context of AML/CFT. The document also introduced the term SREP for the first time, noting its presence in the original CRD. To my knowledge, very few jurisdictions outside the EU refer to Pillar 2 or the SRP as the SREP.

In addition to an enhanced run-down of risks and risk management to be evaluated by SAs, the CRD IV in its Section III on the SREP attaches a "Supervisory examination programme" that is another clear statement of RBS practice, including "an identification of which institutions are intended to be subject to enhanced supervision and the measures taken for such supervision…" and a description of what those enhanced supervision measures should be. Section III also includes the requirement for SAs to carry out supervisory stress tests and an ongoing review of the permission to use the advanced approaches in Basel II.

Following on the law with implementing regulations, the European Banking Authority (EBA) in December 2014 issued its "Guidelines on common procedures and methodologies for the supervisory review and evaluation process (SREP)." These guidelines, which run over 200 pages and were themselves updated in July 2018 in a document running around 100 pages, organize the SREP along five lines:

1. Business model analysis
2. Firm-wide governance and controls
3. Capital adequacy assessment (including an evaluation of the bank's ICAAP)
4. Liquidity assessment (including an evaluation of the bank's Internal Liquidity Adequacy Assessment Process or ILAAP, an innovation hinted at but not clearly spelled out in Basel III)
5. Overall score/composite rating

What makes the SREP the most comprehensive exposition of Pillar 2 is that it contains detailed statements of best practices for corporate governance and the management of risks, including threats to capital and threats to liquidity. The framework naturally leads to an SA's determination of required additional capital, above and beyond the capital required by Pillar 1 (the so-called "Pillar 2 Requirement" or P2R) and recommended additional capital, which can come from the application of standard stress testing (the so-called "Pillar 2 Guidance" or P2G). The SREP also leads to the determination of required additional high-quality liquid assets, as a result of the liquidity analysis contained therein.

Additionally, the SREP pioneered the concept of assessing, across all risk categories, a bank's "net risk," which means the level of inherent risk adjusted for mitigating factors, largely the quality of the bank's risk management. This framework has been adopted by many SAs around the world as the organizing principle for their approach to RBS.

REFERENCES

Basel Committee on Banking Supervision, 2005. *International convergence of capital measurement and capital standards,* November (update).

Basel Committee on Banking Supervision, 2009. *Enhancements to the Basel II framework,* July.

Basel Committee on Banking Supervision, 2012. *Core principles for effective banking supervision,* September.

Basel Committee on Banking Supervision, 2019. *The Basel framework,* January.

Basel Committee on Banking Supervision, 2019. *Overview of Pillar 2 supervisory review practices and approaches,* July.

Committee of European Banking Supervisors, 2006. *Guidelines on the application of the supervisory review process under Pillar 2,* January.

European Banking Authority, EBA/GL/2014/13, 2014. *Guidelines on common procedures and methodologies for the supervisory review and evaluation process (SREP),* December.

European Banking Authority, EBA/GL/2020/10, 2020. *Guidelines on the pragmatic 2020 supervisory review and evaluation process in light of the COVID-19 crisis,* July.

Official Journal of the European Union, L 176/390, 2013. *Capital requirements directive IV,* 27 June.

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