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TECHNICAL ASSISTANCE REPORT—RISK-BASED SUPERVISION PILLAR 2 LIQUIDITY

March 2022

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TECHNICAL ASSISTANCE REPORT

REPUBLIC OF KAZAKHSTAN

Risk-Based Supervision – Pillar 2 Liquidity

FEBRUARY 2022

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GLOSSARY

Agency	Agency for Regulation and Development of the Financial Market of the Republic of Kazakhstan
ALCO	Asset-Liability Committee
ALM	Asset-Liability Management
BASTD	Bank Analytics and Stress Testing Department
BCBS	Basel Committee on Banking Supervision
BCBS Liquidity Principles	BCBS Principles of Sound Liquidity Risk Management and Supervision, 2008
BCP	Basel Core Principles for Effective Banking Supervision, 2012
BRD	Banking Regulation Department
CCAMTAC	Regional Capacity Development Center for the Caucasus, Central Asia and Mongolia
EBA	European Banking Authority
EU	European Union
EWI	Early Warning Indicator
HQLA	High Quality Liquid Assets
Regulation No.188	"Rules for Formation of Risk Management and Internal Control System for Second-Tier banks"
ILAAP	Internal Liquidity Adequacy Assessment Process
IMF	International Monetary Fund
LCR	Liquidity Coverage Ratio
LCP	Liquidity Contingency Plan
MCM	Monetary and Capital Markets Department
NBK	National Bank of Kazakhstan
NMD	Non-Maturing Deposit
NPL	Nonperforming Loans

NSFR	Net Stable Funding Ratio
RAS	Risk Assessment System
RBS	Risk-Based Supervision
Resolution No.170	"(On) Establishment of Statutory Values and Prudential Standards Calculation Methodology and Other Mandatory Standards and Limits, the Amount of the Bank Equity at the Specified Date and the Regulations for Calculation and Limits of the Open Foreign Currency Position"
SREP	Supervisory Review and Evaluation Process
TA	Technical Assistance
WG	Working Group on Developing Methodologies for Assessing the ILAAP and Setting Pillar 2 Liquidity Measures

PREFACE

At the request of the Agency for Regulation and Development of the Financial Market of the Republic of Kazakhstan (the Agency), the Monetary and Capital Markets (MCM) Department conducted a remote mission from July 19 to September 3, 2021 to assist the Agency with the development of internal supervisory methodologies for the assessment of a bank's Internal Liquidity Adequacy Assessment Process (ILAAP), setting individual Pillar 2 supervisory liquidity requirements, and also to provide guidance on survival horizon indicators.

The mission consisted of virtual meetings—in the form of presentations, training sessions, discussions, case studies—with the Agency's staff from the Department of Bank Regulation (BRD), the Department of Methodology and Prudential Regulation of Financial Organizations and the Department of Banking Analytics and Stress Testing (BASTD). Mr. Madi Burin, the head of the Division of International Relations and Integration, coordinated the mission from the side of the Agency. The mission furthermore also had two virtual meetings with representatives of a large domestic bank and a subsidiary of a foreign bank in Kazakhstan.

The mission team would like to express its gratitude to the First Deputy Chairperson of the Agency Mr. Oleg Smolyakov, Team Leader of the Agency's working group Mr. Yelnur Sailaukul, Mr. Madi Burin and to the members of the working group on developing methodologies for assessing the ILAAP and setting Pillar 2 liquidity measures (WG) for their excellent cooperation and constructive discussions during this mission.

EXECUTIVE SUMMARY

This virtual technical assistance (TA) mission assisted the Agency in strengthening liquidity elements of its risk-based supervisory framework. The mission focused on supporting the Agency with the development of internal supervisory methodology for the assessment of banks' ILAAP and setting individual Pillar 2 supervisory liquidity requirements and provided guidance on stress testing and sensitivity analysis through survival horizon analysis. The mission consisted of a combination of presentations, discussions, and trainings, including case studies, and covered the BCBS standards on liquidity risk and other jurisdictions' approaches for the assessment of ILAAP and the Pillar 2 liquidity supervisory review process. This mission should be seen in the context of previous three IMF TA missions which were held since September 2020.

The regulatory framework for liquidity risk is based on Regulation No.188 and Resolution No.170. Regulation No.188 sets out the regulatory framework for the formation of risk management and internal control systems, and also contains the requirements for banks' ILAAP process. The mission notes that for Chapter 6 of Regulation No.188 – which incorporates ILAAP requirements - a more structured and detailed description, in line with the BCBS Principles could be useful for banks to better understand and properly implement these requirements. Resolution No.170 sets out the Agency's minimum prudential liquidity requirements and limits for banks ('Pillar 1') and contains other liquidity prudential standards. This Regulation incorporates prudential liquidity requirements in the form of quick and current prudential liquidity ratios. As the Agency also requires banks to comply with the Liquidity Coverage Ratio (LCR), this combination of liquidity ratio requirements can result in non-consistent requirements for the composition of the liquidity buffer.

The Agency receives prudential returns for those prudential liquidity requirements as covered in Resolution No.170, and in addition several other prudential returns for the monitoring of liquidity risk. Important prudential returns (for example, contractual mismatch information and on funding concentrations) are received. But the Agency could expand the prudential return on liquidity risk monitoring by introducing the measurement and reporting of the LCR per significant currency which will reveal and better capture potential currency mismatches. Furthermore, the monitoring of liquidity risk developments by means of market information monitoring could be used as well.

Liquidity risk is included in the SREP methodology which follows an annual supervisory cycle, and is based on quantitative and qualitative analysis, but qualitative scoring process could be further strengthened. The Risk Assessment System (RAS) methodology (within the overall SREP framework) takes into account four risk categories, which are business model and profitability, corporate governance and risk management, capital related risks, and liquidity and funding related risks. The RAS methodology describes the usage of automatically generated quantitative indicators for liquidity risk. The mission is of the opinion that the set of core quantitative indicators (in phase 2) could be expanded by incorporating funding concentrations and contractual maturity mismatch indicators, as these are generally accepted fundamental

indicators for the assessment of liquidity risk. For the qualitative analysis of liquidity risk the Agency assesses the risk management and control processes through a predefined set of questions which should be answered by yes or no. The mission recommends the Agency to consider adjusting the binary qualitative scoring process of the RAS methodology.

The Agency's SREP methodology appropriately incorporates the outcome of the comprehensive review of a bank's ILAAP and the information as obtained through the ILAAP submission. The first submission of ILAAPs has taken place this year, but the Agency is still in the process of reviewing these ILAAP submissions. The assessment of a bank's ILAAP will form an important element of the SREP process, providing a valuable source of information for supervisors on which to base their overall risk assessment of a bank. The Agency will therefore benefit from developing a methodology for the assessment of a bank's ILAAP and to incorporate the finding in the SREP framework. During the mission the Agency started to draft the internal methodology of bank's ILAAP assessment. The Agency should further develop and finalize its methodology as a matter of priority. The Agency should include more relevant input from the material provided by the mission during the training sessions and Appendices, which are based on international best practice.

Outcome of the survival horizon analysis is one of the quantitative (core) SREP indicators used by the Agency in its SREP process. It however does not provide any description on the actual (stress) scenario(s) used for this survival horizon analysis, and the impact on the balance sheet. There is a wide range of scenarios the banks may apply and that implicate very different theoretical survival horizons. Without knowing the assumptions the banks are applying, the bare outcomes of the calculations are difficult to evaluate and use in the Agency´s assessment or peer analysis. In this case it is the imminent role of the supervisor to assess the adequacy of the internal stress test assumptions, quality of transformation of these assumptions into stressed cash flows and the corresponding survival horizon calculation.

The Agency should decide how to assess the liquidity risk exposure of the bank using the survival horizon indicator. It can thereby follow one of these approaches (or a combination of them): a) Assessment of the adequacy of the design of the bank´s internal stress tests and the outcome (in terms of the internal survival horizons), the Agency thereby also assesses the range of stress test scenarios and their severity; b) Request the bank to incorporate the stress testing assumptions as prescribed by the Agency and to submit the results to the Agency. The Agency may declare a minimum expectation about the survival horizon under this specific test; and c) The Agency requests the cash flow breakdown, applies its own stress test, i.e. transforms the assumptions into the modified cash flows (creates "stressed maturity ladder"). By this approach the Agency itself will quantify the bank´s survival horizon.

Table 1. Kazakhstan: Key Recommendations

Key Recommendations	Priority	Timeline[1]
1.The Agency to consider to better a lign Chapter 6 of Regulation 188 with the BCBS "Principles of sound liquidity risk management and supervision" and thereby to follow the structure and level of detail of the BCBS Principles.	Medium	Long-term[2]
2. The Agency to reconsider the continued use or the revision of the suite of "current and quick liquidity ratios" and how their (non)compatibility with the LCR might be an issue of concern from a regulatory perspective, especially when it comes to the level and composition of high-quality liquid assets.	Medium	Long-term
3. The Agency to consider expanding its suite of liquidity prudential reporting for supervisory monitoring purpose (e.g., the measurement and reporting of the LCR per significant currency; market information).	Medium	Long-term
4. The Agency to add funding concentrations and maturity mismatch levels to the set of (core) quantitative liquidity indicators which are part of the RAS methodology.	Medium	Long-term
5. The Agency to adjust the liquidity risk qualitative scoring process of the RAS methodology (scoring of individual questions yes/no questions, an overall score, reviewing the list of crucial/non-crucial questions), as this differentiation and qualification significantly impacts the overall SREP score for liquidity risk.	Medium	Medium-term
6. The Agency to finalize the supervisory methodology for assessing a bank's ILAAP and for determining Pillar 2 liquidity measures. The Agency should thereby refer to the mission team's provided material and Annexes, based on the best international practices.	High	Short-term
7. The Agency to develop guidance on survival horizon indicators (SREP). The Agency should decide how they can use the survival horizon indicators to assess the liquidity risk profile of the bank, and consider (a combination of) the range of approaches as discussed and presented during the mission.	Medium	Medium-term
8. Banks to be requested to send ILAAP reports to the Agency in line with updated requirements.	High	Medium-term
9. The Agency to review and assess banks' ILAAP reports and include results of the assessment in SREP reports.	High	Long-term

[1] Short-term: < 6 months; Medium-term: 6 to 12 months; Long-term: 12-24 months.

[2] The Agency informed that the revision of Chapter 6 of Regulation 188 might take longer than two years.

I. INTRODUCTION

1. **The MCM Department conducted a remote mission in Almaty, Kazakhstan from July 19 to September 3, 2021, to assist the Agency with the implementation of Pillar 2 liquidity requirements.** The mission assisted the Agency with the development of the internal supervisory methodology for the assessment of a bank's ILAAP and provided guidance on stress testing and sensitivity analysis through survival horizon analysis. The mission consisted of a combination of presentations, discussions, and trainings, including case studies, and covered the BCBS standards on liquidity risk (e.g., LCR, NSFR, Principles for sound liquidity risk management and supervision, and the Liquidity monitoring tools) and other jurisdictions' approaches for the assessment of ILAAP and the Pillar 2 liquidity supervisory review process. The mission benefited from simultaneous translation.

2. **The regulatory and supervisory landscape in Kazakhstan has experienced significant reforms over the past few years.** In early 2020 the financial sector supervisory responsibilities of the National Bank of Kazakhstan (NBK) have been transferred to the newly established Agency. The first supervisory focus of the Agency has been on the outcome of the 2019 Asset Quality Review (AQR) and addressing long-standing issues and to boost confidence in the banking sector. The Agency has been working towards aligning its prudential regulatory and supervisory frameworks with international standards and additional effort is needed toward effective implementation. Since 2018 the NBK (and since 2020, the Agency) follows a risk-based supervision (RBS) approach through SREP, which is in the early stages and requires fundamental changes to the Agency's supervisory approach, development of internal methodologies and capacity building. New regulation[1] was issued in 2019 (and entered into force in October 2020) introducing a set of requirements on banks relating to their governance, risk management and control processes, and requirements for the Pillar 2 process, including ILAAP. The Agency has implemented Basel III liquidity standards (LCR and NSFR).

3. **This mission should be seen in the context of previous three IMF TA missions which are held since September 2020.** The first remote mission assisted the Agency with strengthening the institutional set up and banking supervisory capacity. The second remote mission provided recommendations on the implementation of certain elements of the Pillar 2 requirements of the Basel Framework to enhance the Agency's RBS approach. The latter mission covered the supervisory assessment of a bank's ICAAP and setting individual Pillar 2 supervisory capital requirements (capital add-ons). The third remote mission provided direction to the Agency in developing comprehensive regulatory and supervisory framework for banks' recovery plans and interest rate risk in the banking book (IRRBB) in line with international standards. This mission complements the previous missions in covering the Pillar 2 liquidity process (ILAAP).

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[1] Resolution of the Board of the NBK No.188 (November 12, 2019). http://adilet.zan.kz/eng/docs/V1900019632.

4. **This report is divided into five sections.** After this introductory section, Section II provides an overview of the banking sector. Section III discusses the current banking regulatory framework on liquidity risk. Section IV covers the Agency's supervisory framework and the approach to the assessment of liquidity risk, including the SREP process and the role of bank's ILAAP. Section V discusses the survival horizon indicator and analysis.

II. BANKING SECTOR OVERVIEW

5. **Per July 1, 2021, the banking sector of Kazakhstan consisted of 23 commercial banks, of which 14 are affiliated to foreign banks (11 of which are subsidiaries),[2] and 1 bank is wholly state-owned.** As of July 1, 2021[3], total assets of the banking sector stood at US$ 82 billion[4] (KZT 34826 billion), representing 46 percent of GDP. Total assets increased by 11.7 percent since the start of 2021.[5] The total loan portfolio of the banking sector amounts to 48.1 percent of total assets (KZT 16764 billion, US$ 39 billion), an increase from the beginning of the year of 6.2 percent. The loan portfolio comprises corporate loans (23.9 percent of total loans), retail loans (47.9 percent of total loans), and loans to small and medium-sized enterprises (25.8 percent).

6. **The average total capital ratio for the banking sector amounts to 25.2 percent per July 1, 2021, and nonperforming loans (NPL—as measured by loans past due 90 days)[6] levels have been declining over 2021 and amount to 4.8 percent.** The capital ratios and NPL figures however may be understated due to the relaxations in the authorities' loan classification and provisioning rules and other relief measures (paragraph 9) which were introduced as a response to the COVID-19 pandemic. Return on assets amounts to 3.2 percent with return on equity at 25.9 percent.

7. **The funding structure of the banking sector is concentrated towards deposit funding with a significant part of foreign currency deposits.** Client deposits amount to 79.9 percent of total liabilities and are almost equally divided between retail deposits and corporate deposits, of those client deposits 60 percent constitute time deposits, and 38.4 percent are foreign currency denominated. Interbank funding amounts to 2 percent of total liabilities, issued securities amounts to 5.2 percent, and funding through repurchase agreements ("repo") amounts to 2 percent of total liabilities. Liquid assets to total assets amount to 35.9 percent per July 1, 2021.

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[2] The affiliation of the other three banks related with indirect controlling interest: First Heartland Jusan Bank JSC; Eurasian Bank JSC; Bank Freedom Finance Kazakhstan JSC.

[3] Data from the Agency's publication 'Current State of the Banking Sector of Kazakhstan' as of July 1, 2021, see: https://finreg.kz/cont/Текущее%20ББУ_англ_01.07.2021.pdf.

[4] Exchange rate at as of July 1, 2021: US$1:427 Tenge.

[5] The main driver of this increase was the growth of client deposits (since the beginning of 2021, the deposits have grown up by 13.7 percent).

[6] The banks/the Agency take into account only past due 90 days criteria when flagging NPL exposures.

8. **The banking sector on average reports high values of LCR and NSFR ratios**. The liquidity coverage ratio (LCR) of the sector amounts to 175.8 percent as of July 1, 2021 (with LCR minimum prudential requirement of 90 percent), and the net stable funding ratio (NSFR) amounts to 156.1 percent (with NSFR minimum prudential requirement of 100 percent) as of the same date.

9. **In response to the COVID-19 crisis, the Agency introduced a number of exceptional regulatory measures to support the Kazakh economy aimed at increasing liquidity and reducing pressure on the capital of banks, which are in the process of unwinding.** The Agency relaxed certain capital, liquidity, loan classification, and provisioning requirements. The Agency noted that these exceptionally measures released more than 10 percent of regulatory capital, more than 16 percent of liquid assets, and helped banks re-focus their lending to the economy. In September 2020, the Agency decided to extend majority of these measures until July 1, 2021. The Agency extended certain prudential measures (e.g., a lower risk weighting for loans and guarantees issued to SMEs and for syndicated loans; not to make additional provisions for loans that have been granted a deferral of payments due to the introduction of restrictive lockdown measures, etc.) until the end of 2021 to provide additional support to business entities. The Agency is encouraged to monitor the impact of these exceptional measures. Where relevant, banks should produce credible medium-term plans to restore their capital and liquidity buffers and address the recapitalization needs identified as part of the AQR. Intensified supervisory monitoring should remain critically important to ensure that any adverse developments are detected on a timely basis.

III. The Regulatory Framework for Liquidity Risk

A. Regulation No.188

10. **Rules for formation of risk management and internal control system for second-tier banks ("Regulation No.188") sets out the regulatory framework and includes the requirements for banks' internal processes for assessing liquidity adequacy and risk.** Chapter 6 of the document covers governance and organization structure requirements for the ILAAP process itself and includes risk management requirements for banks for the management of liquidity risk. The mission reviewed Chapter 6 and concludes they are on a high-level aligned with the 2008 BCBS Principles of sound liquidity risk management and supervision[7] (hereafter "BCBS liquidity principles"). Chapter 6 covers topics as risk appetite, the usage of early warning indicators, managing and monitoring intraday liquidity risk, management information systems, diversification of funding sources, contingency funding planning and stress testing.

11. **The mission notes a more structured and detailed description of Regulation No.188—in line with the BCBS liquidity principles—could be useful for banks to better understand and properly implement liquidity risk management requirements**. For example (non-exhaustive), Chapter 6 describes that as part of the ILAAP the board of directors of the

[7] https://www.bis.org/publ/bcbs144.htm.

bank shall be responsible for adhering to the approved risk appetite strategy. This subject is covered under Principle 2 (of the BCBS liquidity principles) and gives more specific and detailed requirements for the risk appetite (and tolerance) setting process. Principle 9 provides more detail on the monitoring and management of asset encumbrance. Principle 5 (Measurement and management of liquidity risk) gives more detail and stresses the importance of considering in the liquidity measurement process: a) the interaction between exposures to funding liquidity risk and market liquidity risk; b) the importance of prudently valuing assets; c) how to manage sources of contingent liquidity demand and related triggers associated with off-balance sheet positions; and d) currencies in which a bank is active. BCBS liquidity Principle 6 states that bank should actively monitor and control liquidity risk exposures and funding needs within and across legal entities, business lines and currencies, taking into account legal, regulatory and operational limitations to the transferability of liquidity. Some elements of this principle are covered in Chapter 6 but are spread out amongst different subjects which hampers a good overview and causes a lack of sense of urgency on this subject. The BCBS liquidity principles furthermore describe that a bank's stress tests should consider how the behavior of counterparties (or their correspondents and custodians) would affect the timing of cash flows, this is not explicitly mentioned in Chapter 6.

B. Resolution No.170

12. **Resolution No. 170 sets out the Agency's minimum prudential requirements and limits for banks and contains other liquidity prudential standards.** Chapter 5 describes the liquidity ratio requirements and the minimum values to be complied with by banks. Ratios to be measured are the: a) bank current liquidity ratio; b) three quick liquidity ratios (considering three different time horizons for term liabilities); and c) three quick currency liquidity ratios (considering the same time horizons, but per currency). Chapter 6 furthermore sets out the requirement for banks to measure the Liquidity Coverage Ratio (LCR) and the Net Stable Funding Ratio (NSFR), these follow the BCBS definition and calibration method (with the same roll-over and run-off rates for example). Since September 2018 the LCR became effective whereby a phased-in approach was followed, whereby banks initially needed to meet 50 percent and per January 1, 2022 need to meet the 100 percent requirement. The NSFR became effective from January 1, 2019, with a minimum prudential requirement of 100 percent.

13. **The quick and current prudential liquidity ratios at the one hand and the LCR at the other, can result in non-consistent requirements for the composition of the liquidity buffer.** This results not only in other requirements for the level of liquid assets, but also when it comes to the composition because the definition of highly liquid assets for the quick and current ratio does not align with the high quality liquid asset (HQLA) definition of the LCR. Overnight loans and deposits placed with banks for example do not qualify as HQLA, whereas they do for the quick and current liquidity ratios.

C. Prudential Reporting

14. **The Agency receives prudential returns for those prudential liquidity requirements as covered in Resolution No.170, and additional returns which provide adequate supervisory monitoring on liquidity risk.** The Agency for example also receives: a) contractual maturity (gap) mismatch information; b) funding concentration information (in terms of significant counterparts including depositor concentrations, and in significant currencies); c) reporting on the level of available unencumbered assets (which provides the bank (and supervisors) with data on the quantity and key characteristics of banks' available unencumbered assets, which can be used as collateral to raise additional HQLA or secured funding in secondary markets or at the central bank). The Agency is recommended to consider also introducing reporting of the LCR per significant currency (which will reveal and better capture potential currency mismatches) and which is relevant due to the dependence on foreign currency funding for several banks. Furthermore, the Agency could consider, for its own use, introducing market related monitoring tools to improve its supervisory monitoring processes.[8]

IV. THE SUPERVISORY FRAMEWORK FOR LIQUIDITY RISK

A. The SREP Framework

15. **The Agency follows a SREP methodology[9] which follows an annual supervisory cycle and is based on quantitative and qualitative analysis.** It involves an assessment of a bank's financial and non-financial risks, and the controls in place to mitigate those risks. The Agency's Risk Assessment System (RAS) is currently based on a quarterly analysis of 33 quantitative indicators and annual assessment of 122 qualitative indicators. Most of the quantitative indicators are generated automatically by the BASTD from prudential return data submitted by the banks. The qualitative assessment is performed based on a set of questions which need to be answered by supervisors (generally based on yes/no answers), whereby supervisors need to rely on several sources of information obtained through their on-going supervisory activities.

16. **The SREP assessment considers four risk categories which are: a) business model and profitability; b) corporate governance and risk management; c) capital related risks; and d) liquidity and funding related risks.** The quantitative and qualitative indicators generate a score between 1–4 for each category, with the line supervisor of the bank adjusting the score based on existing knowledge of the bank. The score for each category generates the overall and final RAS (or "SREP") score for the bank.

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[8] See the BCBS Liquidity Monitoring Metrics for suggested market related monitoring tools. Particularly useful is the monitoring of currency exchange rates, and (spread) rate information on securities issued by banks.

[9] Several discussions were held on the SREP methodology, and quantitative and qualitative questions for liquidity risk have been shared with the mission team.

17. **Through the SREP assessment the supervisor determines whether the liquidity held by the institution ensures an appropriate coverage of risks to liquidity and funding**. The supervisor thereby determines whether the imposition of specific liquidity requirements is necessary to capture risks to liquidity and funding to which an institution is or may be exposed. As the liquidity risk in the sector is perceived as low, the supervisors within its SREP framework have not yet formulated any approach to specific liquidity requirements yet (see also section E for further discussion).

B. Quantitative and Qualitative Indicators for Liquidity Risk

18. **The Agency uses automatically generated quantitative liquidity indicators ("phase 2").**[10] The set of core liquidity risk indicators are the LCR, the NSFR, the ratio of loan-to-deposits, the level of wholesale funding, and the survival horizon. Each indicator has predefined thresholds which results in a score from 1 to 4 (1 is the best score and 4 the worst). Additionally, another set of indicators are considered in order to adjust or modify the scoring criteria for each institution in case there is uncertainty or need for deeper knowledge ("phase 3"). This additional set of indicators amongst other incorporates the concentration of liquidity and funding sources and the liquidity generation capacity (available unencumbered assets).

19. **The set of core ("phase 2") quantitative indicators could be expanded by incorporating funding concentrations and contractual maturity mismatch indicators**. Funding concentrations can be an important source of funding and liquidity risk, for example when it comes to depositor concentration risk. This metric can be used to measure the level of funding sustainability risk in phase 2. Standardized information on maturity mismatches (for example: cumulative 3-month maturity gap level as percent of total liabilities) is useful in identifying elevated levels of cash flows gaps, possibly resulting in refinancing or repayment difficulties. This could be used to assess the short-term liquidity risk level in phase 2.

20. **As indicated in section III. C the Agency could still expand its set of prudential returns for supervisory monitoring purposes**. This relates to the LCR per significant currency and using several market information monitoring tools. This can broaden the information basis of the Agency and help the Agency to improve and better perform the SREP (liquidity risk) assessment and to measure these quantitative SREP indicators. Furthermore, for the survival horizon analysis the Agency still needs to work out the underlying scenario and overall design (see Section V for a comprehensive discussion on the survival horizon analysis and indicator).

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[10] The quantitative assessment is structured as follows: Phase 1: Data gathering, Phase 2: Automatic evaluation (core indicators), Phase 3: Expert judgement (additional indicators).

21. **For the qualitative analysis of liquidity risk the Agency assesses the risk management and control processes through a predefined set of questions which should be answered by yes or no.** This consists of questions classified as "crucial questions" as well as "non-crucial questions". In case one crucial question is answered negatively, this implies the worst rating (of 4). Non-crucial questions help the supervisor to assess if an institution complies with key requirements related to the governance of liquidity risk management. Also, these non-crucial questions impact the score, and the higher the number of affirmed questions the better the score. The mission notes that these "binary questions" might not always capture the more granular levels of each risk management and control subject. For example, the reporting framework might be mostly appropriate but need some minor improvements. The supervisor in this case should probably answer with "no" because the reporting framework is not fully appropriate. A more granular level of assessment might indicate a medium level for the quality of the reporting framework.

22. **The differentiation in "crucial" and "non-crucial" questions needs to be substantiated and reviewed on a regular basis.** This distinction has an important impact on the final SREP score for liquidity, because when a crucial question is answered with "no" this automatically results in the lowest score ("4"). The Agency is strongly encouraged to review the current set of questions in order to update their relevance in terms of importance, the mission discussed and provided several examples where it thinks the questions should be differently qualified (e.g., from non-crucial to crucial, or the other way round). Furthermore, the formulations should also be reviewed, whereby the Agency should focus as much as possible on the assessment of the overall quality and comprehensiveness. Examples have been discussed with the Agency.

C. The Role of ILAAP in the SREP Framework

23. **The Agency's SREP methodology rightly so incorporates the outcome of the comprehensive review of a bank's ILAAP and the information as obtained through the ILAAP submission.** In phase 3 of the quantitative assessment the supervisor reviews and possibly revises the phase 2 preliminary quantitative rating through expert judgement and can thereby also rely on the supervisory review of the ILAAP. Furthermore, in the qualitative assessment process, questions are answered based on several information sources, including the information obtained through the ILAAP submissions. The first submission of ILAAPs has taken place this year, but the Agency is still in the process of reviewing these ILAAP submissions.

24. **The SREP framework requires a change of approach to the way how banks have been supervised under the former compliance-based regime.** The Agency's on-site inspections will need to focus on the assessment of banks' governance and risk management frameworks, and thereby differentiate in the quality of the governance and risk management and control per risk subject (e.g., specific assessment for liquidity risk, market risk, credit risk, et cetera) and its off-site processes and procedures will also involve more frequent contact with bank management. The implementation of the ILAAP/ICAAP framework will re-enforce these changes. On-site inspections can validate the assertions in ILAAP/ICAAP documentation around

the effectiveness of banks' risk management and internal controls, and there will be greater supervisory engagement from the off-site teams with banks' management to substantiate the information provided by banks in their ILAAP/ICAAP documentation.

D. Assessment of ILAAP Submissions

25. **The assessment of a bank's ILAAP submission will form an important element of the SREP process, providing a valuable source of information for supervisors on which to base their overall risk assessment of a bank.** The ILAAP assessment will provide greater clarity and depth of information around the liquidity specific risks a bank is exposed to, and the risk management and internal controls the bank has in place to mitigate those risks. This information[11] supports and complements the existing quantitative and qualitative indicators available to the Agency and significantly enhances the overall assessment of a bank's risk profile.

26. **As the ILAAP is an essential component of the SREP framework, the Agency will benefit from developing a methodology for the assessment of a bank's ILAAP and to incorporate the findings into its SREP framework**. The Agency during the mission period drafted a first and – based on feedback from the mission team – an updated version of the methodology, both were made available to the mission team. The Agency made an effort to capture all factors relevant for assessing liquidity and funding risk in the drafts. Still there are opportunities to improve the last draft version:

- The Agency should decide how this draft methodology aligns with the existing ILAAP assessment process, which is also covered in the SREP methodology.
- The final methodology should be practical for supervisors to use, be clearly structured in relevant subjects and should be concentrating on practical advice.
- All formulations in the methodology must be considered from the position of the reviewing supervisor (how does it help the supervisor in the assessment, does the supervisor know what to look for and does it help to exercise expert judgment).
- The final methodology should set out more clearly what actions and expectations are required of supervisors at each stage of the ILAAP assessment process, including timelines where relevant (taking into account timelines of ICAAP submissions and relevance of submissions based on audited/unaudited results).
- It is recommended that on-site and off-site supervisors be consulted on the methodology as it is developed to test how practicable the document is to use in practice. Supervisors

[11] The draft internal methodology provided by the Agency sets a list of documents to be submitted by banks under the annual ILAAP process. It is assumed that the list will be amended or revised as the experience of supervisors with the ILAAP review will expand.

themselves shall raise the issues they need to cover (and in which detail) and which they think are relevant for the local market based on their experience.

- The methodology should take into account proportionality when reviewing the ILAAP (e.g., some existing standards/requirements may not be achievable/relevant for smallest banks).

Once the draft methodology is finalized, the Agency intends to incorporate it into the already exiting SREP methodology.

27. **The mission team during the training sessions provided many materials for the ILAAP assessment, based on international best practice, which can be used by the Agency in the further development of their own internal methodology**. Appendix II contains the draft ILAAP assessment framework. The main features of the ILAAP assessment process have been presented and discussed with Agency staff (e.g., the various stages of an assessment; the issues to be considered when the ILAAP is submitted; guidance on how the findings of the assessment feed into the SREP framework; and the internal governance requirements), and a checklist of issues that supervisors should consider when assessing the ILAAP documentation provided.

E. Setting Individual Pillar 2 Supervisory Liquidity Requirements

28. **A key objective of the bank's ILAAP assessment and broader SREP framework is to determine the minimum level of liquidity a bank is required to hold against its material liquidity risks, or to impose measures to improve the risk management and controls.** Drawing on international best practice, the mission provided the Agency staff with possible "Pillar 2 supervisory measures" which can be imposed (See Appendix II, section 9). The Agency for example could require the banks to operate with liquidity indicators above the regulatory limits (for example an NSFR of >110 percent), or to hold a liquid asset buffer higher than the prescribed regulatory liquidity ratios (including the LCR) or impose caps on the level of contractual maturity mismatches. Otherwise, qualitative requirements to improve the risk management and governance framework are very common as well.

29. **The Agency has in place the legislation to impose Pillar 2 supervisory liquidity requirements.** Article 46 of the Banking Act gives the Agency the power to impose requirements for maintaining liquidity ratios above the minimum (prudential) values as established by the Agency. It also gives the power to revise internal policies and procedures (including those related to risk management and control) and to limit the risk level. The Agency needs this legal power to set individual Pillar 2 supervisory liquidity requirement to give effect to the ILAAP when it has been introduced and incorporated into the SREP methodology.

V. SURVIVAL HORIZON ANALYSIS

A. Survival Horizon as SREP Indicator

30. **Outcome of Survival horizon analysis is one of the core quantitative SREP indicators used by the Agency in its SREP process.** It is defined as the number of months that the institution is able to fulfil its payments in Tenges (TNG) as well as USD (both considered separately), under the assumption of not being able to issue debt in wholesale financial market in stress scenarios. It however does not provide any further description on the actual stress scenario(s) used for this survival horizon analysis, and the impact on the balance sheet (as indicated through prespecified levels of cash outflow rates, inflow rates, and the level and composition of the counterbalancing capacity by means of the liquidity buffer). Examiners also use some common guidelines for the quantitative assessment process and for the survival horizon. These for example indicate a survival period close to one year corresponds with a "low level of risk". However, the assumptions applied for the scenarios are not known, because only the final outcome of the calculation is provided by banks (no specific details about the scenario or assumptions were requested from the Agency).

31. **Determination of the Survival horizon of a bank is a function of two specific variables: a) the nature and severity of the stress scenario; and b) the size and composition of the counterbalancing capacity in relation to the stressed net cash outflows.** The LCR can be regarded as a specific example for the survival horizon calculation, where the regulation strictly sets the definition of counterbalancing capacity (here HQLA), the assumptions of the stress scenario (through the run-off rates and haircuts) and prescribes the minimum survival horizon (30 days). The internal survival horizon calculation (under ILAAP) relaxes all these assumptions and leaves it up to the bank to specify its own parameters that better fit their business model.

32. **There is a wide range of scenarios the banks may apply and that implicate very different theoretical survival horizons that are difficult to compare among each other.** The scenarios are of different nature - idiosyncratic (bank specific), market wide or combination of both, and are of different severity (mild, severe). Every scenario transforms its assumptions into stressed cash inflows and outflows (stressed maturity ladder) and so into different outcomes of the survival horizon calculations. Without knowing the specific assumptions the banks are applying, it is difficult to evaluate the outcomes of the calculations and to determine the realibility of the outcome for use in the Agency´s assessment or peer analysis. It is therefore important for the supervisor to assess the reasonableness of the internal stress test assumptions, quality of transformation of these assumptions into stressed cash flows including the robustness of the underlying quantitive models, and the corresponding survival horizon calculation. Only then a peer group analysis is relevant.

33. **The Agency may also specify a universal stress scenario and ask the bank to conduct the survival horizon calculation itself and inform the Agency about its outcome.** Also in this

case the supervisor must verify how the assumptions were transformed into stressed cash flows and survival horizon. Finally, the Agency itself may apply a universal stress scenario on banks' cash flows and conduct the calculation with its own sources (i.e., based on data provided by banks as part of their regular supervisory reporting). However, due to the variety of business models operated by banks, prescribed universal scenario by the Agency may not be appropriate in every instance for every institution.

34. **The Agency should decide how to assess the liquidity risk exposure of the bank using the survival horizon indicator while following one of these approaches (or a combination of them):**

- Assessment of the adequacy of the design of the bank´s internal stress tests and the outcome (in terms of the internal survival horizons), the Agency thereby also assesses the range of stress test scenarios and their severity;

and/or

- Request the bank to incorporate the stress testing assumptions as prescribed by the Agency and submit the results to the Agency. The Agency may declare a minimum expectation about the survival horizon under this specific test;

and/or

- Request the cash flow breakdown (within the existing or new reporting) and apply its own stress test to the transformation of the assumptions into the modified cash flows ("stressed maturity ladder"). By this approach the Agency itself will quantify the bank´s survival horizon.

APPENDIX I – OVERVIEW OF INTERNATIONAL STANDARDS AND REGIONAL (EU) REQUIREMENTS ON LIQUIDITY RISK AND ILAAP

BCBS standards

BCBS: Principles for Sound Liquidity Risk Management and Supervision, September 2008
Principles for Sound Liquidity Risk Management and Supervision (bis.org)

BCBS: The LCR and liquidity risk monitoring tools, January 2013
Basel III: The Liquidity Coverage Ratio and liquidity risk monitoring tools (bis.org)

BCBS: The net stable funding ratio, October 2014
Basel III: the net stable funding ratio (bis.org)

BCBS: Core Principles for Effective Banking Supervision, September 2012
Core principles for effective banking supervision (bis.org)

EU Legislation - LCR

EUR-Lex - 32018R1620 - EN - EUR-Lex (europa.eu)

EBA Guidelines

CEBS Guidelines on Liquidity Buffers and Survival Periods, December 2009
Guidelines-on-Liquidity-Buffers.pdf (europa.eu)

EBA SREP Guideline, EBA/GL/2014/13, 2018
Guidelines for common procedures and methodologies for the supervisory review and evaluation process (SREP) and supervisory stress testing | European Banking Authority (europa.eu)

EBA/GL/2016/10, Guidelines on the collection of information related to the internal capital adequacy assessment process (ICAAP) and the internal liquidity adequacy assessment process (ILAAP), November 2016
EBA final guidelines on ICAAP and ILAAP information | European Banking Authority (europa.eu)

EBA Additional monitoring metrics

EBA-ITS-2013-11 (Final draft ITS on additional monitoring metrics).pdf (europa.eu)

Implementing Technical Standards on additional liquidity monitoring metrics | European Banking Authority (europa.eu) and Annexes

ECB Guide, November 2018

ECB Guide to the internal liquidity adequacy assessment process (ILAAP) (europa.eu).

APPENDIX II. SUPERVISORY ISSUES FOR CONSIDERATION ON RECEIPT OF ILAAP DOCUMENTATION

The assessment of ILAAP documents submitted by a bank involves expert judgement on the part of the supervisor. The following topics/questions provide a guide to issues that the supervisor should considered. They are not exhaustive and should consider the size, nature, and complexity of the bank.

Introduction

- This template provides guidance to the Agency for performing their Pillar 2 Supervisory Review and Evaluation Process for liquidity risk. Reference is made to Chapter 6 of Regulation 188, which requires banks to produce an ILAAP.
- The Internal Liquidity Adequacy Assessment Process (ILAAP) plays a role in the Supervisory Review and Evaluation Process (SREP and/or L-SREP)
    - The ILAAP provides an important input to the assessment of a bank's overall liquidity risk profile and to an understanding of its business model and risk appetite.
    - The ILAAP shall be inherently consistent with the ICAAP of the bank.

Purpose of the Methodology

- Aim is to ensure a consistent approach is applied across all banks when evaluating the ILAAP and to determine any additional Pillar 2 liquidity requirements where necessary.
- The structure of this ILAAP methodology is consistent with the ICAAP methodology.
- The methodology should be used for reviewing a bank's ILAAP documentation by supervisors
    - the information used by supervisors to assess the ILAAP
    - the various stages of the assessment
    - the approach for determining Pillar 2 requirements if appropriate

Scope of Application and Proportionality

- Specify for which banks the requirements apply
    - All banks?
    - Consolidated group level or at solo bank level?
- Specify the intensity of the review
    - Less intensive assessment for smaller, less complex banks?
- Frequency of assessment
    - Timeline for banks to submit ILAAP documents – consistent with ICAAP submission process?
    - Annual submissions for largest banks/less frequent for smaller, less complex banks?
    - ILAAPs should be updated more frequently in case of significant changes to the business and liquidity risk profile of a bank

Structure of the Methodology

The Methodology could be structured according to the steps in the ILAAP assessment as outlined below.

1. ILAAP REQUEST AND DOCUMENTATION
2. SOURCES OF INFORMATION FOR CONDUCTING LIQUIDITY SREP (L-SREP)
3. ASSESSMENT OF INHERENT LIQUIDITY RISK
4. ASSESSMENT OF INHERENT FUNDING RISK
5. ASSESSMENT OF LIQUIDITY AND FUNDING RISK MANAGEMENT AND GOVERNANCE
6. SCENARIOS, STRESS TESTING AND SURVIVAL HORIZON ANALYSIS
7. PEER ANALYSIS
8. RAS SCORE/RATING
9. SUPERVISORY ACTION AND COMMUNICATION TOWARDS THE BANK

1. ILAAP REQUEST AND ILAAP DOCUMENTATION

- Approach to requesting ILAAP documentation
    - An ILAAP submission letter to be issued by supervisors.
        - Date of issuing the letter will be no later than the end of month X each year
        - Specific requirement for the current year (specific stress testing reflecting current situation (e.g., in the market) or previously identified shortcomings)
        - Different requests for smaller/less complex banks and/or for different business model (for future effective peer analysis)
        - The Agency should consider which information and documentation is still required, as it might already has obtained this through on-site inspections, ad-hoc reporting during the year, regular regulatory reporting, discussion with other stakeholders (e.g., external auditors, et cetera).

- Specify the format and content of the report
    - The information requested within the ILAAP should be based on the information required by Regulation No. 188 – see Chapter 6 in particular, this may include:
        - Business strategy and risk appetite (or changes from previous versions);
        - Description of the set-up of ILAAP;
        - Liquidity risk and funding risk management strategy (or changes from previous versions);
        - Clearly articulated risk appetite, this should also include a definition of the duration and type of stress that the banks should survive from a liquidity perspective (survival horizon under different stress scenarios);
        - Composition of liquidity buffer and collateral management;
        - Funding plan (quantitative overview, characteristics (volumes, prices, investors));

- Comprehensive list of limits (and changes in the limits from previous submission), limit utilization;
- List and description of liquidity stress tests - of different severities and sources (market, idiosyncratic and combined) - identification of parameters the bank is sensitive to (specific stress testing assumptions) and results of the stress tests;
- Liquidity contingency plan (LCP), back-tested (highlighting changes from previous version);
- Regular Liquidity risk reports (quarterly and monthly reports for the past 12-month period, weekly and daily reports for a shorter period (e.g., latest month);
- Values and limit values of the early warning indicators (EWI), description of responses/escalation to any actual warning;
- Models, assumptions, segmentations and time series applied in quantifying deposit outflows (behavioral models of non-maturing deposits (NMD)) and other behavioral assumptions if relevant (prepayments, commitments drawdown);
- Internal audit report relating to the liquidity risk;
- Assessment of Liquidity Coverage Ratio (LCR) and the Net Stable Funding Ratio (NSFR);
- List of group financing transactions if relevant; and
- Product book (or material changes in products and services).

- The Agency to decide if a universal template to be filled in (e.g., for the ILAAP Summary report) or whether it is left for the bank to decide
    - The ILAAP Summary report should include an executive summary, which summarizes:
        - the results of the bank's ILAAP;
        - the bank's view of its risk profile - liquidity and funding risk - and its capacity to cover the risk to which it is exposed;
        - the bank´s view on its liquidity risk management, and material changes (made or planned) to the risk management framework based on the ILAAP results;
        - review of the stress tests and survival horizon discussion;
        - the bank's assessment of its own liquidity adequacy requirement; and
        - material changes (made or planned) to the business model, strategy or risk appetite frameworks based on the ILAAP results.

- Set deadline for submission date (dates aligned with ICAAP submission, thus March, April of the calendar year)
- Inspectors to review the information submitted and check that it is complete and of sufficient detail to enable a thorough analysis to be conducted.
- Request additional information/documentation if not submitted or of insufficient detail.

2. SOURCES OF INFORMATION FOR CONDUCTING LIQUIDITY SREP (L-SREP)

In conducting the assessment of risks to liquidity and funding as part of the L- SREP, competent authorities/Agency should use a combination of information sources, including:

- Outcomes from the analysis of the institution's business model, particularly those that may help with understanding the key sources of risks to liquidity and funding;
- Supervisory/regulatory reporting, and particularly the information provided in liquidity risk reporting;

- Information from the monitoring of key indicators; e.g. additional monitoring metric reports (e.g., maturity ladder)); monthly/quarterly monitoring of the indicators
- Outcomes of the various supervisory activities and regular discussion with the bank;
- Information provided by the bank within the ILAAP submission (or other extraordinary and ad-hoc submissions);
- Findings and observations from internal or external audit reports;
- Risks identified in other banks operating a similar business model (the peer group); and
- Information from on-site inspections.

3. ASSESSMENT OF INHERENT LIQUIDITY RISK[1]

The main areas to be covered in the assessment:

- Evaluation of liquidity needs in the short and medium term (per currency)
- Evaluation of intraday liquidity risk
- Evaluation of liquidity buffer and counterbalancing capacity
- Liquidity stress testing, supervisory liquidity stress testing (if relevant)

- The following questions provide a guide to the evaluation, but are not exhaustive and supervisory (expert) judgment should be followed in the liquidity assessment process:

- Evaluation of bank´s short-term and medium-term liquidity risk. In this context, review of bank´s cash flow profile, including intraday net liquidity needs, contractual maturity gaps and their concentration, broken down by currency, the going concern liquidity balance and gaps;
- Evaluation of money market dependency, with special regard to short-term parent bank funding (intra group funding);
- Assessment of the level of excess liquidity; the quantity and quality of the liquidity buffer and the counterbalancing capacity, including transferable assets and transferable assets that are of extremely high / high liquidity and credit quality, the related market liquidity risks. A currency breakdown for significant currencies is warranted;
- Assessment of the LCR with the relevant calculations. Assessing if the LCR is correctly reported, and adequately identifies the institution´s liquidity needs. Also other relevant short term liquidity indicators and ratios should be assessed (e.g. quick assets ratios). A breakdown in significant currencies is warranted;
- Assessment of bank´s analysis of stability of retail deposits, wholesale funding characteristics, characteristics of contingent cash-flows/off-balance sheet items (credit lines, undrawn commitments, margin calls); drawdown-related liquidity risk;

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[1] If not stated otherwise the methodology is based on EBA SREP Guideline, EBA/GL/2014/13, July 2018 Guidelines for common procedures and methodologies for the supervisory review and evaluation process (SREP) and supervisory stress testing | European Banking Authority (europa.eu).

- Review of bank´s own stress test and survival period; and
- Evaluation of the results of the supervisory liquidity stress test (if available).

4. ASSESSMENT OF INHERENT FUNDING RISK

The main areas to be covered in the assessment:

- Evaluation of the bank´s funding profile (per currency)
- Evaluation of risks to the stability of the funding profile
- Evaluation of actual market access
- Evaluation of expected change in funding risk based on bank´s funding plan

The following questions provide a guide to the evaluation, but are not exhaustive and supervisory (expert) judgment should be followed in the liquidity assessment process:

- Review the funding profile of the institution along with the funding structure and funding concentrations and its development over time. Also should consider the size, share and structure of the parent bank funding/intra-group funding and the possibilities of accessing funds from money and capital markets and central bank (assessing all range of facilities);
- Evaluation whether maturity mismatch/gaps on the longer end of the maturity spectrum are not excessive, thereby also taking into account possible liquidity FX mismatch risk;
- Assessment of the stability and sustainability of the institution's funding and FX maturity transformation with the foreign exchange funding ratio and NSFR indicators;
- Assessment of NSFR and its calculation, does it reflect the bank´s funding needs, if not, are there other longer-term indicators (like the Loan-to-Deposit ratio);
- Assessment of concentration of funding sources, reliance on one specific source of funding, unstable funding (e.g. regular reporting of 5 or 10 largest depositors and/or funding sources);
- Asset (un)encumbrance levels (e.g., compared to the balance sheet);
- Assessment of current market access and current and future threats to this market access;
- Transferability of assets (currency convertibility, cross-border transfers, transfers among entities);
- Evaluation of the financing plan along with the related structural gaps based on the business model and business plan of the institution, feasibility of the plan.

5. ASSESSMENT OF LIQUIDITY AND FUNDING RISK MANAGEMENT AND GOVERNANCE

The main areas to be covered in the assessment:

- Liquidity risk strategy and liquidity risk tolerance
- Organizational framework, policies and procedures
- Risk identification, measurement, management, monitoring and reporting
- Liquidity-specific stress testing
- Internal control framework for liquidity risk management

- Liquidity contingency plans
- Funding plans

The following questions provide a guide to the evaluation, but are not exhaustive and supervisory (expert) judgment should be followed in the liquidity assessment process:

- Review, based on the business model available, the liquidity strategy and risk appetite of the bank together with the relevant regulatory and internal limits and targets, that all the components are internally consistent, and the risk tolerance reflects the nature, size and complexity of the bank;
- Assessment if liquidity strategy and liquidity risk appetite statement are consistent with overall risk strategy and risk appetite (esp. credit and market risk);
- Evaluation of organization of liquidity management (e.g. Treasury – ALM – risk management – ALCO), assessment if conflicting duties are segregated (risk taking and risk management);
- Assessment if ILAAP is comprehensive and well-integrated, all policies and procedures and reporting to management are in place and functioning;
- Assessment if limit system is internally consistent and reflects all aspects of liquidity (e.g., a combination of LCR, NSFR, survival horizon, quick asset ratios, concentration limits, structural limits);
- Assessment of the bank´s internal indicator and limit system, key indicators, early warning indicators (EWIs) and if escalation procedures are in place and functioning;
- Assessment if the bank has implemented appropriate method for projecting its cash flows over appropriate time horizons, assuming business-as-usual and stress situations;
- Evaluation of the risk management processes: monitoring within the month, indicator forecasting (e.g. loan disbursements, liaising with holders of large deposits), proven and fast mechanisms to increase the buffer (e.g. credit facility from parent bank/group, central bank);
- Evaluation of the management of intraday liquidity risks, in the context of which it reviews the management of daily liquidity positions broken down by foreign currency, as well as the process of meeting the central bank requirement in respect of mandatory reserves;
- Assessment of the modelling of behavioural assumptions (especially breakdown of retail and corporate deposits), quality of back-testing;
- Evaluation of liquidity stress testing procedures and the tests itself (appropriateness of assumptions of the tests (to the nature and complexity of the bank), range of tests (different severity), appropriateness of survival horizons under different stresses);
- Evaluation of the Liquidity Contingency Plan (LCP), its feasibility, availability of potential alternative funding sources, interaction with EWIs, governance arrangements for its activation; and
- Evaluation of the Funding Plan, its feasibility and ability to support the projected business activities also under adverse scenarios.

6. SCENARIOS, STRESS TESTING AND SURVIVAL HORIZON ANALYSIS

The banks shall identify - and the Agency shall assess - the stress testing scenarios the bank is most sensitive to and in which way. The scenarios are usually bank specific (idiosyncratic) or market wide or combination of both. Also the severity of these scenarios differs. Examples of these scenarios are:

- oil prices shock and its impact on funding and liquidity;
- policy rate change (central bank) and its impact on funding and liquidity rates;
- KZT currency devaluation; RUB devaluation/shock to the currencies;
- natural disasters/climate change in Kazakhstan or neighboring countries/around the world (mostly reflected through the agricultural sector);
- increase of price of CO_2 quotas;
- rise/decline in real-estate prices (retail, commercial real estate);
- pandemic (and subsequent closure of the economy);
- (geo)political trade tensions and possible sanctions.

The bank must identify - and the Agency must assess - the stress testing factors that are derived from the scenarios outlined above and the bank is most sensitive to. These may include:

- the run-off of retail funding;
- the reduction of secured and unsecured wholesale funding;
- concentration of funding;
- concentration of assets (e.g. client concentration (default of significant debtor/group), industry/sector concentration, repayment schedule concentration (reliance on bullet repayments etc.);
- the correlation between funding markets and diversification across different markets;
- additional contingent off-balance sheet exposures; higher drawdowns;
- funding tenors (e.g. where the funding provider has call options);
- the impact of any deterioration of the institution's credit rating;
- (home) currency devaluation;
- FX convertibility and access to foreign exchange markets;
- the ability to transfer liquidity across entities, sectors and countries;
- estimates of future balance-sheet growth;

- due to reputational risks, an implicit requirement for the institution to roll over assets and to extend or maintain other forms of liquidity support.[2]

Having analyzed these factors and after determining the specific stress testing scenario's and underlying assumptions, the stress test typically incorporates an analysis of the impact of the stress scenarios on the net cash flows in relation to the counterbalancing capacity. In its assessment of the stress test the Agency can follow several – or a combination of – approaches:

- Assessment of the adequacy of the design of the bank´s internal stress tests and the outcome (for example in terms of the internal survival horizons), the Agency thereby also assesses the range of stress test scenarios and their severity;

and/or

- Request the bank to incorporate the stress testing assumptions as prescribed by the Agency and submit the results to the Agency. The Agency may declare a minimum expectation about the survival horizon under this specific test;

and/or

- Request the cash flow breakdown (from the bank) and apply its own stress test to the transformation of the assumptions into the modified cash flows (stressed maturity ladder). By this approach the Agency itself will quantify the bank´s survival horizon.

The Agency should – while deciding on the approach or combination of approaches - bear in mind:

- Given the variety of business models operated by banks, common scenarios and assumptions may not be appropriate in every instance for every institution. The Agency should address this by using the most appropriate benchmark where alternatives are available, and/or by applying judgment to the outcome of the benchmark to account for business-model-specific considerations;
- The Agency should assess the suitability of any benchmarks applied to banks and continually review and update them in light of the experience of using them.
- When the Agency takes supervisory benchmarks into consideration for the determination of specific liquidity requirements, as part of the dialogue, they should explain to the institution the rationale and general underlying principles behind the benchmarks.

When the Agency decides to follow its own calculation, then:

- the Agency needs to collect the data through the regulatory or other supervisory reporting;
- the design of the benchmark is then influenced by the content of this reporting and the implementation of the benchmark is dependent when the reports are available;
- the Agency to decide about its approach towards (amongst others) non-maturing deposits, contingent liabilities/undrawn commitments and other bank specific (risk profile related) assumptions;

[2] The run-off of retail deposits as a result of crystallization of a reputation risk event (e.g., rumors which could spread quickly through the social media).

- the Agency will have to define a stress (universal? bank specific? mild? severe?) and derive a stressed maturity ladder; and
- the Agency will have to communicate the result to banks (to justify the opinion, especially when any additional requirement/supervisory action follows).

7. PEER ANALYSIS

Supervisors to undertake a peer analysis with similar banks on a range of factors, including but not limited to:

a. Length and depth/detail of ILAAP document;
b. Risk appetite statements and the limit framework;
c. Liquidity and Funding risk profile (structural gaps);
d. Quality and composition of the Liquidity Buffer;
e. LCR and NSFR, trend, volatility, driving sources of the calculated values; and
f. Stress tests assumptions, severity of the tests and survival horizon quantification.

8. RAS SCORE/RATING

The Agency has its own methodology for assessing a risk score for liquidity and funding risk, which is based on its Risk Based Framework and SREP procedures. The Rating is based on a set of quantitative and qualitative indicators.

9. SUPERVISORY ACTION

If shortcomings are identified in respect to liquidity and funding risk and/or risk management system, the following actions can by undertaken by the Agency/ Requests towards the bank can be defined:

- liquidity indicators above the regulatory limit, for example the LCR higher than the regulatory minimum;
- defined level of balancing capacity/liquid assets that ensure a prescribed minimum survival period and/or defined level of maximum cash outflow for a specific period:
    - require a minimum survival period of such a length that identified shortcomings are sufficiently mitigated; the survival period can be set either directly, as a requirement, or indirectly, by setting a cap on the amount of outflows over the relevant time buckets considered;
- specific quantitative requirements for stable funding by requiring a minimum level of stable funding in terms of the NSFR (higher than regulatory minimum)
- quantitative requirements in the form of restrictions/caps/limits
    - on mismatches (gaps),
    - funding concentrations,
    - risk appetite.
- quantitative restrictions on the issuance of secured/unsecured loans

- several of the beforementioned quantitative requirements could also further be specified in currency specific requirements, where appropriate and if needed based on the (currency specific) shortcomings identified
- qualitative requirements related to risk management and governance.