



EUROPEAN CENTRAL BANK

BANKING SUPERVISION

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

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1 Introduction

1. The recent financial crisis has shown the fundamental importance of liquidity¹ for credit institutions, as insufficient liquidity poses an immediate threat to their continuity. One of the main lessons learned² is that their liquidity risk management has to ensure their ability to fulfil their payment obligations at all times, even under adverse conditions.
2. Accordingly, the internal liquidity adequacy assessment process (ILAAP) plays a key role in the risk management of credit institutions. As regards significant institutions established in the Single Supervisory Mechanism (SSM), the ECB expects the ILAAP in accordance with the provisions in Article 86 of the Capital Requirements Directive (CRD IV)³ to be prudent and conservative⁴. The ECB is of the view that sound, effective and comprehensive ILAAPs comprise a clear assessment of the risks to liquidity, and have well-structured risk governance and risk escalation processes based on a well-thought out and thorough risk strategy that is translated into an effective risk limit system.
3. In the ECB's view, a sound, effective and comprehensive ILAAP is based on two pillars: the economic and the normative perspectives. Both perspectives are expected to complement and inform each other.
4. The ILAAP is also an important input factor in the SSM Supervisory Review and Evaluation Process (SREP). It feeds into all SREP assessments and into the Pillar 2 liquidity determination process in accordance with the EBA Guidelines on common procedures and methodologies for the SREP.
5. In the SREP, it is acknowledged that a good ILAAP reduces an institution's and its supervisors' uncertainty concerning the risks that the institution is or may be exposed to, and gives supervisors an increased level of confidence in the institution's ability to continue operating by maintaining adequate liquidity buffers and stable funding and by managing its risks effectively. This requires the institution, in a forward-looking manner, to ensure that all material risks are identified, effectively managed (using an appropriate combination of quantification and controls) and covered by a sufficient level of high-quality liquidity buffers.

¹ For the purpose of this Guide, the term "liquidity" covers both liquidity and funding.

² See, for example, *The Basel Committee's response to the financial crisis: report to the G20*, Basel Committee on Banking Supervision, October 2010.

³ Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC (OJ L 176, 27.6.2013, p. 338).

⁴ Article 86(1) CRD IV: "Competent authorities shall ensure that institutions have robust strategies, policies, processes and systems for the identification, measurement, management and monitoring of liquidity risk over an appropriate set of time horizons, including intra-day, so as to ensure that institutions maintain adequate levels of liquidity buffers."

1.1 Purpose

6. The purpose of this ECB Guide to the ILAAP (the “Guide”) is to provide transparency by making public the ECB’s understanding of the liquidity risk requirements following from Article 86 CRD IV. The Guide is aimed at assisting institutions in strengthening their ILAAPs and at encouraging the use of best practices by explaining in greater detail the ECB’s expectations on the ILAAP, leading to more consistent and effective supervision.
7. The Guide deduces from the CRD IV liquidity risk provisions seven principles that will be considered, inter alia, in the assessment of each institution’s ILAAP as part of the SREP. These principles will also be referred to in discussions with individual institutions in the supervisory dialogue.
8. The Guide does not substitute or supersede any applicable law implementing Article 86 CRD IV. Insofar as the Guide is not in line with applicable law, the applicable law prevails. The Guide is intended to be a practical tool that is updated regularly to reflect new developments and experience. Consequently, the principles and expectations laid out in this Guide will evolve over time. It will be reviewed in the light of the ongoing development of European banking supervision practice and methodologies, international and European regulatory developments and, for example, new authoritative interpretations of relevant directives and regulations by the Court of Justice of the European Union.
9. This Guide follows a principles-based approach with a focus on selected key aspects from a supervisory perspective. It is not meant to provide complete guidance on all aspects relevant for sound ILAAPs. The implementation of an ILAAP that is adequate for an institution’s particular circumstances remains the responsibility of the institution. The ECB assesses institutions’ ILAAPs on a case-by-case basis.
10. In addition to this Guide, and in addition to relevant Union law and national law, institutions are encouraged to take into account other ILAAP-relevant publications from the EBA⁵ and international fora like the Basel Committee on Banking Supervision (BCBS) and the Financial Stability Board (FSB). Furthermore, institutions should take into account all ILAAP-related recommendations addressed to them, e.g. recommendations resulting from the SREP, such as those related to sound governance, to risk management and to controls.

1.2 Scope and proportionality

11. This Guide is relevant for any credit institution that is considered to be a significant supervised entity as referred to in Article 2 (16) of the SSM

⁵ Of particular relevance in this regard are the EBA Guidelines on internal governance (EBA/GL/2017/11), the EBA Guidelines on institutions’ stress testing (EBA/GL/2018/04) and the CEBS Guidelines on the management of concentration risk under the supervisory review process (GL31).

Framework Regulation⁶. The scope of application of Article 86 CRD IV on ILAAP scope is determined by Article 109 CRD IV. Given that Article 86 CRD IV is a minimum harmonisation provision, and its transposition has been dealt with in different ways in different EU Member States, a wide variety of ILAAP practices and requirements for the supervision of credit institutions exist across participating Member States.

12. The ECB, together with the national competent authorities (NCAs), has developed ILAAP principles. The objective of these principles is to ensure high standards of supervision by fostering the development of common methodologies in this important supervisory area.
13. The ILAAP is, above all, an internal process, and it remains the responsibility of individual institutions to implement it in a proportionate and credible manner. Pursuant to Article 86 CRD IV, ILAAPs have to be proportionate to the nature, scale and complexity of the activities of the institution.
14. The principles developed in this Guide shall only serve as a starting point in supervisory dialogues with credit institutions. Therefore, they should not be understood as comprehensively covering all aspects necessary to implement and use a sound, effective and comprehensive ILAAP. It is the responsibility of the institution to ensure that its ILAAP remains comprehensive and proportionate to the nature, scale and complexity of its activities, bearing in mind that proportionality is not to be applied in a way that undermines the effectiveness of its ILAAP.

⁶ Regulation (EU) No 468/2014 of the European Central Bank of 16 April 2014 establishing the framework for cooperation within the Single Supervisory Mechanism between the European Central Bank and national competent authorities and with national designated authorities (SSM Framework Regulation) (ECB/2014/17) (OJ L 141, 14.5.2014, p. 1).

2 Principles

Principle 1 – The management body is responsible for the sound governance of the ILAAP

- (i) In view of the major role of the ILAAP for the institution, all of its key elements are expected to be approved by the management body. This is expected to be reflected in the internal governance arrangements for the management body, set up in accordance with national regulations and in line with relevant Union law and EBA guidelines. The management body, senior management and relevant committees are expected to discuss and challenge the ILAAP in an effective way.
- (ii) Each year, the management body is expected to provide its assessment of the liquidity adequacy of the institution, supported by ILAAP outcomes and any other relevant information, by producing and signing a clear and concise statement, the liquidity adequacy statement (LAS).
- (iii) The management body has overall responsibility for the implementation of the ILAAP, and it is expected to approve an ILAAP governance framework with a clear and transparent assignment of responsibilities, adhering to the segregation of functions. The governance framework is expected to include a clear approach to the regular internal review and validation of the ILAAP.

The management body approves key elements of the ILAAP

15. The management body is expected to produce and sign the LAS, and approve the key elements of the ILAAP, for example:
 - the governance framework;
 - the internal documentation framework;
 - the perimeter of entities captured, the risk identification process, and the internal risk inventory and taxonomy, reflecting the scope of material risks as well as the coverage of those risks by liquidity;
 - risk quantification methodologies,⁷ including high-level risk measurement assumptions and parameters (e.g. time horizon, confidence levels,⁸ and maturity profile), supported by reliable data and sound data aggregation systems;

⁷ The ILAAP Guide does not prescribe a particular methodology for quantifying risks. This is explained in more detail in the section on “Choice of risk quantification methodologies” under Principle 6.

⁸ Such as in the case of non-maturing deposits modelling.

- the approach used to assess liquidity adequacy (including the stress-testing framework and a well-articulated definition of liquidity adequacy);
 - quality assurance of the ILAAP, particularly with regard to key inputs for the LAS (including the set-up and role of internal validation, the use of self-assessment against applicable rules, regulations and supervisory expectations, controls in place for validating the institution's data, stress test results, models applied, etc.).
16. The management body comprises a supervisory function and a management function that may be performed by a single body or two separate bodies. Which key elements of the ILAAP are approved by which function depends on the internal governance arrangements of the institution. This will be interpreted by the ECB in accordance with national regulations and in line with relevant Union law and EBA guidelines⁹.

Internal review and validation

17. The ILAAP shall be subject to regular internal review. This regular internal review is expected by the ECB to cover both qualitative and quantitative aspects, including, for example the use of ILAAP outcomes, the stress-testing framework, risk capture, and the data aggregation process, including proportionate validation processes for internal risk quantification methodologies used.
18. For this purpose, the institution is expected to have in place adequate policies and processes for internal reviews. The reviews are expected to be conducted by the three lines of defence, consisting of the business lines and the independent internal control functions (risk management, compliance and internal audit), in accordance with their respective roles and responsibilities¹⁰.
19. The ECB expects a defined process to be in place in order to ensure proactive adjustment of the ILAAP to any material changes that occur, such as entering new markets, providing new services, offering new products, or changes in the structure of the group¹¹ or financial conglomerate.
20. ILAAP outcomes and assumptions are expected to be subject to adequate internal review, covering, for example, liquidity planning, scenarios, and risk quantification. The extent to which this challenge is expected to be quantitative as opposed to qualitative depends on the nature of the element assessed. This review is expected to take due account of the limits and constraints arising from

⁹ See recital 56, points (7) to (9) of Article 3(1) CRD IV and Title II of the EBA Guidelines on internal governance (EBA/GL/2017/11).

¹⁰ The respective roles of the functions involved are described in the EBA Guidelines on internal governance (EBA/GL/2017/11).

¹¹ For the purpose of this Guide, the term "institution" also refers to groups, conglomerates or sub-groups, as applicable in accordance with Article 109 CRD IV.

the methodologies employed, the underlying assumptions and the input data used in quantifying the risk.

21. The purpose of the review is to scrutinise whether the internal processes, chosen methodologies and assumptions have led to sound outcomes (“back-testing¹²”) and whether they remain appropriate with a view to the current situation and future developments. The outcome of this review is expected to be thoroughly assessed, documented and reported to senior management and the management body. In case any weaknesses have been identified, effective follow-up actions are expected to lead to a quick rectification of the findings.

Liquidity adequacy statement

22. In the liquidity adequacy statement (LAS), the management body provides its assessment of the liquidity adequacy of the institution and explains its main supporting arguments, backed by information it considers relevant, including ILAAP outcomes. The ECB is of the view that a sound LAS demonstrates that the management body has a good understanding of the liquidity adequacy of the entity, its main drivers and vulnerabilities, the main ILAAP inputs and outputs, the parameters and processes underlying the ILAAP, and the coherence of the ILAAP with its strategic plans.
23. The authority to sign the LAS on behalf of the management body is expected to be decided by the institution in the light of national regulations and relevant prudential requirements and guidelines.¹³

Principle 2 – The ILAAP is an integral part of the overall management framework

- (i) Pursuant to Article 86(1) CRD IV, the institution is expected to have robust strategies, policies, processes and systems for the identification, measurement, management and monitoring of liquidity risk over an appropriate set of time horizons, including intraday, to ensure that it maintains adequate liquidity buffers.¹⁴
- (ii) In addition to an adequate quantitative framework for assessing liquidity adequacy, a qualitative framework needs to ensure that liquidity adequacy is actively managed. This includes the monitoring of liquidity adequacy metrics to identify and assess potential threats over different time horizons, including

¹² For example, the funding plan is expected to be subject to back-testing in accordance with the requirements of the EBA Guidelines on harmonised definitions and templates for funding plans of credit institutions under Recommendation A4 of ESRB/2012/2.

¹³ The EBA Guidelines on internal governance (EBA/GL/2017/11) describe in more detail the allocation of tasks and responsibilities between the supervisory and management functions of the management body.

¹⁴ For a description of internal liquidity buffers and internal stable sources of funding, see Principle 5.

intraday, in a timely manner, drawing practical conclusions and taking preventive action to ensure that regulatory and internal liquidity buffers remain adequate.

- (iii) The quantitative and qualitative aspects of the ILAAP are expected to be consistent with each other and with the institution's business strategy and risk appetite. The ILAAP is expected to be integrated into the business, decision-making and risk management processes of the institution. The ILAAP is expected to be consistent and coherent throughout the group.
- (iv) Institutions are expected to maintain a sound and effective overall ILAAP architecture and documentation of the interplay between the ILAAP elements and the integration of the ILAAP into the institution's overall management framework.
- (v) The ILAAP is expected to support strategic decision-making and, at the same time, be operationally aimed at ensuring that the institution maintains adequate liquidity on an ongoing basis, thereby promoting an appropriate relationship between risks and rewards. All methods and processes used by the institution to steer its liquidity as part of the operational or strategic liquidity management process are expected to be approved, thoroughly reviewed, and properly included in the ILAAP and its documentation.

The ILAAP as an integral part of an institution's management framework

- 24. In order to assess and maintain adequate liquidity to cover the institution's risks,¹⁵ the internal processes and arrangements are expected to ensure that quantitative analysis of risks, as reflected in the ILAAP, is integrated into all material business activities and decisions.
- 25. This integration may be achieved by using the ILAAP for, for example, the strategic planning process at group level, monitoring liquidity adequacy indicators to identify and assess potential threats in a timely manner, drawing practical conclusions and taking preventive action, determining liquidity allocation, and ensuring the ongoing effectiveness of the risk appetite framework (RAF).
- 26. ILAAP-based risk-adjusted performance indicators¹⁶ are expected to be used in the decision-making process, and, for example, when determining variable remuneration or when discussing business and risks at all levels of the institution, including, inter alia, in asset and liability management committees, risk committees and meetings of the management body.

¹⁵ The general expectations regarding the quantitative part of the ILAAP are introduced under Principle 3.

¹⁶ Examples of such indicators can be found in the *EBA Guidelines on sound remuneration policies under Articles 74(3) and 75(2) of Directive 2013/36/EU and disclosures under Article 450 of Regulation (EU) No 575/2013* (EBA/GL/2015/22).

The overall ILAAP architecture

27. The management body is responsible for maintaining a sound and effective overall ILAAP architecture, ensuring that the different elements of the ILAAP fit coherently together and that the ILAAP is an integral part of the institution's overall management framework. The institution is expected to have a clear view of how these elements are consistently integrated into an effective overall process that allows it to maintain liquidity adequacy over time.
28. For this purpose, the institution is expected to maintain as part of its ILAAP documentation a description of the overall ILAAP architecture, for example an overview of the key elements of the ILAAP and how they work together, explaining how the ILAAP is integrated into the institution's functioning and how its outcomes are used in the institution. This ILAAP architecture description is expected to explain the high-level structure of the ILAAP, how its outcomes are used in decision-making, and the connections between, for example, business and risk strategies, funding plans, risk identification processes, the risk appetite statement, limit systems, risk quantification methodologies, the stress-testing programme and management reporting.

Management reporting

29. The ILAAP is an ongoing process. The institution is expected to integrate ILAAP outcomes (such as how material risks, key indicators, etc. are evolving) into its internal reporting to different managerial levels at appropriate frequencies. The frequency of reporting to the management body is expected to be at least quarterly, but, depending on the size, complexity, business model and risk types of the institution, reporting might need to be more frequent to ensure timely management action, given the potentially rapid changes in the liquidity and funding situation and the immediate impact that an inadequate liquidity position could have on the continuity of the institution.

The ILAAP and the risk appetite framework¹⁷

30. The RAF of the institution is expected to formalise the interplay between the RAF and other strategic processes such as the ICAAP, the ILAAP, the recovery plan and the remuneration framework in accordance with the SSM supervisory statement on governance and risk appetite. A well-developed RAF, articulated through the risk appetite statement, is expected to be closely interlinked with the ILAAP and a cornerstone of sound risk and liquidity management.

¹⁷ Further explanations and guidance can be found in the *SSM supervisory statement on governance and risk appetite*, ECB, June 2016, and in the *Principles for An Effective Risk Appetite Framework*, Financial Stability Board, November 2013.

31. In its risk appetite statement, the institution is expected to set out both a clear and unambiguous view on and intended actions with regard to its risks in line with its business strategy. In particular, the statement is expected to include motivations for taking on or avoiding certain types of risks, products or regions. Furthermore, the institution is expected to widen the monitoring of the liquidity risks to other metrics than the regulatory ones and to select a diversified set of metrics proportionate to its business model and risk profile.
32. The institution's overall risk profile is expected to ultimately be constrained and driven by the group-wide RAF and its implementation. Furthermore, the RAF is a critical element of the institution's strategy development and implementation process. In a structured manner, the RAF links risks taken to the institution's liquidity adequacy and strategic objectives. As part of the RAF, the institution is expected to determine and take into account its management buffers.
33. The institution is expected to clearly express how the implementation and monitoring of its strategy and risk appetite are supported by its ILAAP, and how this effectively allows it to comply with the agreed risk boundaries set out in the risk appetite statement. In order to facilitate sound and effective risk management, the institution is expected to use the ILAAP outcomes when setting up an effective risk monitoring and reporting system and an adequately granular limit system (including effective escalation procedures) that allocates specific limits to, for example, individual risks, sub-risks, entities and business areas, promoting the risk appetite statement of the group.
34. The institution is expected to have a policy in place regarding the use of public funding sources.¹⁸ Such policies are expected to differentiate between the use of such sources during business as usual and during times of stressed conditions and be explicitly considered in the risk appetite (timing and amount) and liquidity adequacy statements. The actual and potential future use of such sources is expected to be monitored. This monitoring is expected to take place in all material currencies. In order to quantify both the timing and the amount of potential future use of such sources stress testing is expected to be used.

Consistency between ILAAPs and recovery plans

35. A recovery plan aims at providing measures to be taken by the institution to restore its financial position following a significant deterioration. Since insufficient liquidity is one of the key threats to business continuity/viability, the ILAAP and the recovery plan are expected to be parts of the same risk management continuum. While the ILAAP is aimed at maintaining the continuity of an institution (within its strategy and intended business model) recovery

¹⁸ The EBA Guidelines on harmonised definitions and templates for funding plans of credit institutions under Recommendation A4 of ESRB/2012/2 (EBA/GL/2014/04) define public funding sources as "sources of funding that are either directly or indirectly provided by the public sector. This includes medium- and long-term repo financing programmes, credit guarantee funding programmes and credit guarantee real economy support programmes". (This includes for example the ECB's longer-term refinancing operations, or LTROs.)

plans set out measures (including extraordinary measures) to restore its financial position following a significant deterioration.

36. Accordingly, institutions are expected to ensure consistency and coherence between their ILAAPs, on the one hand, and their recovery plans and arrangements (e.g. thresholds for early warning signals and recovery indicators, escalation procedures, and potential management actions¹⁹) on the other. Moreover, potential ILAAP management actions with material impact are expected to be reflected without delay in the recovery plan, and vice versa, to ensure that the processes and the information included in related documents are consistent and up to date.

Consistency and coherence across groups

37. The ILAAP is expected to ensure liquidity adequacy at relevant levels of consolidation and for applicable entities of the group, as required by Article 109 CRD IV. In order to be able to effectively assess and maintain liquidity adequacy across entities, the strategies, risk management processes, decision-making and the methodologies and assumptions applied when quantifying liquidity and funding need to be coherent across the relevant perimeter.
38. Where national ILAAP provisions or guidance differ for certain entities or sub-groups, their implementation “on those levels of the group or sub-group may require diverging approaches to a certain degree. However, institutions are expected to ensure that this does not interfere with the effectiveness and consistency of the ILAAP on each relevant level, with a special focus on the group level.
39. In the case of cross-border operations facing differences in local liquidity (risk management) requirements, the ILAAP at the highest level of consolidation is expected to make it clear what local differences in regulation are relevant. In general, the expectation is that such differences in regulation will only affect the details of implementation, such as stress test parameters, sign-off and reporting, etc., and will not compromise consistency in the general approach to the ILAAP. The institution is also expected to assess impediments to liquidity transferability in a conservative and prudent manner and take them into account in its ILAAP.

Example 2.1: Risk adjusted performance measurement

A bank incorporates liquidity costs, benefits and risks into the internal pricing, funds transfer pricing (FTP), performance measurement and new product approval process

¹⁹ However, where there are differences in the principles underlying the ILAAP and recovery planning, the envisaged management actions may be different.

for all significant business activities (both on-balance sheet and off-balance sheet), thereby aligning the risk-taking incentives of individual business lines with the liquidity risk exposures their activities create for the institution as a whole.

This is supported by the implementation of a sound ILAAP governance framework and architecture as described under Principle 1.

Example 2.2:

Consistency between ILAAP and recovery plan

To ensure the overall consistency of recovery and ILAAP arrangements, institutions are expected to be consistent across the continuum of potential liquidity impacts and corresponding management actions in their ILAAPs and their recovery plans. More specifically, this means, for example, that liquidity indicators used in the recovery plan for identifying significant actual and likely future deteriorations in the quantity and quality of liquidity are expected to be consistently taken into account in the ILAAP. More specifically, under normal circumstances liquidity levels are expected to be managed via the ILAAP so as to stay above the thresholds for liquidity indicators²⁰ in the recovery plan by a prudent margin.

Likewise, the management actions in the ILAAP and the recovery plan are also expected to be consistent: where an institution assumes similar actions in its recovery plan and in its ILAAP, this could lead to an overestimation of the effectiveness of recovery options in the calculation of the overall recovery capacity if some of them have already been used under the ILAAP. Therefore, in order to avoid overlaps between recovery options and ILAAP management actions, which might lead to “double-counting”, material management actions taken under the ILAAP are expected to be reflected without delay in a re-assessment of the feasibility and effectiveness of the recovery options included in the recovery plan.²¹

For instance, the capacity of an institution to raise funding in a recovery situation may be severely affected if the institution has already raised funding under its ILAAP in a situation that does not fall under the recovery plan. This could impact the types and volume of extra funding that could be raised as well as the specification of issuance conditions.

Another connection between ILAAPs and recovery plans is reverse stress testing. This instrument is expected to be used by institutions as part of their ILAAPs to assess which scenarios would bring them into a situation that would threaten their ability to pursue their intended business model (and therefore their ILAAP objectives). In the context of recovery planning, “reverse stress testing should be considered as a starting point for developing scenarios that should be only ‘near-default’; i.e. they would lead to an institution’s or a group’s business model becoming

²⁰ More details on this can be found in the EBA Guidelines on the minimum list of qualitative and quantitative recovery plan indicators (EBA/GL/2015/02).

²¹ See also the ECB Report on recovery plans, July 2018, for more details.

non-viable unless the recovery actions were successfully implemented.”²² Moreover, scenarios in both ILAAPs and recovery plans should be based on events that are particularly relevant to the institutions and address their key vulnerabilities.

Principle 3 – The ILAAP contributes fundamentally to the continuity of the institution by ensuring its liquidity adequacy from different perspectives

- (i) The ILAAP plays a key role in maintaining the continuity of the institution by ensuring its adequate liquidity and funding position. In order to ensure this contribution to its continuity, the institution is expected to implement a proportionate ILAAP that is prudent and conservative and integrates two complementary internal perspectives.
- (ii) The institution is expected to implement an economic perspective, under which it is expected to identify and quantify all material risks that may negatively affect its internal liquidity position.
- (iii) Under the economic perspective, the institution is expected to ensure that any risks that may affect its liquidity position are adequately covered by internal liquidity in line with its internal liquidity adequacy concept. This includes the assessment of a credible baseline scenario and adequate, institution-specific adverse scenarios, as reflected in the multi-year liquidity and funding planning and in line with the overall planning objectives of the institution.
- (iv) The institution is expected to implement a normative perspective which is an assessment of the institution’s ability to fulfil all of its liquidity-related regulatory and supervisory requirements and demands and to cope with other external financial constraints on an ongoing basis in the medium term.
- (v) The institution is expected to have a formal liquidity contingency plan (LCP) that clearly sets out the measures for addressing liquidity difficulties under stressed circumstances. The LCP is expected to address the risks identified in the institution’s ILAAP and to set out the relationship with its recovery plan.

Objective: to contribute to the continuity of the institution

- 40. The objective of the ILAAP is to contribute to the institution’s continuity from a liquidity perspective by ensuring that it has sufficient liquidity to fulfil its obligations when they fall due, to bear its risks and follow a sustainable strategy, even during a prolonged period of adverse developments. The institution is expected to reflect this continuity objective in its RAF (as specified under Principle 2) and to use the ILAAP framework to reassess its risk appetite

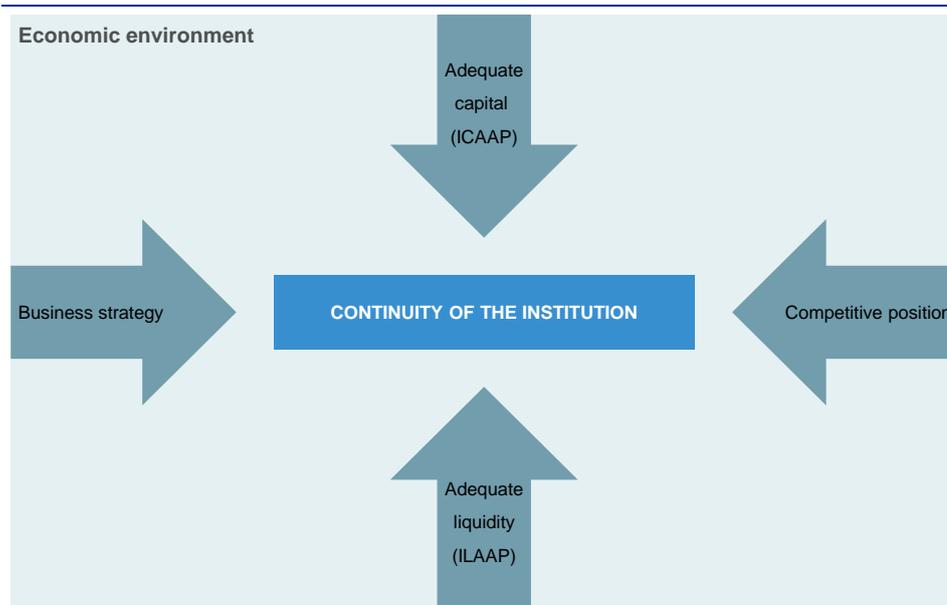
²² See paragraph 11 of the EBA Guidelines on the range of scenarios to be used in recovery plans (EBA/GL/2014/06).

and tolerance thresholds within its overall liquidity constraints, taking into account its risk profile and vulnerabilities.

41. Within these liquidity constraints, the institution is expected to assess and define²³ management buffers above the regulatory and supervisory minima²⁴ and internal liquidity needs that allow it to sustainably follow its strategy. When aiming for sufficient management buffers over the short-term horizon, the institution is expected to take into account, for example, the expectations of markets, investors and counterparties and the reliance of the business model on the ability to pay out bonuses, dividends and payments on Additional Tier 1 (AT1) instruments. In addition to such external constraints, the management buffers are expected, for example, to cushion uncertainties around projections of, and possible resulting fluctuations in, liquidity ratios, to reflect the institution's risk appetite and to allow it some flexibility in its business decisions.

Figure 1

The ILAAP contributes to the continuity of the institution



Figures and dimensions are for illustrative purposes only.

Economic internal perspective

42. The institution is expected to manage its liquidity adequacy from the economic perspective by ensuring that its risks and expected outflows are adequately covered by internal liquidity taking into account the expectations of Principle 5.

²³ In this Guide, management buffers do not refer to available liquidity ("headroom"). Rather, they reflect the institution's view on the liquidity it needs to sustainably follow its business model.

²⁴ The management buffer concept does not actually set new minimum liquidity requirements above the existing legal minima. Although it is generally expected that management buffers will be larger than zero, in theory an institution may also be able to argue that, depending on the scenario assessed, a management buffer of zero would still allow it to sustainably follow its business model.

Economic liquidity adequacy requires the internal liquidity of the institution to be sufficient to cover its risks and expected outflows and to support its strategy on an ongoing basis. Under this perspective, the institution's assessment is expected to cover the full universe of risks that may have a material impact on its liquidity position, taking into account cash flows and the applicable liquidity value of liquid assets. The institution is expected to manage economic risks and adequately assess them in its stress-testing programme and its monitoring of liquidity adequacy.

43. The institution is expected to use its own processes and methodologies to identify, quantify, and provide internal liquidity for the expected and unexpected outflows that it might be subject to, taking into account the principle of proportionality. The institution is expected to perform a point-in-time risk quantification of the current situation as at the reference date. This is expected to be complemented by a forward-looking liquidity adequacy assessment for the medium term that takes into account future developments, like changes in the external environment. Institutions are expected to capture at least three years for the funding position and an appropriate time horizon for the liquidity position.
44. For this purpose, in addition to assessing the available liquidity against liquidity needs in its daily operations and funding planning under a baseline scenario, the institution is expected to also consider adverse scenarios.²⁵ Where relevant, the assumptions used are expected to be consistent with the recovery plan.
45. The institution is expected to use the outcomes and metrics of the economic liquidity adequacy assessment in its strategic and operational management, when reviewing its risk appetite in its interactions with clients (stopping new business, enforcing repayment at contract date without refinancing, etc.) and markets (fire sales and other actions that affect market perception when executed) and when reviewing its business strategies. In addition to prudent internal liquidity buffers definition²⁶ and risk quantification, the institution is expected to present an economic liquidity adequacy concept that enables it to remain economically viable and follow its strategy. This includes management processes to identify in a timely manner the need for action to overcome emerging internal liquidity deficiencies and to take effective measures (e.g. increasing liquidity buffers, changing the cash flow profile).

Normative internal perspective

46. The normative perspective is a multi-year assessment of the institution's ability to fulfil all of its liquidity-related (quantitative) regulatory and supervisory requirements and demands, and to cope with other external financial constraints, on an ongoing basis.

²⁵ The severity of adverse scenarios is discussed further under Principle 7.

²⁶ Expectations regarding the internal liquidity buffers are introduced under Principle 5.

47. The normative perspective is expected to take into account all aspects that could affect relevant regulatory ratios, including inflows, outflows and liquidity buffers, over the planning period. Therefore, although its outcomes are expressed in regulatory metrics, the normative perspective is not limited by the assumptions underlying the calculation of the Pillar 1 ratios. Rather, when assessing its liquidity adequacy under the normative perspective, the institution is expected to take into account the assumptions it uses under the economic perspective when calculating the Pillar 1 ratio²⁷, as explained in Example 3.1.
48. The institution is expected to maintain a robust, up-to-date liquidity and funding plan that is compatible with its strategies, risk appetite and liquidity resources. The liquidity and funding plan is expected to comprise baseline and adverse scenarios, and to cover a forward-looking horizon capturing at least three years²⁸ for the funding position²⁹ and an appropriate time horizon for the liquidity position. When preparing those projections the institution is expected to account for the economic situation as reflected in the economic perspective. The institution is expected to also take into account the impact of upcoming changes in legal, regulatory, and accounting frameworks³⁰ and make an informed and reasoned decision on how to address them in the liquidity and funding planning.
49. To assess the expected evolution of key normative and economic internal metrics under adverse developments in ongoing business expectations, the institution needs to assess the level of these metrics under adverse conditions against internal thresholds as defined in the risk appetite statement. This does not mean that the institution needs to comply with the liquidity coverage ratio (LCR) under severe stress conditions. However, it does mean that it is expected to present a concept that enables it to remain viable and pursue its strategy, e.g. by taking concrete action (change in liquidity profile) as a result of the projections it has made. This also implies that the institution is expected to monitor the potential decline in the LCR under such conditions and link this to its risk appetite, LCP and recovery plan.

Interaction between the economic and the normative perspectives

50. Figure 2 gives an overview of the aspects, measures and outcomes that are expected to be taken into account under the economic and normative

²⁷ The same logic applies when calculating ratios imposed by the competent authority as part of SREP decisions (e.g. the minimum survival period).

²⁸ It is the responsibility of the institution to choose an adequate planning horizon – three years is the minimum horizon that a detailed funding plan is expected to capture. Institutions are also expected to take developments beyond this minimum horizon into account in their strategic planning, in a proportionate manner, if they will have a material impact.

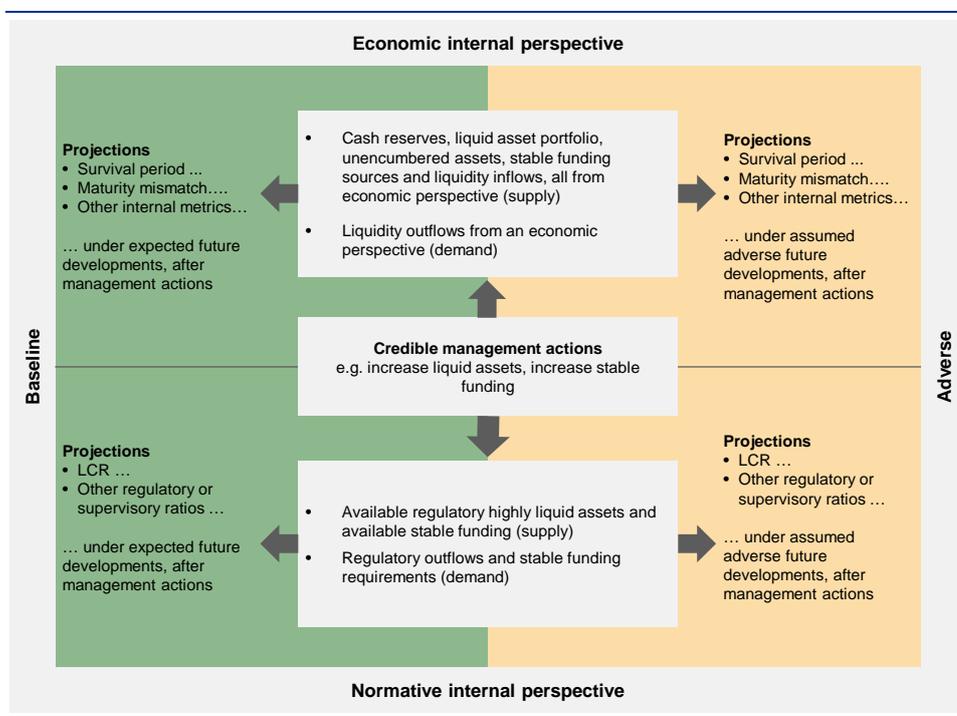
²⁹ It is also possible to integrate the liquidity and funding plans into a single document.

³⁰ Depending on the likelihood and potential impact of particular changes, different treatment may be applied by the institution. For instance, some changes may seem highly unlikely, but would have such a huge impact that the institution is expected to prepare contingency measures. Other, more likely regulatory changes, however, are expected to be captured in the liquidity and funding plan itself. An example is the implementation of the net stable funding ratio (NSFR).

perspectives for the assessment of both the liquidity and the funding position. Although the calculations of the projections under the normative perspective mechanically follow Pillar 1 provisions, the institution nonetheless is expected to form an internal view on the scenarios used and on the impacts of those scenarios on projected Pillar 1 and Pillar 2 figures. Under the economic perspective, it is expected to also select adequate scenarios and determine the impact on the respective projections. In addition, under the economic perspective it is also expected to determine adequate assumptions and measures for all supply, demand and surplus-relevant calculation methodologies. The differences in methodologies, measures and assumptions used can lead to very different outcomes of the assessments between the two perspectives, even if the same scenario is applied.

51. The same is true with regard to management actions taken into account in liquidity or funding planning under the two perspectives. Moreover, such differences can even occur within the same perspective, depending on the scenario assessed. Figure 2 shows that the same management actions may have materially different impacts, depending on the perspective and the scenario considered. The institution is expected to take this into account in its liquidity and funding planning and ensure that the management action assumptions under the different perspectives are consistent with each other.

Figure 2
Different impacts of credible management actions, depending on the perspectives and scenarios considered – illustrative example



Figures and dimensions are for illustrative purposes only.

52. If the institution assumes management actions in its liquidity and funding plan, it is expected to assess the feasibility and expected impact of such actions

under the respective scenarios, and to be transparent about the quantitative impact of each action on projected figures.

53. The economic and normative perspectives are expected to mutually inform each other and be integrated into all material business activities and decisions as outlined under Principle 2.
54. In addition to measuring its current ability to fulfil liquidity obligations, the institution is expected to have a clear and concise plan on how to act when (unexpected) difficulties arise in meeting obligations as they fall due. The ILAAP is therefore expected to contain detailed information on liquidity contingency measures (in the form of an LCP) that can be taken, including an assessment of the potential contingent liquidity that can be generated during stress, the time the measures would take to execute, potential negative effects (on profit and loss account, reputation, business model viability, etc.) and the likelihood of completion of the measures under stressed conditions. Such liquidity contingency measures are expected to be consistent with the risks identified and quantified in the ILAAP. The institution is expected to make clear (in its ILAAP architecture) the relationship between the LCP and the liquidity part of the recovery plan and how these relate to the risks identified on an ongoing basis as described above and under stress circumstances.

Example 3.1

The economic perspective informs the normative perspective

Under the economic perspective, the institution assesses outflows from different types of products using its internal approaches.

For example, under the economic perspective the institution has a comprehensive approach for identifying retail deposits subject to higher outflow rates (“less stable retail deposits”) and calculating the respective outflow rates³¹.

These outcomes are used in the estimation of liquidity buffers under the economic perspective. In addition, this information is used to quantify the 30-day outflow rate under the normative perspective. In doing so, the institution makes use of all available information from the economic perspective when calculating the LCR.

Principle 4 – All material risks are identified and taken into account in the ILAAP

- (i) The institution is responsible for implementing a regular process for identifying all material risks it is or might be exposed to under the economic and normative

³¹ Subject to Article 25(2) and (3) of Commission Delegated Regulation (EU) No 2015/61 of 10 October 2014 to supplement Regulation (EU) No 575/2013 of the European Parliament and the Council with regard to liquidity coverage requirement for Credit Institutions (OJ L 11, 17.1.2015, p. 1).

perspectives. All risks identified as material are expected to be addressed in all parts of the ILAAP in accordance with an internally defined risk taxonomy.

- (ii) Taking a comprehensive approach, including all relevant legal entities, business lines and exposures, the institution is expected to identify at least annually risks that are material using its own internal definition of materiality. This risk identification process is expected to result in a comprehensive internal risk inventory.
- (iii) In the case of financial and non-financial participations, subsidiaries, and other connected entities, the institution is expected to identify the significant underlying risks that it is or may be exposed to and take them into account in its ILAAP.
- (iv) For all risks identified as material, the institution is expected either to cover the risk with sufficient liquidity or to document the justification for not holding the liquidity.

Risk identification process

- 55. The institution is expected to implement a regular process for identifying all material risks and include them in a comprehensive internal risk inventory. Using its internal definition of materiality, it is expected to ensure that the risk inventory is kept up to date. In addition to regular updates (at least yearly), it is expected to adjust the inventory whenever it no longer reflects the risks that are material, e.g. because a new product has been introduced or certain business activities have been expanded.
- 56. The risk identification is expected to be comprehensive and take both normative and economic perspectives into account. In addition to its current risks, the institution is expected to consider in its forward-looking liquidity adequacy assessments any risks, and any concentrations within and between those risks³², that may arise from pursuing its strategies or from relevant changes in its operating environment.
- 57. The risk identification process is expected to follow a “gross approach”, i.e. without taking into account specific techniques designed to mitigate the underlying risks. The institution is then expected to assess the effectiveness of these mitigating actions³³.
- 58. In line with the EBA Guidelines on limits on exposures to shadow banking entities (EBA/GL/2015/20), the institution is expected, as part of its risk identification approach, to identify its exposures to shadow banking entities, all

³² This refers to intra-risk and inter-risk concentrations.

³³ The “gross approach” explained here refers to the risk identification process. Institutions are not expected to disregard mitigating actions when they determine how much liquidity they need to cover their risks.

potential risks arising from those exposures, and the potential impact of those risks.

59. The management body is responsible for deciding which risk types are to be considered material, and which material risks are to be covered by liquidity. This includes a justification of why a certain risk the institution is exposed to is not considered material.

Risk inventory

60. When determining its internal risk inventory, the institution is responsible for defining its own internal risk taxonomy. It is expected not to simply adhere to a regulatory risk taxonomy.
61. In its risk inventory, the institution is expected to take into account the underlying risks, where material, stemming from its financial and non-financial participations, subsidiaries and other connected entities (for example, intragroup risk, reputational and operational risks, risks stemming from letters of comfort, etc.).
62. In a proportionate way, the institution is expected to look beyond participation risks and identify, understand and quantify significant underlying risks, and take them into account in its internal risk taxonomy, regardless of whether the entities concerned are included in the prudential perimeter or not. The depth of the analysis of the underlying risks is expected to be commensurate with the business activity and the risk management approach.
63. The institution is expected to look at all relevant products, clients, contracts (triggers) from a maturity and behavioural perspective for the different time horizons considered, including intraday. Such risks may, for example, stem from increased outflows, reduced inflows or reduced liquidity value of liquid assets. Both on- and off-balance-sheet items are expected to be considered in this regard, including contingent liquidity impacts from collateral calls and margin calls owing to market movements or a reduction in own creditworthiness (including voluntary buy-backs of own debt to ensure market access in the future).
64. One example is innovative funding instruments with call options that amend the maturity of the funding (not limited to evergreen deposits and repos) which need to be identified and captured as a source of possible contingent liquidity risk. Another is collateral swaps that can influence the size and composition of the stock of liquid assets; any potential risk stemming from such transactions is expected to be clearly identified and included in the set of risk indicators.
65. In the case of cross-border activities, the ILAAP is expected to include an assessment of impediments to the transfer of liquidity between legal entities, countries and currencies and quantify the impact of such impediments on the availability of liquidity throughout the group.

66. The ILAAP is expected to ensure a sound process for determining and monitoring what currencies are considered material for liquidity risk and/or funding risk. The institution is expected to clearly identify any material risks, including those stemming from cross-border activities, resulting in liquidity or funding risk being (partly) taken in a currency other than the currency of the corresponding buffers of liquid assets. Such risks are expected to be quantified in the ILAAP both under normal conditions (balance sheet positions and currency differences) and under stressed conditions (liquidity value of liquid assets in foreign currency versus stressed net outflows in foreign currency) for each currency that is considered material.

Principle 5 – The internal liquidity buffers are of high quality and clearly defined; the internal stable sources of funding are clearly defined

- (i) The institution is expected to define, assess and maintain internal liquidity buffers and stable sources of funding under the economic perspective. The definition of internal liquidity buffers is expected to be consistent with the economic liquidity adequacy concept and internal risk quantifications of the institution³⁴.
- (ii) The internal liquidity buffers are expected to be of sound quality, and determined in a prudent and conservative manner. The institution is expected to show clearly, assuming the continuity of its operations, how its internal liquidity is available to cover risks, thereby ensuring that continuity.
- (iii) The sources of funding are expected to be stable to ensure that business operations can also continue in the longer term.

Internal liquidity buffers definition

67. The institution is expected to define which assets and future inflows can be considered to be liquidity available for the purpose of assessing its liquidity adequacy, taking a prudent and conservative approach. This internal definition is expected to be based on the likelihood of the liquidity sources being used to obtain liquidity under normal and stressed conditions. An explicit internal view is expected to be formed on the desired composition of the buffers of liquid assets used to cover liquidity risks. In particular, the institution is expected to differentiate between assets that are highly likely to remain liquid during times of stress and assets that can only be used to obtain liquidity from central banks.

³⁴ The CEBS *Guidelines on Liquidity Buffers & Survival Periods* define the internal liquidity buffer as “the excess liquidity available outright to be used in liquidity stress situations within a given short-term period”, i.e. the short end of the counterbalancing capacity under a “planned stress” view. Additionally, the buffer should be determined in three dimensions: the severity and characteristics of the stress scenario, the time horizon fixed as the survival period, and the characteristics of the assets in the buffer.

Internal limits are expected to be set for both components, with a clear link between the target size of the buffers of liquid assets and the liquidity risks that could materialise over various time frames, taking into account a time frame of at least one year.

Internal stable sources of funding definition

68. For the purposes of assessing its funding sustainability, the institution is expected to define which funding sources can be regarded as stable, taking a prudent and conservative approach. In order to define this, an explicit internal view is expected to be formed on the stickiness of deposits and the (behavioural) cash flow profile, taking behavioural assumptions into account. The institution is expected to assess the stability of its funding profile, accounting for the diversity (or concentration) of funding providers, markets and products, and assess its market access in terms of volume and pricing, taking into account current asset encumbrance and expected changes in this when executing the funding plan.

Principle 6 – ILAAP risk quantification methodologies are adequate, consistent and independently validated

- (i) The institution is responsible for implementing risk quantification methodologies that are adequate for its individual circumstances under both the economic and normative perspectives. In addition, the institution is expected to use adequate methodologies for quantifying the potential future changes in its liquidity and funding position in its adverse scenarios. The institution is expected to apply a high level of conservatism under both perspectives to ensure that rare/tail events are considered appropriately.
- (ii) The key parameters and assumptions are expected to be consistent throughout the group and between risk types. All risk quantification methodologies are expected to be subject to independent internal validation. The institution is expected to establish and implement an effective data quality framework.

Comprehensive risk quantification

69. The ILAAP is expected to ensure that risks that the institution is/may be exposed to are adequately quantified. The institution is expected to implement risk quantification methodologies that are tailored to its individual circumstances (i.e. they are expected to be in line with its risk appetite, market expectations, business model, risk profile, size and complexity).

70. Risks are not expected to be excluded from the assessment because they are difficult to quantify or the relevant data are not available.³⁵ In such cases, the institution is expected to determine sufficiently conservative risk figures, taking into consideration all relevant information and ensuring adequacy and consistency in its choice of risk quantification methodologies.³⁶
71. The key parameters and assumptions cover, inter alia, confidence levels and scenario generation assumptions.

Level of conservatism

72. The risk quantification methodologies and assumptions used under the economic and normative perspective are expected to be robust, sufficiently stable, risk-sensitive and conservative enough to quantify liquidity outflows that occur rarely. Uncertainties arising from risk quantification methodologies are expected to be addressed by an increased level of conservatism.

Choice of risk quantification methodologies

73. It is the responsibility of the institution to implement adequate methodologies both to quantify its risks and to determine projections. This Guide does not set out any expectation regarding using or not using any quantification methodology per se. This means that there is no predetermination as to whether, for example the institution is expected to use (amended) Pillar 1 methodologies (e.g. to take into account concentration risk), stress test results or other methodologies, such as multiple scenarios, to quantify the risks it is or may be exposed to.
74. The methodologies used are expected to be consistent with each other, with the perspective considered and with the definition of liquidity and stable funding. They are expected to capture the risks to which the institution is exposed in an adequate and sufficiently conservative manner, taking into account the principle of proportionality. This means, for example, that larger or more complex institutions, or institutions that have more complex risks, are expected to use more sophisticated risk quantification methodologies to capture the risks in an adequate manner.
75. However, the institution is not expected to implement risk quantification methodologies that it does not fully understand and which, consequently, are not used for its own internal risk management and decision-making. The

³⁵ For risks that are difficult to quantify (e.g. because of missing data or the absence of established quantification methodologies), the institution is expected to develop adequate methodologies to quantify risks, including using expert judgement.

³⁶ Risk measurement of difficult to quantify risks should be consistent and comparable, as far as possible, with overall risk measurement assumptions. The institution is expected to ensure that such risks are appropriately factored into the risk management and risk control processes, regardless of whether they are quantified using traditional models or scenario analysis, or informed by other estimates.

institution is expected to be able to demonstrate the adequacy of the methodologies for its individual situation and risk profile. In the case of vendor models, this includes the expectation that such models are not expected to be imported mechanistically, but rather they are expected to be fully understood by the institution and well-suited for, and tailored to, its business and its risk profile.

Data quality

76. The institution is expected to deploy adequate processes and control mechanisms to ensure the quality of data.³⁷ The data quality framework is expected to ensure reliable risk information that supports sound decision-making, and it is expected to cover all relevant risk data and data quality dimensions.

Independent validation

77. ILAAP risk quantification methodologies are expected to be subject to regular independent internal³⁸ validation, respecting, in a proportionate way, the principles underlying the respective standards established for Pillar 1 internal models, taking into account the materiality of the risks quantified and the complexity of the risk quantification methodology.
78. Depending on the size and complexity of the institution, various organisational solutions may be adopted to ensure independence between the development and validation of risk quantification methodologies. However, the concepts underlying the various lines of defence are expected to be respected; i.e. the independent validation is expected to not be conducted by the internal audit function.
79. The overall conclusions of the validation process are expected to be reported to senior management and the management body, used in the regular review and adjustment of the quantification methodologies, and taken into account when assessing liquidity adequacy.

³⁷ Data quality comprises, for example, the completeness, accuracy, consistency, timeliness, uniqueness, validity and traceability of the data. For more information, see the draft [ECB Guide for the Targeted Review of Internal Models \(TRIM\)](#) of February 2017.

³⁸ "Internal" does not mean that the institution itself is expected to carry out each and every validation activity. As with "internal" audit, this rather refers to the fact that the institution is responsible for this process.

Example 6.1

Organisation of independent validations

In order to ensure the independent and proportionate validation of ILAAP risk quantification methodologies, the institution is expected to take into consideration the draft ECB guide to Internal Models – General topics chapter.

Depending on the nature, size, scale and complexity of its risks, the institution may, for example, employ one of the following three organisational arrangements to ensure the independence of the validation function from the methodology development process (i.e. design, development, implementation and monitoring of the risk quantification methodologies):

- separation into two different units reporting to different members of the senior management;
- separation into two different units reporting to the same member of the senior management;
- separate staff within the same unit.

Principle 7 – Regular stress testing is aimed at ensuring liquidity adequacy in adverse circumstances

- (i) The ECB expects the institution to perform a tailored and in-depth review of its vulnerabilities, capturing all material risks on an institution-wide basis that result from its business model and operating environment in the context of stressed macroeconomic and financial conditions on a yearly basis and more frequently, when necessary, depending on the individual circumstances. On the basis of this review, the institution is expected to define an adequate stress-testing programme for both normative and economic perspectives.
- (ii) As part of the stress-testing programme, the institution is expected to determine adverse scenarios to be used under both perspectives, taking into account other stress tests it conducts. The application of severe, but plausible, macroeconomic assumptions and a focus on key vulnerabilities are expected to result in a material impact on the institution's internal and regulatory liquidity position. In addition, the institution is expected to conduct reverse stress testing in a proportionate manner.
- (iii) The institution is expected to continuously monitor and identify new threats, vulnerabilities and changes in the environment to assess at least quarterly whether its stress testing scenarios remain appropriate and, if not, adapt them to the new circumstances. The impact of the scenarios is expected to be updated regularly (e.g. quarterly). In the case of material changes, the institution is expected to assess their potential impact on its liquidity adequacy over the course of the year.

Determination of the stress-testing programme

80. The stress-testing programme is expected to cover both the normative and the economic perspective. It is expected to capture different time horizons (including intraday), and take the relevant currency split into account. When defining the set of internal stress scenarios and sensitivities, the institution is expected to use a broad set of information on historical and hypothetical stress events. It is the institution's own responsibility to define scenarios and sensitivities in the manner that best addresses its individual situation and to translate them into liquidity inflows and outflows and applicable liquidity values of liquid assets. The normative perspective is expected to be covered under the stress-testing programme in such a way that the impact of the stress events on the evolution of the projected regulatory ratios such as the LCR is analysed at various points in time, in line with paragraph 46.
81. When defining stress testing scenarios, institutions are expected to capture their material vulnerabilities, given their individual business model, risk profile and the external conditions they face. Other stress tests conducted, e.g. sensitivity analysis, are expected to inform the scenarios used by revealing the material vulnerabilities of the institution.
82. As liquidity transferability can be very different during periods of stress when compared with normal times, an institution with significant cross-border activities is expected to assess the transferability of liquidity within the group and take this into account in its stress-testing programme. It is expected to; analyse the impact and likelihood of additional impediments to liquidity transferability under stressed conditions, in particular for operations outside the euro area; and to identify remedial actions and contingency measures for such a scenario.

Severity level of adverse scenarios

83. In its baseline assessment, the institution is expected to assume developments that it would assume under expected circumstances, taking into account its business strategy, including credible assumptions regarding inflows and outflows, risk materialisations, etc.
84. In adverse scenarios, the institution is expected to assume exceptional, but plausible developments with an adequate degree of severity in terms of their impact on its liquidity position. The level of severity is expected to correspond to developments that are plausible, but as severe from the institution's perspective as any stress event that might be observed during a crisis situation in the markets, factors or areas that are most relevant for the institution's liquidity adequacy.
85. The range of adverse scenarios is expected to adequately cover severe economic downturns, severe market disruptions and financial shocks, relevant

institution-specific vulnerabilities, reliance on major funding providers, and plausible combinations of these³⁹.

Coherence versus targeting key vulnerabilities

86. In stress testing, the institution is expected to focus on its key vulnerabilities when attempting to define plausible adverse scenarios. ICAAP and ILAAP stress tests are expected to inform each other; i.e. the underlying assumptions, stress test results and projected management actions are expected to be mutually taken into account. For instance, if the ILAAP stress tests apply a stress event to the credit spread or ratings of assets in the liquidity buffer, the impact shall be considered in ICAAP stress tests and vice versa.

Reverse stress testing

87. In addition to stress-testing activities that assess the impact of certain assumptions on its liquidity position, the institution is expected to conduct reverse stress-testing assessments. These assessments are expected to start from the identification of the pre-defined outcome, such as the business model becoming unviable⁴⁰.

88. Such reverse stress tests are expected to be used to challenge the comprehensiveness and conservatism of the ILAAP framework assumptions. Reverse stress tests are expected to be conducted at least once a year. Depending on the likelihood of the resulting scenarios, it may be necessary to immediately address the scenarios by taking or preparing management actions in the ILAAP in order to prevent a recovery situation that would occur if one or more of the reverse stress testing scenarios assessed in the ILAAP were to become reality. Moreover, reverse stress testing in the ILAAP context could be seen as a starting point for developing recovery plan scenarios⁴¹. More details can be found in the relevant EBA guidelines and BCBS guidance.

Example 7.1

Interaction between ICAAP and ILAAP stress tests

The institution is expected to assess the potential impact of relevant scenarios, integrating capital and liquidity impacts and potential feedback loops, taking into

³⁹ The number of scenarios that is adequate for an institution depends on, among other things, its individual risk profile. It is expected that several adverse scenarios will usually be necessary to adequately reflect the different plausible combinations of risks.

⁴⁰ See the EBA Guidelines on institutions' stress testing (EBA/GL/2018/04).

⁴¹ As outlined in the EBA Guidelines on the range of scenarios to be used in recovery plans (EBA/GL/2014/06), these scenarios are expected to be only "near-default", i.e. they are expected to lead to an institution's or group's business model becoming non-viable unless the recovery actions are successfully implemented.

account, in particular, losses arising from the liquidation of assets or increases in funding costs during periods of stress.

Example 7.2 Reverse stress testing

In its internal reverse stress tests, the institution determines the level of deposit outflows required to exhaust its liquidity buffers and other sources of contingent funding by determining assumptions on deposit outflows and other risk drivers (e.g. rating downgrade of the institution, debt-buy-back calls). The outcome of one such assessment is shown in the table below, illustrating outflow rates for three different scenarios.

	Scenario 1	Scenario 2	Scenario 3
Deposit outflow assumption			
Retail	49%	7%	10%
Corporate	33%	63%	60%
Financial	62%	91%	94%
Other assumptions (not exhaustive)			
Downgrade	4 notches	4 notches	4 notches
Debt buy-back	0%	15%	15%

The institution is expected to determine the probability of such scenarios being realised and whether any remedial action might be needed.

Example 7.3 Calibration of adverse scenarios

Adverse scenarios take into account historical developments observed in markets and in client behaviour, but they are not limited to the institution's own historical client behaviour and market access. Furthermore, the institution's scenario design goes beyond historical observations, in particular where historical evidence is distorted (e.g. by public sector support). This limits the accuracy of the estimated stress parameters for in- and outflows and the haircuts applied to the estimated value of liquid assets.

Such adverse scenarios could include both an ongoing business perspective (normal operations continue, limited possibility of inflows from the loan book, reliance on marketable assets mainly to generate liquidity, buy-back of own debt to ensure future market access, etc.) and scenarios in which a severe disruption of the business model cannot be avoided (e.g. stop on asset generation, stop on dividend and bonus payments, using all eligible collateral to obtain liquidity, including central bank funding, not exercising call options on own debt or equity instruments).

3 Glossary

Adverse scenario

A combination of assumed adverse developments in internal and external factors (including macroeconomic and financial developments as well as severe market disruptions) that is used to assess the resilience of the liquidity adequacy of the institution to potential adverse developments over a medium-term horizon. The assumed developments in internal and external factors are expected to be combined in a consistent way and be severe but plausible from the institution's perspective, reflecting the risks and vulnerabilities that are assessed as representing the most pertinent threats to the institution.

Baseline scenario

A combination of expected developments in internal and external factors (including macroeconomic and financial developments) that is used to assess the impact of those expected developments on the liquidity adequacy of the institution. The baseline scenario is expected to be consistent with the basis of the institution's business plans and budget.

Cost-benefit allocation mechanism

A cost-benefit allocation mechanism allocates liquidity costs, benefits and risks and is part of the institution's strategies, policies, processes and systems.

Economic internal perspective

An ILAAP perspective under which the institution manages its liquidity adequacy by ensuring that its risks and expected outflows are sufficiently covered by available internal liquidity.

Economic liquidity adequacy concept

An internal concept aimed at ensuring under the economic perspective that the financial resources (internal liquidity) of the institution will enable it to cover its risks and expected outflows and to maintain the continuity of its operations on an ongoing basis.⁴²

Funding planning

A multidimensional internal process resulting in a funding plan presenting a multi-year projection of the funding sources of the institution, taking into account its baseline and adverse scenarios, strategy and operational plans. The assessment of adverse scenarios is a key element of funding planning as it helps institutions to continue operating even under a prolonged period of stress.

⁴² It is the responsibility of the institutions themselves to implement adequate risk quantification methodologies – there is no general expectation that institutions will utilise “economic liquidity models” to ensure economic liquidity adequacy.

Gross approach in risk identification

The gross approach means that risks are first identified without taking into account specific actions designed to mitigate them.

ILAAP architecture

Different elements of the ILAAP and how they interlink. The ILAAP architecture is expected to ensure that the different elements of the ILAAP fit together coherently and that the ILAAP is an integral part of the institution's overall management framework. The institution is expected to maintain, as part of its ILAAP documentation, a description of the overall ILAAP architecture which explains how the ILAAP is integrated and how its outcomes are used in the institution.

ILAAP outcomes

Any information that results from the ILAAP and adds value to decision-making.

ILAAP

The internal liquidity adequacy assessment process as defined in Article 86 CRD IV, which requires competent authorities to ensure that institutions have robust strategies, policies, processes and systems for the identification, measurement, management and monitoring of liquidity risk over an appropriate set of time horizons, including intraday, so as to ensure that institutions maintain adequate levels of liquidity buffers.

Internal review and validation

Internal review covers a broad range of controls, evaluations and reports aimed at ensuring that ILAAP strategies, processes and models remain sound, comprehensive, effective and proportionate.

Validation, as part of the internal review, encompasses processes and activities assessing whether the risk quantification methodologies and risk data of the institution adequately capture relevant aspects of risk. In a proportionate way, the validation of risk quantification methodologies is expected to be conducted independently and respect the principles underlying the respective standards established for Pillar 1 internal models.

Limit system

A documented and hierarchical system of limits set in line with the overall strategy and risk appetite of the institution in order to ensure that risks and losses can be limited effectively in line with the liquidity adequacy concept. The limit system is expected to lay down effective boundaries for risk taking for, for example, different risk types, business areas, products and group entities.

Liquidity adequacy statement

A formal statement from the management body providing its assessment of the liquidity adequacy of the institution and explaining its main supporting arguments.

Liquidity adequacy

The degree to which risks are covered by the institution's liquidity. The ILAAP is aimed at maintaining adequate liquidity on an ongoing basis, from both the economic

and normative perspectives, contributing to the continuity of the institution over the medium-term.

Management actions

Actions (for example, raising funding) taken by the management to keep the liquidity/funding position within the risk appetite)⁴³.

Management buffer

An amount of liquidity above the regulatory and supervisory minima and internal liquidity needs that allows the institution to sustainably follow its business model and to remain flexible regarding possible business opportunities, without endangering its liquidity adequacy.

Material risk

A liquidity-related downside risk that, based on the institution's internal definitions, has a material impact on its overall risk profile, and thus may affect the liquidity adequacy of the institution.

Medium-term time horizon

A time horizon which captures the near and medium-term future. It is expected to capture the liquidity position over at least the upcoming year and the funding position over the upcoming three or more years.

Normative internal perspective

A multi-year ILAAP perspective under which the institution manages its liquidity adequacy by ensuring that it is able to fulfil all of its liquidity-related legal requirements and supervisory demands and cope with other internal and external liquidity constraints on an ongoing basis.

Proportionality

A principle in Article 86 CRD IV which states that the ILAAP shall be proportionate to the complexity, risk profile, scope of operation of the institution and risk tolerance set by the management body.

Public funding sources

All sources of funding that are either directly or indirectly provided by the public sector as defined in Annex 1 to the EBA Guidelines on harmonised definitions and templates for funding plans of credit institutions under Recommendation A4 of ESRB/2012/2 (EBA/GL/2014/04).

Recovery plan

A plan drawn up and maintained by an institution in accordance with Article 5 of the Bank Recovery and Resolution Directive (BRRD).⁴⁴

⁴³ For more guidance see the EBA Draft Guidelines on institutions' stress testing (EBA/GL/2018/04), Section 4.8.2 Management actions.

Reverse stress test

A stress test which starts from the identification of the pre-defined outcome (non-viability of the business model) and then explores scenarios and circumstances that might cause that outcome to occur.

Risk appetite statement

A formal statement in which the management body expresses its views on the amounts and types of risk that the institution is willing to take in order to meet its strategic objectives.

Risk identification process

A regular process the institution uses to identify risks that are or might be material for the institution.

Risk inventory

A list of identified risks and their characteristics. The risk inventory is the result of the risk identification process.

Risk quantification

The process of quantifying identified risks by developing and using methodologies to determine risk figures and enable a comparison between the risks and the available liquidity of the institution.

Risk taxonomy

A categorisation of different risk types/factors enabling the institution to assess, aggregate and manage risks in a consistent way through a common risk language and mapping.

Risk tolerance

The types of risks and levels of those risks that the institution does not intentionally expose itself to, but accepts/tolerates.

⁴⁴ Directive 2014/59/EU of the European Parliament and of the Council of 15 May 2014 establishing a framework for the recovery and resolution of credit institutions and investment firms and amending Council Directive 82/891/EEC, and Directives 2001/24/EC, 2002/47/EC, 2004/25/EC, 2005/56/EC, 2007/36/EC, 2011/35/EU, 2012/30/EU and 2013/36/EU, and Regulations (EU) No 1093/2010 and (EU) No 648/2012, of the European Parliament and of the Council (OJ L 173, 12.6.2014, p. 190).

Abbreviations

AT1	Additional Tier 1
BCBS	Basel Committee on Banking Supervision
BRRD	Bank Recovery and Resolution Directive
CRD IV	Capital Requirement Directive
EBA	European Banking Authority
ECB	European Central Bank
ESRB	European Systemic Risk Board
FSB	Financial Stability Board
ICAAP	Internal capital adequacy assessment process
ILAAP	Internal liquidity adequacy assessment process
LAS	Liquidity adequacy statement
LCP	Liquidity contingency plan
LCR	Liquidity coverage ratio
NCA	National competent authority
RAF	Risk appetite framework
SI	Significant institution
SREP	Supervisory Review and Evaluation Process
SSM	Single Supervisory Mechanism
TRIM	Targeted Review of Internal Models

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