

## 12. Assessment of liquidity and funding risk and liquidity adequacy

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# Outline

- 1. Introduction to Liquidity & Funding Risk**
  - a) Short review on liquidity supervision**
  - b) Need for SREP**
- 2. SREP General Framework**
  - a) Assessment of risks to liquidity and funding**
  - b) Assessment of liquidity and funding risk management**
  - c) Assessment of liquidity adequacy**
- 3. Risk scoring & additional liquidity requirements**
- 4. Conclusion**

# PART 1

## INTRODUCTION TO LIQUIDITY & FUNDING RISK

# 1. Review liquidity supervision (I)

- **Pre-crisis, there was a focus on minimum capital requirements, credit risk and operational risk.**
- **But no prudent management of liquidity & funding risk by banks**
- **Lapses in basic principles of liquidity risk management**
- **2008 financial crisis revealed capital adequacy is not enough**
- **E.g. Northern Rock, Fortis, Bank of Ireland**

# 1. Review liquidity supervision (II)

- As a response, the BCBS issued the “Principles for Sound Liquidity Risk Management and Supervision” (2008)
- Additionally, further strengthening of framework by introducing minimum requirements (liquidity risk “Pillar 1”)
  1. Liquidity Coverage Ratio
  2. Net Stable Funding Ratio

BCBS agreements are not binding

- Later on, the BSBC agreements used to create a LCR reporting requirement in CRDIV , which is further specified in EBA’s Regulatory Technical Standards
- Delegated act adopted by European Commission: defines legally binding LCR
- Phasing-in of LCR: different binding targets per country

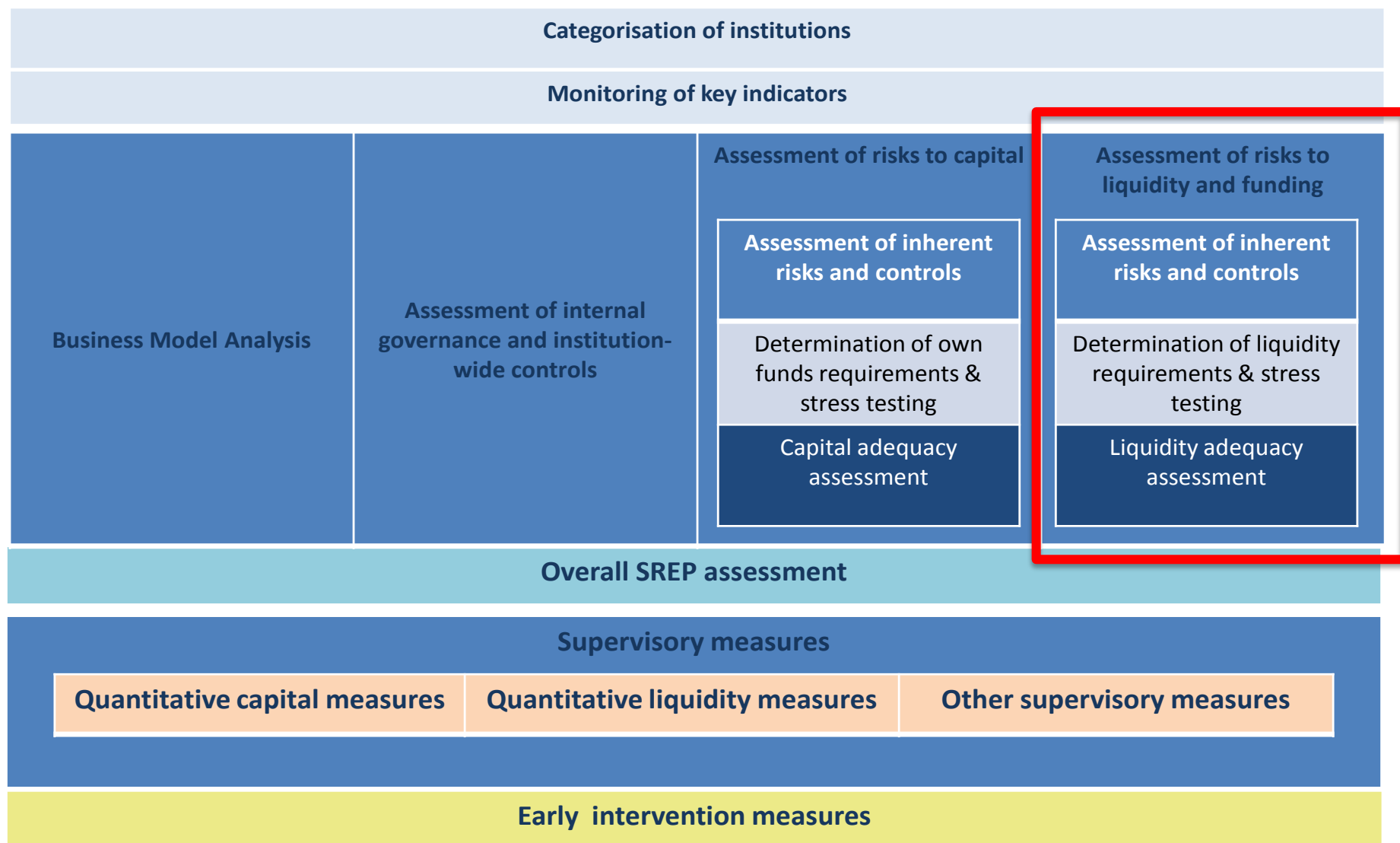
# 1. Review liquidity supervision (III)

- But, one size does not fit all...
- Examples:
  1. Coffee beans as HQLA
  2. Cliff-effect
- Need for institution specific requirements (liquidity risk “pillar 2”).
- To determine additional requirements, assessment of liquidity & funding risk is needed
  - Institution self assessment: ILAAP
  - Supervisory assessment: Supervisory Review & Evaluation Process (SREP)

## PART 2

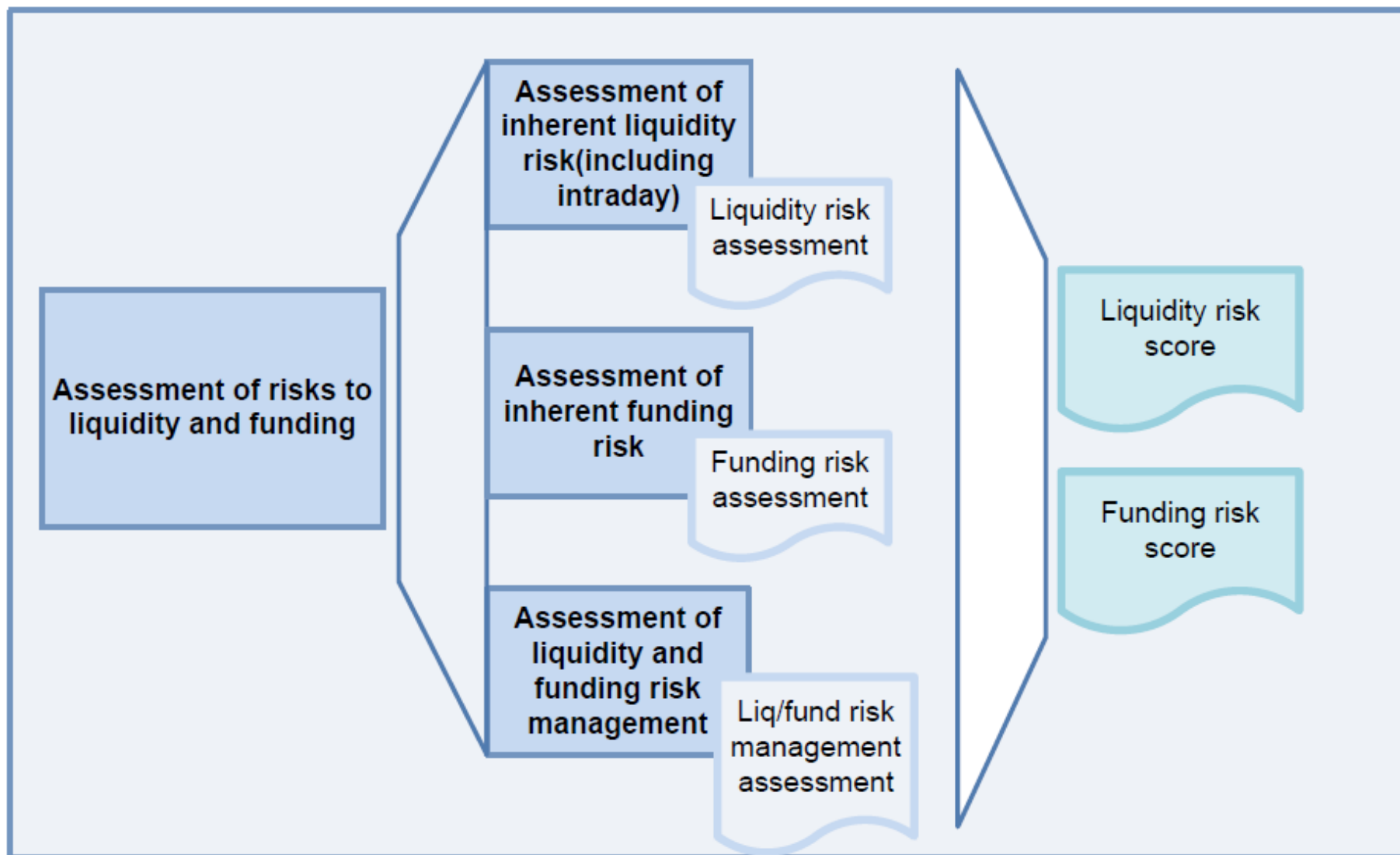
# SREP GENERAL FRAMEWORK FOR LIQUIDITY

## 2. Overview of the common SREP framework





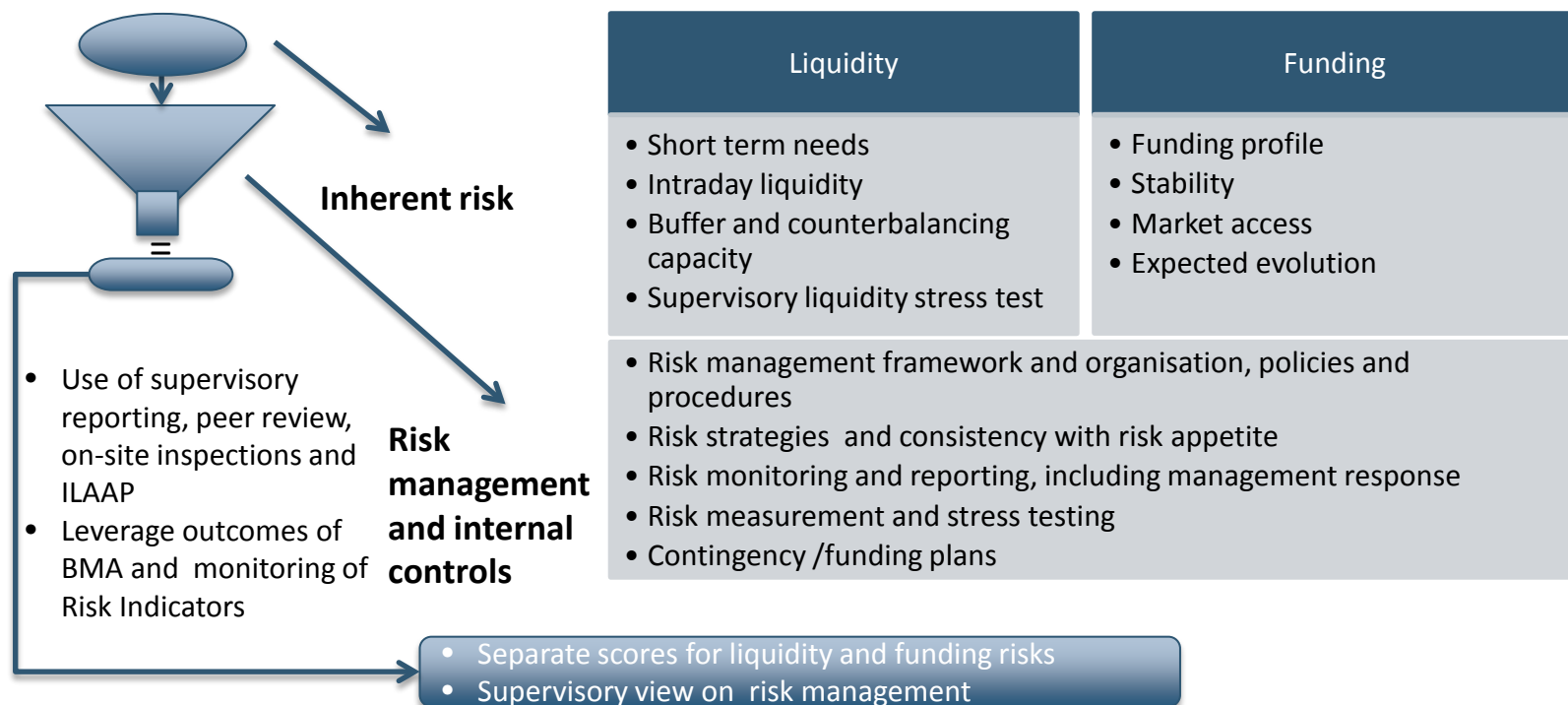
## 2. Overview of the common SREP framework



## 2.1 Assessment of risks to liquidity and funding

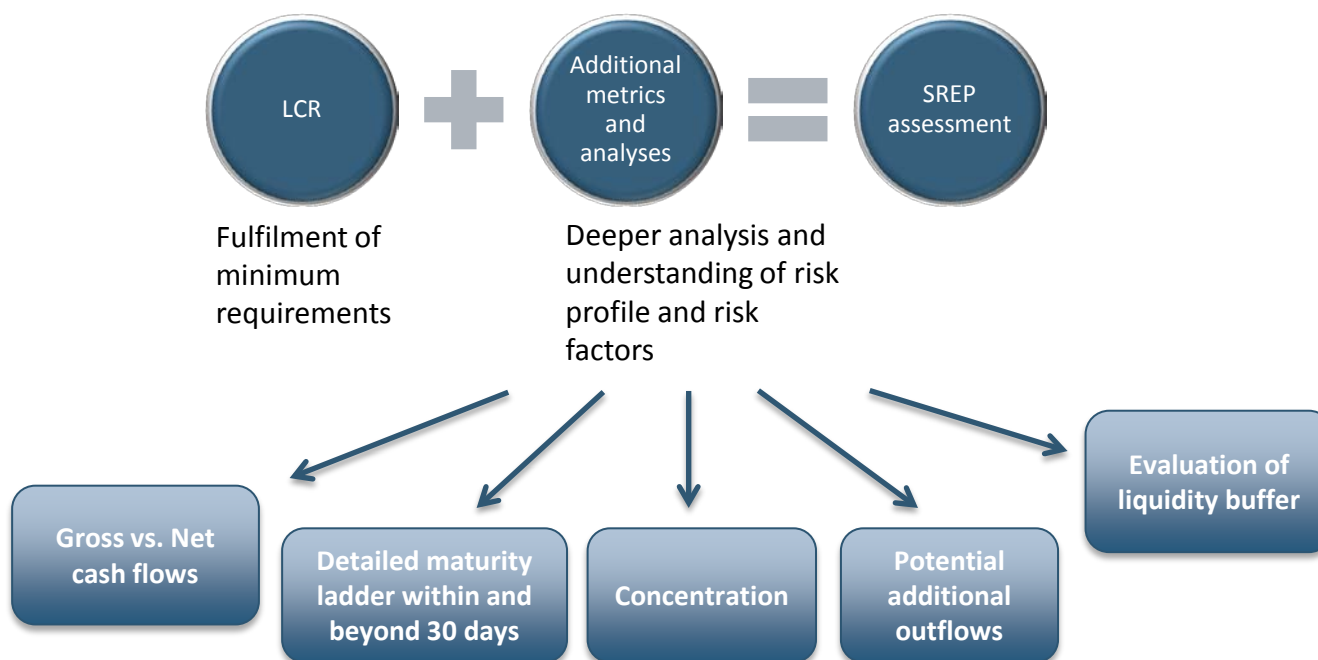
### Overview

- Aim at defining and introducing common elements for assessing liquidity and funding risks
- Combined analysis of inherent risk and of risk management and internal controls (same approach as for risks to capital)

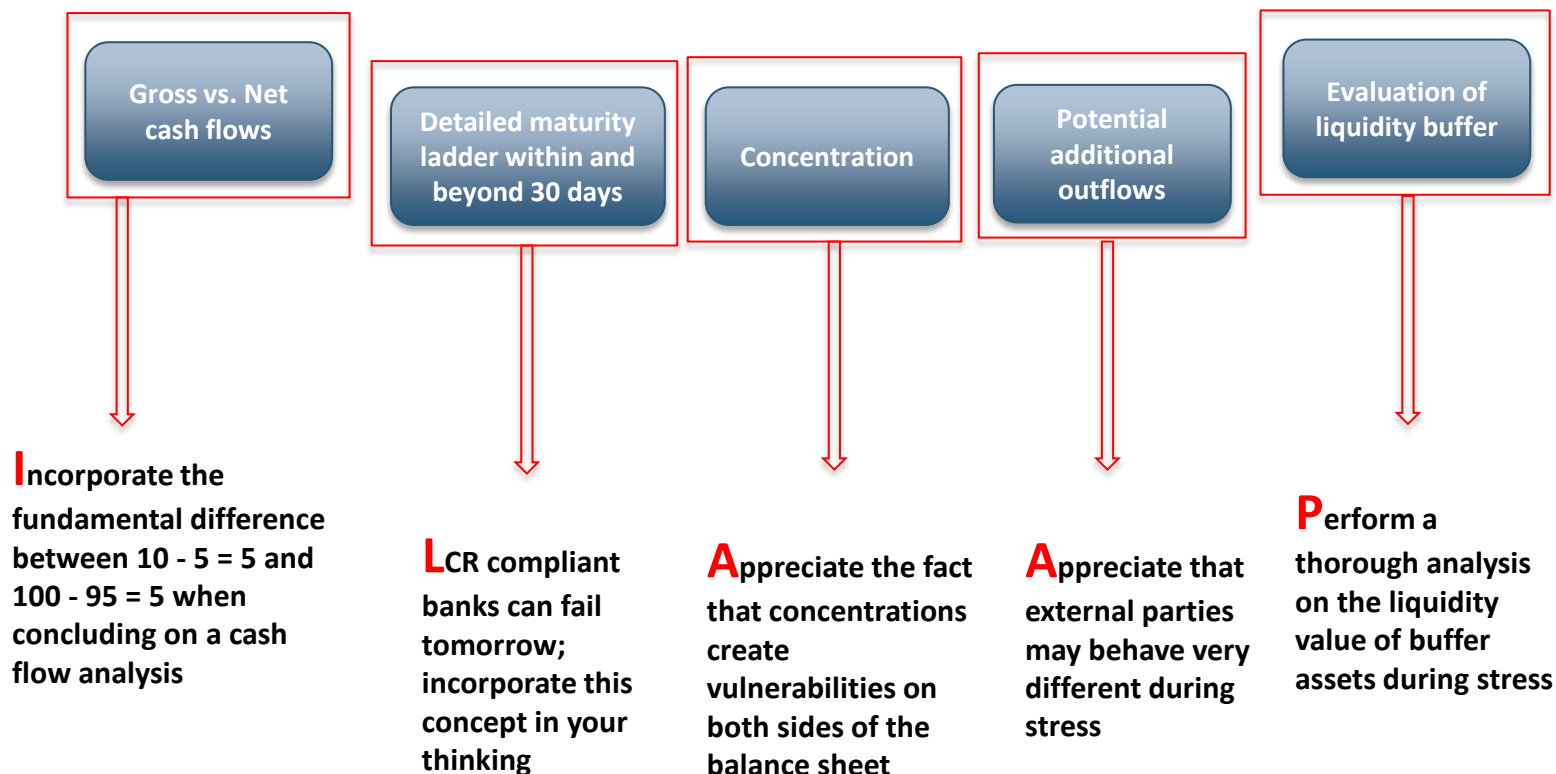


## 2.2 Assessment of inherent short term liquidity risk (I)

- The SREP assessment is intended to obtain a comprehensive view of liquidity risk, which goes beyond checking compliance



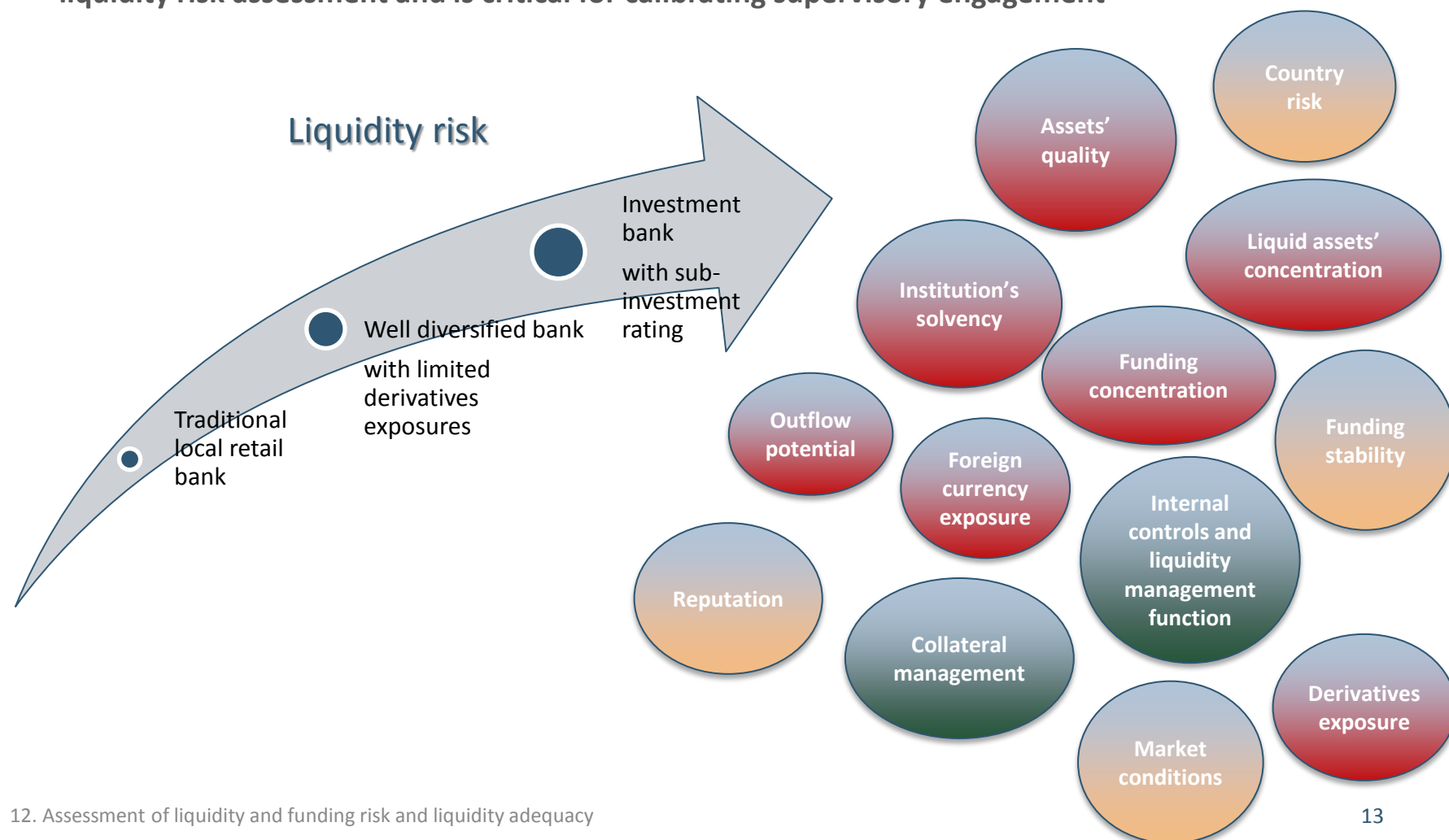
## 2.2 Assessment of inherent short term liquidity risk (II)



## 2.2 Assessment of inherent short term liquidity risk (III)

### *Business model analysis and idiosyncratic risk*

- Having a clear view of the institutions business model and its solvency risk is at the basis of liquidity risk assessment and is critical for calibrating supervisory engagement



## 2.2 Assessment of inherent short term liquidity risk (IV)

### *Compliance with LCR requirements*

- As a minimum competent authorities should check the compliance with minimum requirements (quantitative and qualitative) and assess the completeness, accuracy and reliability of the information used to calculate the LCR (e.g.):
  - Value of LCR
  - Classification and composition of Liquidity Buffer
  - Valuation of assets (data, models) and application of haircuts
  - Mapping and identification of sources outflows and inflows
  - Classification of customers, characteristics of assets and liabilities (i.e. retail, non-financial, stable/operational deposits, maturities, currencies, etc.) and application of multipliers
- This assessment mainly concerns processes, data, systems and procedures that institutions have implemented to comply with the requirements of CRR, Delegated Act and EBA TS

## 2.3 Liquidity Stress Testing (I)

- **LCR is basically a specific stress scenario** (combined idiosyncratic and market-wide scenarios); the delegated act defines minimum multipliers and haircuts for this stress test
- **Article 5 of the delegated act leaves some margins of discretion/interpretation. Examples:**
  - a) the run-off of a significant proportion of retail deposits;*
  - b) increased market volatility affecting the value of collateral or its quality or creating additional collateral needs*
  - c) potential obligation to buy-back debt or to honour non-contractual obligations*

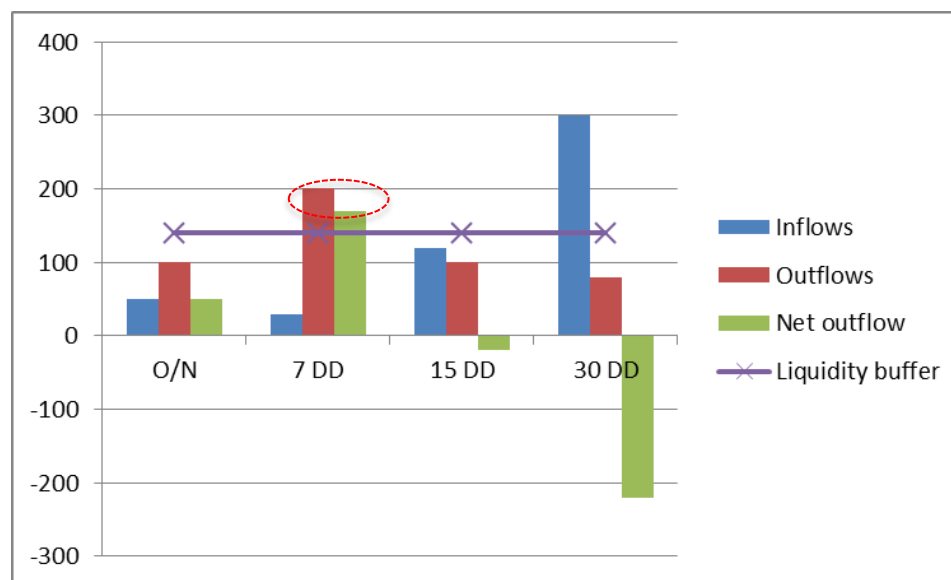
## 2.3 Liquidity Stress Testing (II)

- **Assess the bank's own stress tests:** Supervisors should assess the severity and suitability of scenarios applied by institutions and verify that assumptions are appropriate for the business model, market conditions, types of funding (retail vs wholesale, money market vs capital market, etc.) and complexity of the institution.
- **Perform Supervisory stress tests:** Supervisors should use the available reporting to create their own top down stress tests to challenge the bank's stress test and to benchmark stressed positions (e.g. survival periods) between peers.
- **Stress tests can be performed in different ways with specific goals:**
  - Using different time horizons, e.g. up to 1 year → identify cliff effects
  - Survival periods, e.g. "time to default" and "time to ECB" → assessment of liquidity adequacy e.g. in relation to time needed for (management or supervisory intervention / recovery actions)
  - Specific event risk → Robustness of LCR / P2 compliance and adequacy of ILAAP
    - concentration, default of largest deposit taking counterpart
    - Stress on liquidity value of buffer assets



## 2.4 Examples of additional analyses (I)

- Analysis of liquidity using gross cash flows and a more detailed maturity ladder



	Over 30 DD	
Inflows	500	
Outflows	480	
Net outflow	120	= Outflows - min(75% x Outflows, Inflows)
Liquidity buffer	140	
LCR	117%	

**LCR > 100% !**

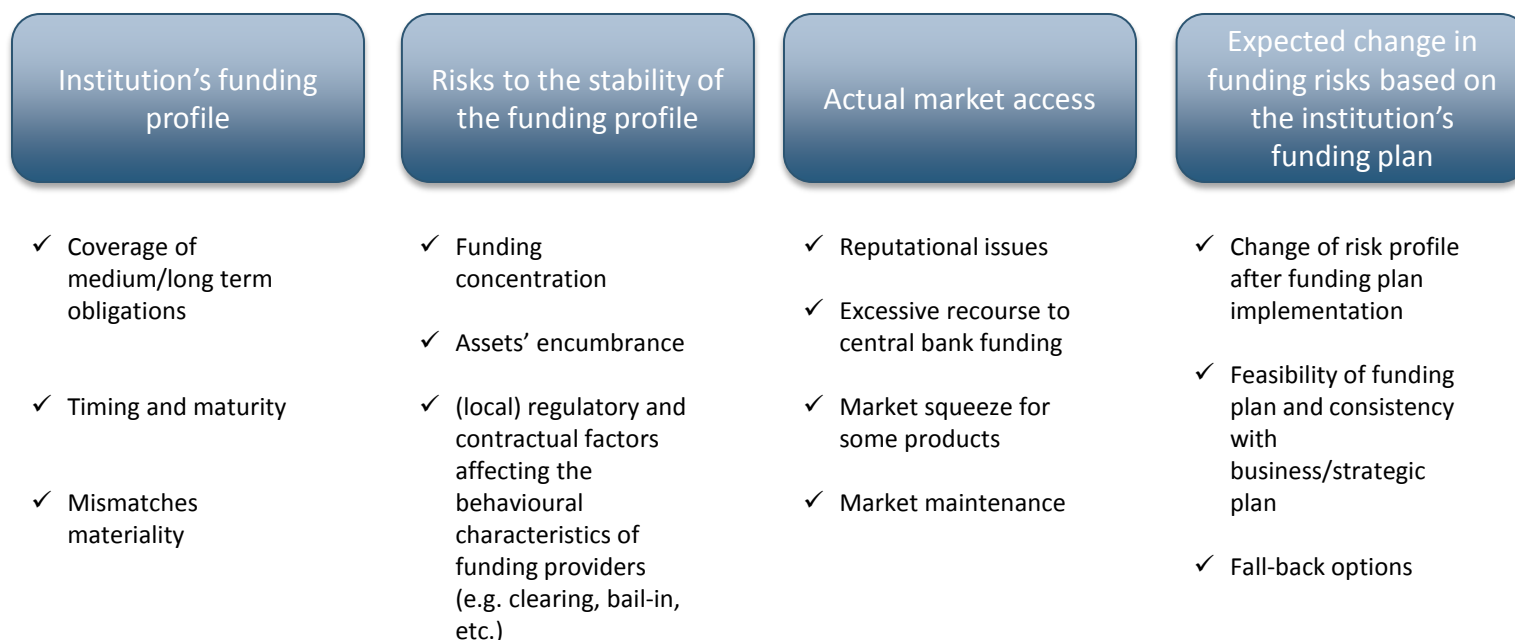
## 2.4 Examples of additional analyses (II)

	Total	EUR	USD	Other
<b>Inflows</b>	<b>1700</b>	<b>900</b>	<b>800</b>	<b>0</b>
Party1		800	200	0
Party2		50	300	0
Party3		50	300	0
<b>Outflows</b>	<b>3680</b>	<b>2000</b>	<b>280</b>	<b>1400</b>
Party4		500	100	600
Party5		1000	80	600
Party6		500	100	200
<b>Net outflow</b>	<b>1980</b>	<b>1100</b>	<b>70</b>	<b>1400</b>
<b>Liquidity buffer</b>	<b>2000</b>	<b>1400</b>	<b>600</b>	<b>0</b>
Asset1		1000	200	0
Asset2		200	200	0
Asset3		200	200	0

- a) Dependence on one counterpart relative to net outflow and liquidity buffer; risk of default
- b) Outflows in one currency can not be covered with liquid assets in that currency: Risk of non convertibility
- c) Concentration in buffer assets: risk of market value changes → lack of robustness of LCR

## 2.5 Assessment of inherent funding risk

- Supervisors should assess the institution's funding risk and whether the medium and long-term obligations are adequately met with a range of stable funding instruments and assess the impact of stressed market conditions on the stability of the funding profile



## 2.6 Assessment of risk management and control

### *Liquidity and funding risk*

Article 86 of CRD requires competent 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 intra- day, so as to ensure that institutions maintain adequate levels of liquidity buffers (aka “ILAAP”)*

- Liquidity risk strategy and liquidity risk tolerance
  - formalised and consistent with business model, market environment, role in the financial system
- Risk identification, measurement, management, monitoring and reporting
  - (qualitative and quantitative) Adequacy of resources for liquidity risk management, monitoring and measurement
  - Adequacy of the monitoring and measurement framework (evaluation and stress testing methodologies, processes and IT infrastructure)
  - Adequacy of limits and control framework (maturities, currencies, on-off balance sheet, etc.)
  - Scope of liquidity risk monitoring (e.g. exposures, group/sub-group/subsidiaries)
  - Effectiveness of reporting (reliability, comprehensiveness and timeliness, frequency)
  - Organisation of liquidity management (full-control of assets, location of assets, etc.)
- Liquidity contingency plan (also linked to recovery plan)
  - Clarity of policies, procedure, governance (especially in case of cross-border groups and depending on the liquidity risk management model), actions
  - Early warning indicators
  - Assumptions about the role of central bank funding

# PART 3

## LIQUIDITY ADEQUACY ASSESMENT

## 3.1 Scoring

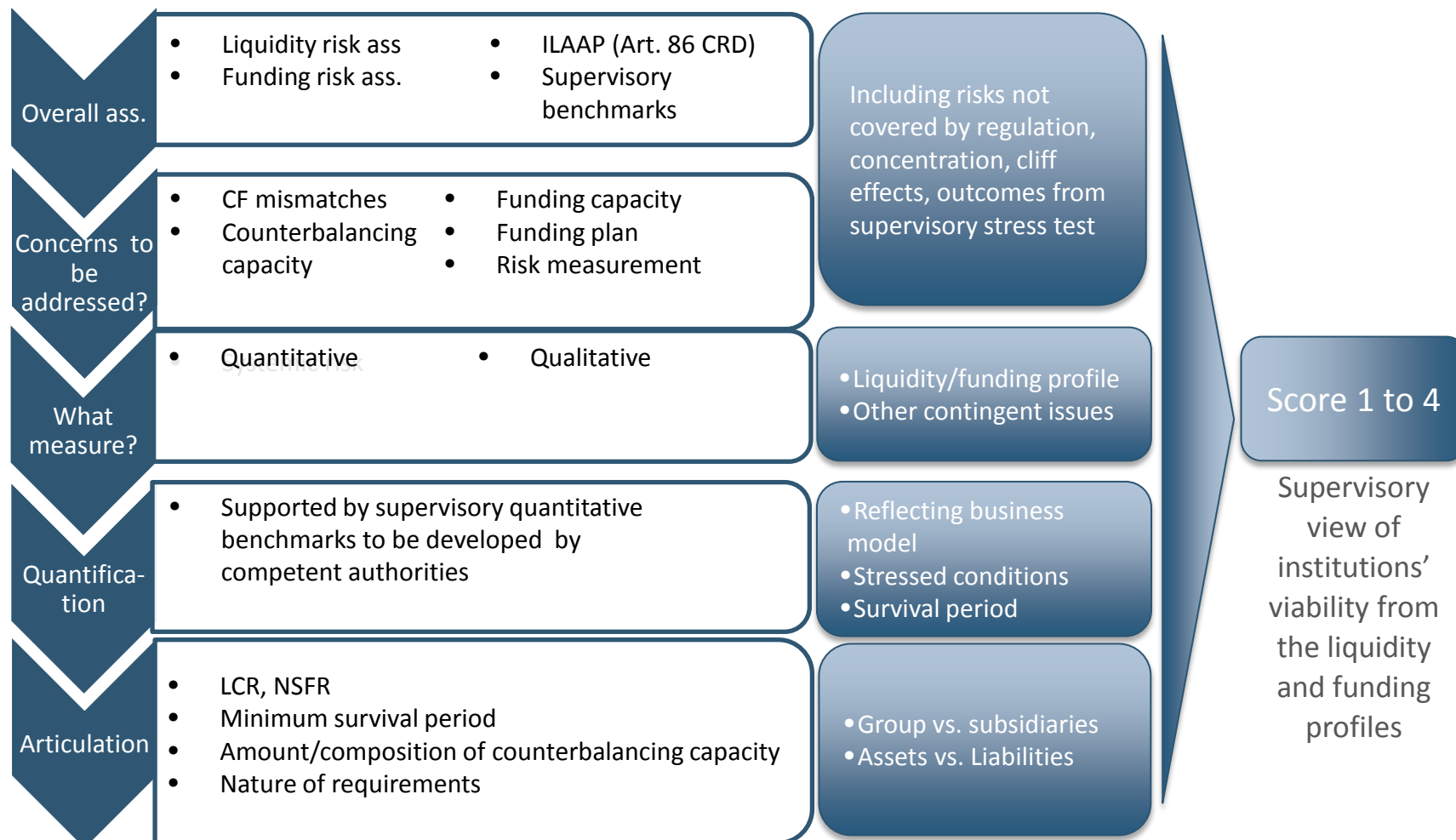
### *Liquidity and funding risk*

- Following the above assessment, competent authorities should form a view on the institution's funding and liquidity risks and reflect this in a summary of findings, accompanied by a score based on the following considerations

Risk score	Supervisory view	Considerations for inherent risk	Considerations for adequate management & controls
1	There is no discernible risk of significant prudential impact on the institution considering the level of inherent risk and the management and controls.	<ul style="list-style-type: none"> <li>There is no discernible risk arising from mismatches (e.g. between maturities, currencies, etc.).</li> <li>The size and composition of the liquidity buffer is adequate and appropriate.</li> <li>Other drivers of liquidity risk (e.g. reputational risk, inability to transfer intra-group liquidity, etc.) are not material.</li> </ul>	<ul style="list-style-type: none"> <li>There is consistency between the institution's liquidity risk policy and strategy and its overall strategy and risk appetite.</li> <li>The organisational framework for liquidity risk is robust with clear responsibilities and a clear separation of tasks between risk takers and management and control functions.</li> </ul>
...	.....	• .....	
4	There is a high risk of significant prudential impact on the institution considering the level of inherent risk and the management and controls.	<ul style="list-style-type: none"> <li>Mismatches (e.g. between maturities, currencies, etc.) imply high risk.</li> <li>The risk from the size and composition of the liquidity buffer is high.</li> <li>Other drivers of liquidity risk (e.g. reputational risk, inability to transfer intra-group liquidity, etc.) are high.</li> </ul>	<ul style="list-style-type: none"> <li>Liquidity risk measurement, monitoring and reporting systems are appropriate.</li> <li>Internal limits and the control framework for liquidity risk are sound and are in line with the institution's risk management strategy and risk appetite/tolerance.</li> </ul>

## 3.2 Assessment of liquidity adequacy (I)

**Liquidity adequacy is a key determinant of institutions' viability and subject to Joint decisions for cross – border groups**



## 3.2 Assessment of liquidity adequacy (II)

### *Supervisory benchmarks*

- The outcome of liquidity risk assessment leads to supervisors' determination of liquidity adequacy (intended in terms of coverage of liquidity risk)
- Depending on business models, complexity and on market conditions, supervisors need to use other benchmarks in addition to the regulatory LCR
- These supervisory benchmarks are based on stressed measures and aim to provide consistent liquidity assessment and measures (and challenge LCR and ILAAP measures of liquidity risk profile)

#### Example:

a ) Projection of liquid assets and of cash flows on the maturity ladder (from overnight to 1 year) under expected and stressed conditions (both assets values and cash flows)

b) Estimation of survival period

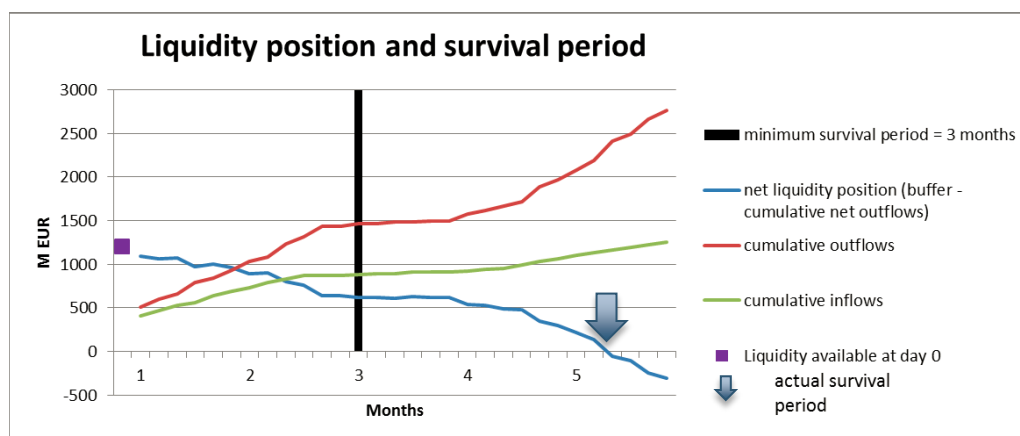
c) Comparison with supervisory desired survival period (based on BM and risk profile)

- The determination of liquidity adequacy is not only based on the result of such indicators but also involves undertaking dialogue with the institutions' management and it should incorporate the quality of liquidity risk management



## 3.3 Articulation of Liquidity measures

- A fundamental objective of the SREP guidelines is to provide common assessment methodologies in order to reach consistent supervisory outcomes and measures
- To this purpose the EBA guidelines provide three main approaches to liquidity measures (the choice depending on the results of the risk assessment):
  - Approach 1: LCR > minimum
  - Approach 2: minimum survival period



- Approach 3: minimum amount of liquid assets of a specific quality/composition
- Other possible measures may include:
  - Caps on cash-flows mismatches by currencies and maturity
  - Higher reporting frequency

## 3.4 Liquidity adequacy score

- Competent authorities should form a **view on whether existing liquidity resources provide sound coverage of the risks** to which the institution is or might be exposed and reflect this in a summary of findings, accompanied by a score
- For the joint decision (where relevant), competent authorities should use the liquidity assessment and score to determine whether the liquidity resources are adequate
- For **cross-border institutions specific quantitative liquidity requirements; and/or any other measures when the score assigned to liquidity risk and/or funding risk is '3' or '4' should be subject to joint decision**

Score	Supervisory view	Considerations
1	The institution's liquidity position and funding profile pose no discernible risk to the viability of the institution.	<ul style="list-style-type: none"> <li>The institution's counterbalancing capacity and liquidity buffers are comfortably above specific supervisory quantitative requirements and are expected to remain so in the future.</li> <li>The composition and stability of longer-term funding (&gt;1 year) pose no discernible risk in relation to the activities and business model of the institution.</li> <li>The free flow of liquidity between entities in the group, where relevant, is not impeded, or all entities have a counterbalancing capacity and liquidity buffers above supervisory requirements.</li> <li>The institution has a plausible and credible liquidity contingency plan that has the potential to be effective if required.</li> </ul>
.....	.....	<ul style="list-style-type: none"> <li>.....</li> </ul>
4	The institution's liquidity position and/or funding profile pose a high level of risk to the viability of the institution.	<ul style="list-style-type: none"> <li>The institution's counterbalancing capacity and liquidity buffers are rapidly deteriorating and/or are below the specific supervisory quantitative requirements, and there are serious concerns about the institution's ability to restore compliance with these requirements in a timely manner.</li> <li>The composition and stability of longer-term funding (&gt;1 year) pose a high level of risk in relation to the activities and business model of the institution.</li> <li>The free flow of liquidity between entities in the group, where relevant, is severely impeded.</li> <li>The institution has no liquidity contingency plan, or one that is manifestly inadequate.</li> </ul>

## 4. Conclusion

- ➔ Understanding of liquidity risk in the context of the bank and its environment
- ➔ Focus in your assessment of liquidity and funding risk
- ➔ Conclusion on quality of liquidity / funding risk management
- ➔ Conclusion on current short term liquidity risk
- ➔ Conclusion on current funding stability
- ➔ Conclusion on quality of liquidity / funding risk management
- ➔ Outlook for short term liquidity risk
- ➔ Outlook for P1 / P2 compliance
- ➔ Outlook funding assessment taking into account funding plan
- ➔ LCR add-on
- ➔ Survival period
- ➔ Minimum buffer size
- ➔ Caps on outflows
- ➔ Qualitative requirements for ILAAP



- |  |   |   |   |   |
|--|---|---|---|---|
| <ul style="list-style-type: none"> <li>✓ Business model assessment</li> <li>✓ balance sheet analysis</li> <li>✓ long term strategy</li> <li>✓ peer groups</li> </ul> | <ul style="list-style-type: none"> <li>✓ Types of funding</li> <li>✓ Frequency of market access</li> <li>✓ Characteristics of clients</li> <li>✓ Geographical spread</li> </ul> | <ul style="list-style-type: none"> <li>✓ ILAAP</li> <li>✓ RAS</li> <li>✓ Limits</li> <li>✓ Management information</li> <li>✓ Contingency plans</li> <li>✓ <u>Quality</u> of funding plans</li> <li>✓ Escalation procedures</li> </ul> | <ul style="list-style-type: none"> <li>✓ Stress tests on in and outflows</li> <li>✓ Stress test on asset value</li> <li>✓ Survival horizons</li> <li>✓ <u>Impact</u> of funding plan</li> <li>✓ Market developments</li> <li>✓ Change in client behaviour</li> <li>✓ Trends!!!</li> </ul> | <ul style="list-style-type: none"> <li>✓ Underestimation of outflows</li> <li>✓ Overestimation of inflows / buffer value</li> <li>✓ Cliff effects</li> <li>✓ Concentration risk</li> <li>✓ Management shortcomings</li> </ul> |
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THANK YOU

# Liquidity risk assessment in the SREP

London, 11 & 12 June 2015

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