EUROPEAN CENTRAL BANK

BANKING SUPERVISION

Sensitivity Analysis of Liquidity Risk – Stress Test 2019

6 February 2019

Executive summary

- **The ECB will perform a sensitivity analysis of liquidity risk (LiST) as the annual supervisory stress test for 2019**
  - Liquidity risk is part of the supervisory priorities for 2019, as we have witnessed individual cases of constrained liquidity in recent years
- **The sensitivity analysis will focus on banks' ability to handle hypothetical idiosyncratic liquidity shocks**
  - Shocks are calibrated based on supervisory experience
  - The exercise will be carried out without any reference to monetary policy decisions
- **Results will feed into the ECB's ongoing supervisory assessments of banks' liquidity risk management frameworks, including the SREP**
  - Exercise will run until May/June 2019
  - Banks' individual results will be discussed bilaterally as a part of the supervisory dialogue in Q3 2019

Background & Objectives

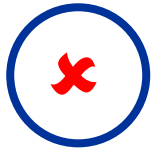
Background

- **Art. 100 CRDIV** requires that competent authorities (CAs) conduct at least **annually supervisory stress tests** on the supervised institutions **as an input to the SREP**
- **EU-wide stress-tests** are conducted biennially, with the next one being scheduled for **2020**
- In between, the ECB conducts stress tests focussed on topical issues. For the first time, the ECB conducted the **Sensitivity analysis of IRRBB** in **2017.**
- This year's stress test will take the form of a **sensitivity analysis of idiosyncratic liquidity risk**

Objectives

- Objective of the call is to **inform about the launch of the 2019 exercise**

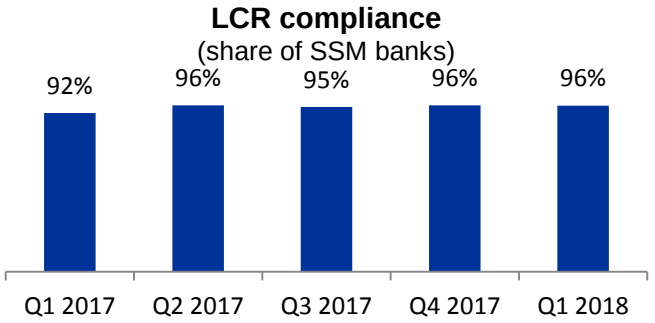
- Provide an **overview of the exercise and the approach**
- Present the foreseen **interactions between the banks and the ECB**
- Explain the **next steps**



- Discuss bank-specific information or bank-specific questions on the methodology

The assessment of banks' liquidity risk is one of the SSM supervisory priorities for 2019

- **Banks in the euro area have experienced ample liquidity in the past few years…**
  - ✓ High levels of compliance with fully phased-in Liquidity Coverage Ratio (LCR)
  - ✓ Supervisory framework for sound internal liquidity risk management procedures (ILAAP) finalized in 2018



Source: ECB Supervisory Banking Statistics – Second quarter 2018 (October 2018).

- **…yet, we have witnessed individual cases of constrained liquidity**
- Liquidity risk is an inherent risk of banks, as banks transform short term funding into long term credit
- Liquidity drains can happen fast and can be based on multiple factors, both systemic and idiosyncratic
- Usually they are going hand in hand with reduced trust in the viability of an institution

⇨ **This calls for a test to which degree SSM banks can handle critical situations.**

Key features of the Sensitivity Analysis of Liquidity Risk – Stress Test 2019

Key features

- The exercise will be a **sensitivity analysis** based on **idiosyncratic liquidity** shocks
  - **Instantaneous shocks** reverberating through **six months**
  - **No macro-economic scenario** or market-wide stress simulation
- The exercise will be carried out **without any reference to monetary policy decisions**.
- **Around 100 significant institutions**[a] required to **report bottom-up cash flows projections**
- **Smaller exercise than EBA ST 2018**
  - **Less than 5% of data points** collected and significantly less resources involved compared to the 2018 stress test
  - Banks will be able to **leverage on existing supervisory reporting**
- Reported data will be **challenged by the ECB Banking Supervision** through a Quality Assurance process

Timeline

- Quality Assurance will last until **May/June 2019**
- **Integration** of results **into the SREP** will be discussed bilaterally with banks in Q3 2019
- **Decision on the publication of aggregated results** in Q3/ Q4 2019 pending

[a] Combined number of significant institutions (SIs) included in the exercise is lower than the total number of banks under direct ECB supervision, as some exceptions apply (e.g. SIs that are subsidiaries of other SSM SIs, which are already covered at the highest level of consolidation).

Exercise focuses on assessing banks' ability to handle idiosyncratic liquidity shocks

The exercise covers…

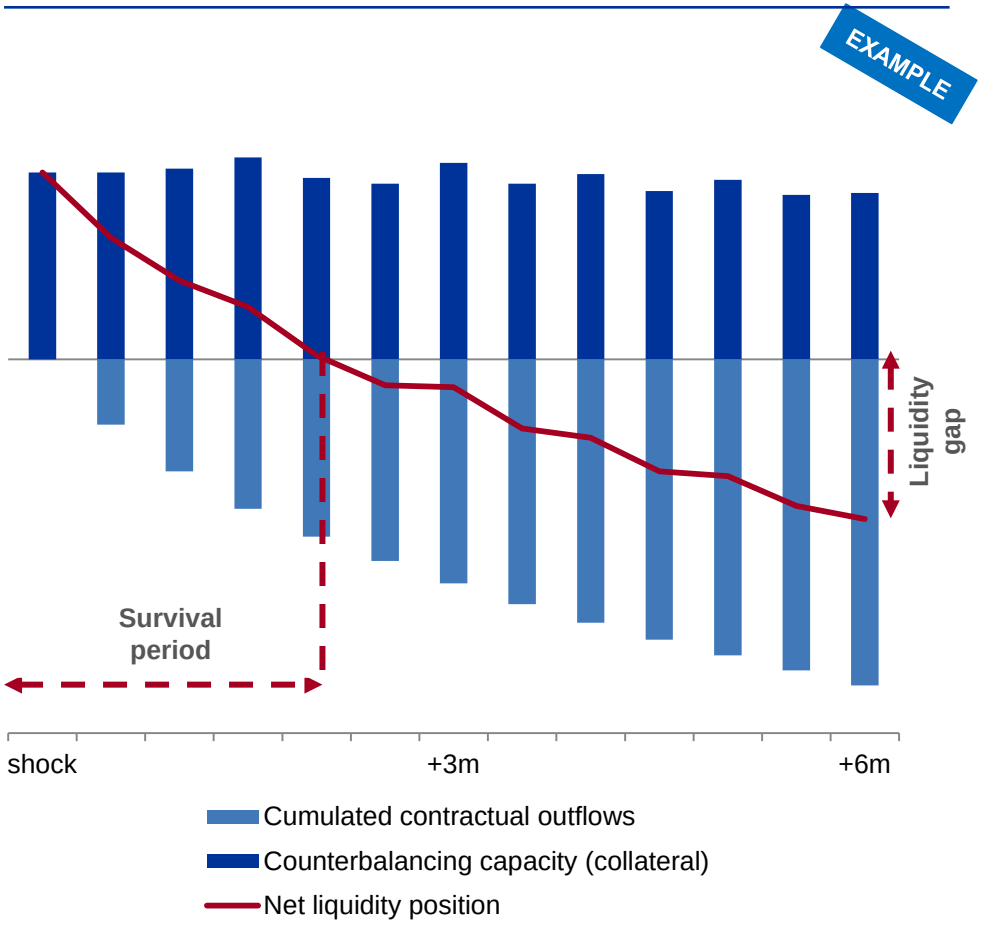
- Sensitivity analysis will be based on **hypothetical shocks** drawn upon **supervisory experience.**
  - The exercise simulates **cash outflows** of retail and commercial deposits and a full freeze of wholesale funding. Moreover, banks face rating downgrades and additional drawdowns of committed lines.
  - At the same time, banks find themselves **unable to generate liquidity from deleveraging** commercial lending activities
  - Banks' ability to withstand the shocks is driven by their **counterbalancing capacity**, the amount of liquidity they can generate instantaneously based on available collateral
  - The exercise will also test banks' intragroup liquidity flows as well as those denominated in a non-EUR currency; and their ability to mobilise further collateral beyond what is immediately available.

…and it excludes

- The exercise will not assess banks' structural funding risk and it makes **no reference to systemic liquidity crises** (i.e. general changes in risk premia or asset valuations, etc.)
- Liquidity shocks will **not rely on any macroeconomic or geopolitical scenario**. Accordingly, the exercise is carried out without any reference to monetary policy decisions.

Banks will be assessed based on their expected and stressed short-term cash flows

Survival period represents main output metric



- Banks will provide **expected** and **shocked cash flows** to the ECB covering the six month following the reference date (**31 Dec 2018**)
- The **survival period** describes the number of days that a bank can continue to operate using available cash and collateral with **no access to funding**
  - ✓ Comparable among banks with different business models
  - ✓ Complementary to the existing supervisory requirements (e.g. Liquidity Coverage Ratio)

Test of adverse and extreme hypothetical shocks in which banks face increasing liquidity outflows

Baseline
contractual cash flows

- **No shock**
- Contractual flows from wholesale banking are fully considered.
- Commercial banking activities (deposit taking / lending) remain stable.

Adverse shock

Lasting 6 months

- **Moderate shock**
- Banks face limited scale deposit outflow; a freeze of wholesale banking activities, a one-notch rating downgrade and limited withdrawals of committed lines.
- Commercial lending is assumed to remain stable.

Extreme shock

Lasting 6 months

- **Harsh shock**
- Severe deposit run-offs are assumed to hit the bank while commercial lending remains stable.
- Besides the freeze of wholesale banking, banks face an instantaneous three-notch downgrade and pronounced withdrawals of committed lines.

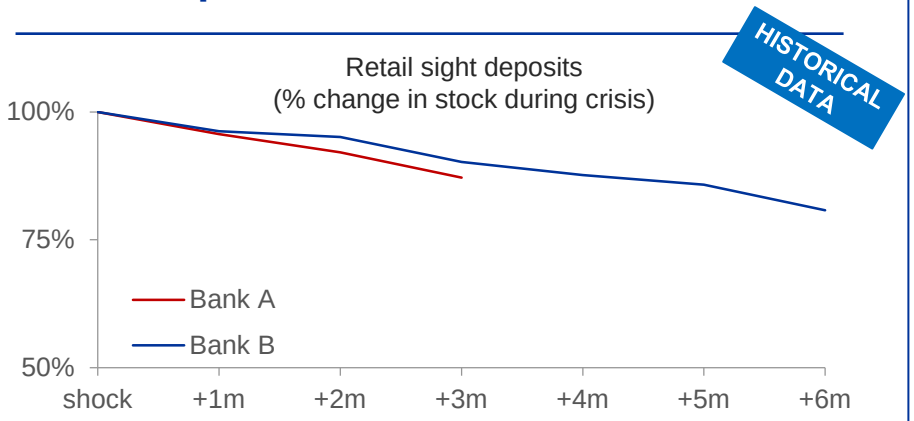
Shocks designed without any reference to monetary policy decisions

Deposit outflows were calibrated based on supervisory experience from recent crisis episodes

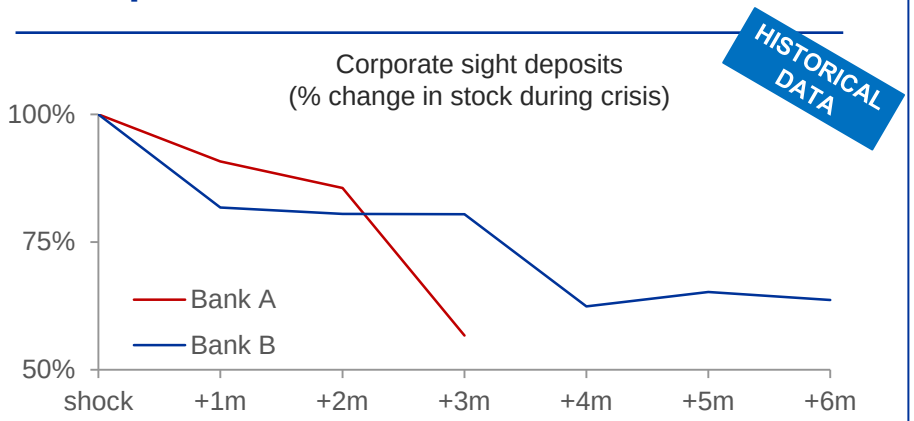
- The ECB analysed the liquidity dynamics observed in recent bank-specific liquidity crises through multiple sources
- Patterns identified by supervisors informed the design of the shocks, including their length.
- The severity of shock factors was calibrated based on real crisis cases.

- **Deposit outflows were identified as one of the main channels through which idiosyncratic shocks may hit banks**

Retail deposit outflows can be material…



…corporate clients are even more reactive



Source: ECB.

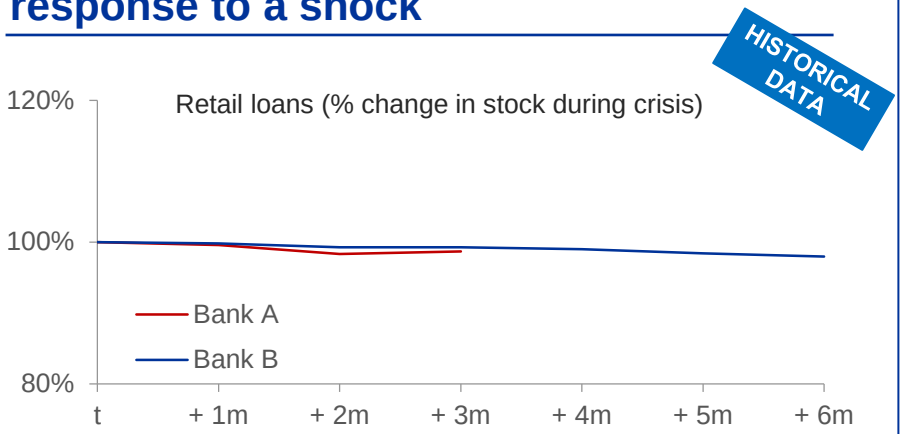
Analysis reveals that despite substantial outflows, banks' commercial lending remains stable

- In spite of the substantial outflows observed in historic liquidity crisis episodes, **stressed banks did not compensate the drain of liquidity through deleveraging** their balance sheet.

- Potential explanations include e.g. possible signaling effects to market participants and the long-term nature of many loans.

- **The asymmetric impact on their assets and liabilities may lead banks into a liquidity squeeze.**

Banks find it hard to deleverage quickly in response to a shock



Source: ECB.

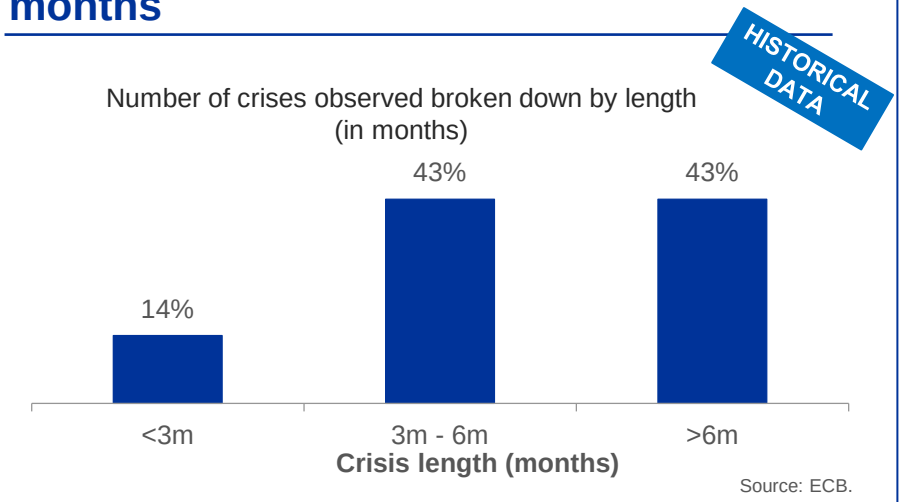
Shock time horizon of six months closes gap between existing supervisory measures

- Past liquidity crises were observed to last between four and five months on average.

- The Liquidity Coverage Ratio (LCR) targets a 30 day stress horizon, the Net Stable Funding Ratio (NSFR) a 1 year horizon

- **Six months LiST stress horizon complements both LCR and NSFR and closes the gap between the time periods targeted by other supervisory measures.**

Liquidity crises may last for several months



Overview of shocks envisaged for the key balance sheet items

Full table in the Annex!

INCREASING SEVERITY

		Baseline contractual CFs	Adverse shock	Extreme shock	Business view
Contractual maturity items	Securities issued & secured market funding	**100%** outflow rate	**100%** outflow rate	**100%** outflow rate	**Based on banks' own business plans and assumptions**
	Secured market lending	**100%** outflow rate	**100%** outflow rate	**100%** outflow rate	
	Term deposits (commercial counterparties)	**Constant stock**	**18%-52%** outflow rate[a]	**27%-76%** outflow rate[a]	
	…	…	…	…	
Open maturity items	Sight deposits (commercial clients)	**Constant stock**	**12%-58% outflow**[a]	**18%-74% outflow**[a]	
	Sight deposits (financial counterparties)	**100%** outflow	**100%** outflow	**100%** outflow	
	…	…	…	…	
CBC	Coins banknotes and CB reserves	**Nominal** value	**Nominal** value	**Nominal** value	
	HQLA (L1 & L2) and non tradable assets eligible for CB	**Post-haircut** value	**Post-haircut** value	**Post-haircut** value	
	…	…	…	…	
Contingencies	Outflows from committed facilities	**Not relevant**	**12%/ 60%** outflow rate[b]	**15%/ 75%** outflow rate[b]	
	Impact from own rating downgrade		**1-notch** ↓	**3-notch** ↓	

[a] Outflow rates relate to particular types of deposits which are assumed to differ in terms of stability. Lowest outflow rates are attributed to 'Stable deposits' as defined in Art. 421 CRR, whereas the highest outflow rates relate to deposits from non-financial corporates.

[b] The lower rate shall be applied to committed credit facilities whereas the higher rates apply to committed liquidity facilities.

Outcome will affect supervisory SREP requirements in a non-mechanical way

SREP: Determination of capital requirements

- Quality and timeliness of banks' submissions will be factored into the assessment of banks' governance and risk management (Element 2 of the SREP framework[a]). Thus, LiST results may have an indirect impact on capital requirements
- No direct impact on capital requirements which would be inappropriate to address liquidity risks

[a] For further reference, see SREP Booklet [Link]

SREP: Determination of liquidity requirements

- LiST outcome shall inform all blocks of the liquidity assessment of the SREP (Element 4 of the SREP framework[a])
- LiST will be used as an input factor into banks' liquidity SREP scores and thus may lead to additional liquidity requirements
- LiST might also lead to supervisory requests to strengthen specific liquidity buckets to improve the overall resilience of individual banks

[a] For further reference, see SREP Booklet [Link]

⇨ **Outcome to be discussed with banks in the supervisory dialogue in Q3 2019.**

⇨ **LiST 2019 will contribute to the further improvement of the SREP methodology.**

Next steps...

6 February 2019	Launch of exercise
Launch + 6 weeks	Remittance date for data request for all participating banks and start of the Quality Assurance phase
May/ June 2019	Finalization of Quality Assurance interactions with banks
Q3 2019	Supervisory dialogue between supervisors and individual banks
H2 2019	Disclosure of aggregate results *[to be decided]*

Annex

Overview of shocks envisaged for the key balance sheet items

INCREASING SEVERITY

			Baseline contractual CFs	Adverse shock	Extreme shock	Business view
1	Contractual maturity items	Securities issued & secured market funding	**100%** outflow rate	**100%** outflow rate	**100%** outflow rate	Based on banks' own business plans and assumptions
		Secured market lending	**100%** outflow rate	**100%** outflow rate	**100%** outflow rate	
		Term deposits (commercial counterparties)	**Constant stock**	**18%-52%** outflow rate[a]	**27%-76%** outflow rate[a]	
		Term deposits (financial counterparties)	**100%** outflow rate	**100%** outflow rate	**100%** outflow rate	
		Derivatives & FX swaps (inflow/outflow)	**100%** in/outflow rate	**100%** in/outflow rate	**100%** in/outflow rate	
		Loans (commercial counterparties)	**Constant stock**	**Constant stock**	**Constant stock**	
		Loans (financial counterparties)	**100%** inflow rate	**100%** inflow rate	**100%** inflow rate	
		Own portfolio investments	**100%** inflow rate	**100%** inflow rate	**100%** inflow rate	
		Others (inflow/outflow)	**100%** in/outflow rate	**100%** in/outflow rate	**100%** in/outflow rate	
2	Open maturity items	Sight deposits (commercial clients)	**Constant stock**	**12%-58% outflow**[a]	**18%-74% outflow**[a]	
		Sight deposits (financial counterparties)	**100%** outflow	**100%** outflow	**100%** outflow	
		Sight loans	**Constant stock**	**Constant stock**	**Constant stock**	
		Open repos & reverse repos	**100%** in/outflow	**100%** in/outflow	**100%** in/outflow	
3	CBC	Coins banknotes and CB reserves	**Nominal** value	**Nominal** value	**Nominal** value	Haircuts based on current monetary policy frameworks
		HQLA (L1 & L2) and non tradable assets eligible for CB	**Post-haircut** value	**Post-haircut** value	**Post-haircut** value	
		Other tradable assets	**Post-haircut** value	**Post-haircut** value	**Post-haircut** value	
		Undrawn committed facilities received	**Nominal** value	**Nominal** value	**Nominal** value	
4	Contingencies	Outflows from committed facilities	Not relevant (**excl. from NLP**)	**12%/ 60%** outflow rate[b]	**15%/ 75%** outflow rate[b]	
		Impact from own rating downgrade		**1-notch** ↓	**3-notch** ↓	
		Net liquidity position computed as:	1 + 2 + 3	1 + 2 + 3 + 4	1 + 2 + 3 + 4	1 + 2 + 3 + 4

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