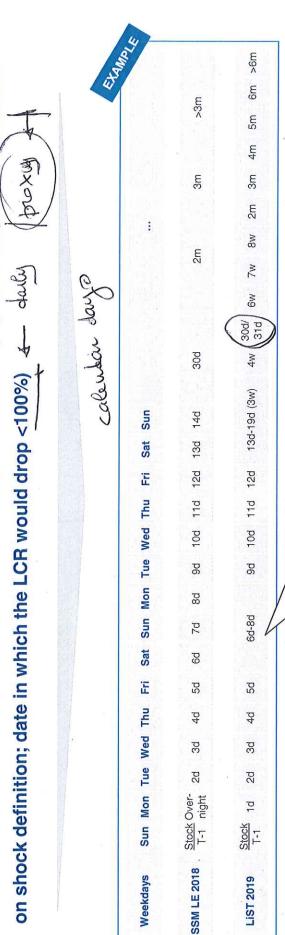
Template over reporting horizon and granularity of **LIST 2019 maturity ladders differ from Liquidity** time buckets

- → Longer time horizon: six months vs. three months
- → Increased granularity (i.e. weekly reporting for first two months)
- → Banks shall provide more precise information on specific events (e.g. survival period date based あるとう on shock definition; date in which the LCR would drop <100%)



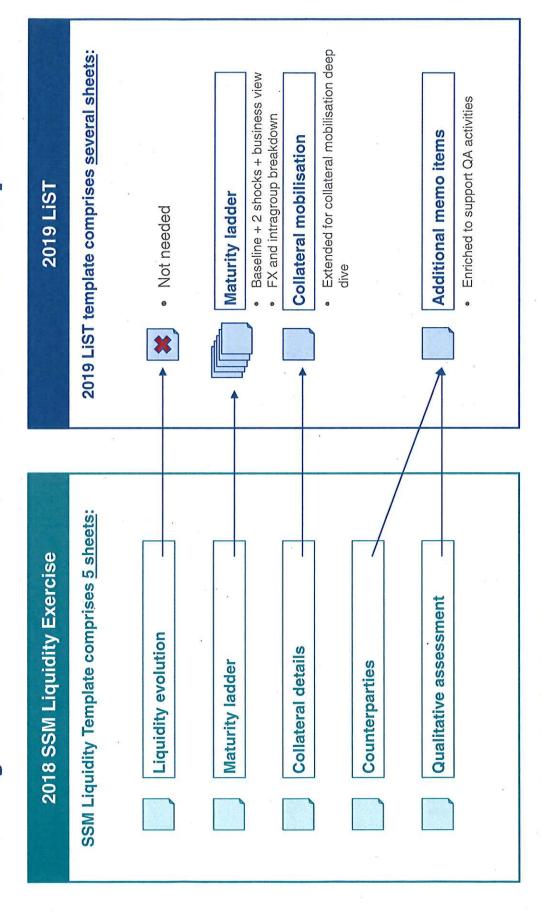
LCR ou-daily

reporting day was a Example if the first

*

Monday!

Some elements of SSM LE dropped but additional maturity ladders collected to enable deep dives





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- Introduction
- Overview of the exercise

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Main template

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Shock factors

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Deep dive analyses

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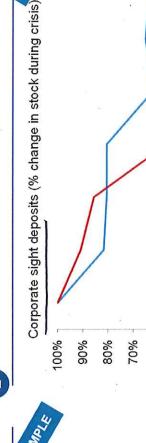
- Preliminary overview of the Quality Assurance process ဖ
- 6 Next steps

The calibration of the shocks is based on recent liquidity crises cases

Retail deposit outflows can be material ...

2

... corporate clients are even more reactive



EXAMPLE Retail sight deposits (% change in stock during crisis) +5m +4m +3m +2m Bank B --- Bank A

> 100% %06 %08 %02

Liquidity crises may last longer than one month 4 Banks find it hard to deleverage quickly in

+6m

+5m

+4m

+3m

+2m

- Bank B

- Bank A

%09

Number of crises observed broken down by length (in months)^(a)

Retail Ioans (% change in stock during crisis)

120%

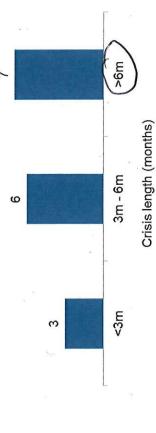
110%

100%

%06

response to a shock

8



(a) Number of crises observed higher than number of banks looked at given that for some institutions more than one crisis was identified over time. Source: IBSI, ECB/ NCA data.

+ 6m

+ 5m

+ 4m

+ 3m

+ 2m

- Bank A

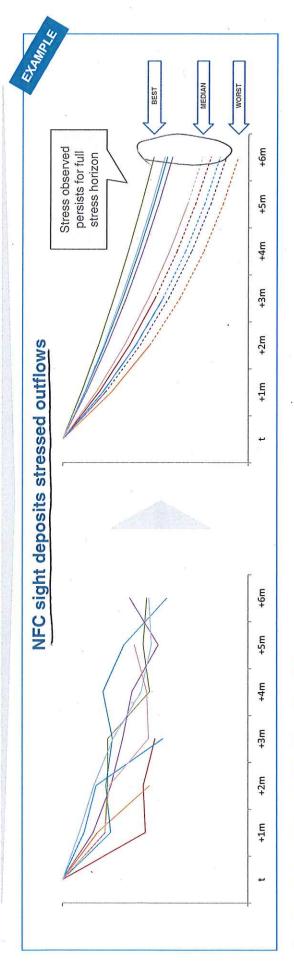
80%

Sensitivity Analysis of Liquidity Risk - Stress Test 2019

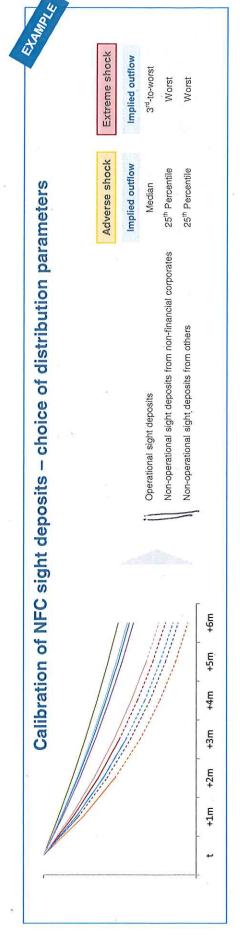
Shocks are inspired by supervisory experience with past crisis cases, including time horizon

→ Example of sight deposits

We extract the average monthly outflow rate as the geometric mean of realized outflow rates from crisis inception to lowest point. We construct a calibration matrix of compounding outflow rates for each deposit type and for both shocks For each past crisis case, we measured the evolution of the stock of sight deposits (retail and corporate). We assign average monthly outflow rates to the different deposit type reported in the maturity ladder. We identify the percentiles of the distribution of average monthly outflow rates. 4 က 2 Key steps followed



distribution parameters of real-life crisis cases Calibration of deposit outflows based on



	Adverse shock	SK.	Ext	Extreme shock	:k	LCR
N Company	Cumulated outflow rates over time	ver time	Cumulated	Cumulated outflow rates over time	ver time	
	mt	em e	1m		6m	TET.
Stable retail	2%	12%	3%		18%	3-5%
Other retail sight deposits	7%	37%	%6		42%	10%
Operational sight deposits	10%	48%	15%		61%	2-100%
Non-operational sight deposits from credit institutions	100%	í	100%		i	100%
Non-operational sight deposits from other financial customers	100%		100%			100%
Non-operational sight deposits from non-financial corporates	13%	%89	20%.		74%	100%
Non-operational sight deposits from others	13%	28%	20%		74%	20-40%



78957

Overview of shocks envisaged for the key maturity ladder items

Securities issued & secured market funding 100% outflow rate 100% in/outflow r							
Securrities issued & secured market funding Secured market lending Secured market lending Secured market lending Term deposits (commercial counterparties) Term deposits (financial counterparties) Toans (commercial counterparties) Toans (commercial counterparties) Toans (commercial counterparties) Toans (commercial counterparties) Toans (financial counterparties) Toans inflow rate Toans in rating down rating down rati				Baseline contractual CFs	Adverse shock	Extreme shock	Business view
Secured market lending Term deposits (commercial counterparties) Term deposits (financial counterparties) Term deposits (financial counterparties) Term deposits (financial counterparties) Derivatives & FX swaps (inflow/outflow) Loans (commercial counterparties) Loans (financial counterparties) Own portfolio investments Open repos & reverse repos Constant stock Open repos & reverse repos Open repos & reve			Securities issued & secured market funding	100% outflow rate	100% outflow rate	100% outflow rate	NA partie
Term deposits (commercial counterparties) Term deposits (financial counterparties) Term deposits (financial counterparties) Derivatives & FX swaps (inflow/outflow) Loans (commercial counterparties) Derivatives & FX swaps (inflow/outflow) Loans (commercial counterparties) Own portfolio investments Own portfolio investments Others (inflow/outflow) Sight deposits (commercial clients) Constant stock Open repos Sight loans Constant stock Open repos Sight loans Constant stock Open repos Sight loans Open repos Sight loans Open repos Constant stock Open repos Nominal value Post-haircut value Nominal value Outflows from committed facilities Outflows from committed facilities Outflows from committed facilities Not relevant Innpact from own rating downgrade Outflows from nom rating downgrade Outflows from nom rating downgrade Outflows from nomited as: Ontel iquidity position computed as: Ontel iquidity position computed as: Ontel iquidity position computed as: Outflows from committed facilities Outflows from nomited facilities Outflows from nomited as: Outflows from nomited facilities Outflows f			Secured market lending	100% outflow rate	100% outflow rate	100% outflow rate	
Term deposits (financial counterparties) 100% outflow rate Derivatives & FX swaps (inflow/outflow) 100% in/outflow rate Loans (commercial counterparties) 100% inflow rate Constant stock Loans (financial counterparties) 100% inflow rate Own portfolio investments 100% inflow rate Own portfolio investments 100% inflow rate Own portfolio investments Others (inflow/outflow) 100% inflow rate Sight deposits (financial counterparties) 100% outflow Sight deposits (financial counterparties) 100% outflow Sight deposits (financial counterparties) 100% outflow Constant stock Open repos & reverse repos Constant stock Open repos &			Term deposits (commercial counterparties)	Constant stock	18%-52% outflow ratea	27%-76% outflow ratea	THE WOLL
Derivatives & FX swaps (inflow/outflow) Loans (commercial counterparties) Constant stock Loans (financial counterparties) Others (inflow/outflow) Sight deposits (commercial clients) Constant stock Constant stock Open repos & reverse repos Coins banknotes and CB reserves HQLA (L1 & L2) and non tradable assets Undrawn committed facilities received Outflows from committed facilities Outflows from own rating downgrade Onet in/outflow rate Constant stock 100% in/outflow rate 100% in/outflo		Contractual	Term deposits (financial counterparties)	100% outflow rate	100% outflow rate	100% outflow rate	
Loans (commercial counterparties) Loans (financial counterparties) Loans (financial counterparties) Own portfolio investments Own portfolio investments Others (inflow/outflow) Sight deposits (commercial clients) Sight deposits (commercial clients) Constant stock Open repos & reverse repos Open repos		maturity	Derivatives & FX swaps (inflow/outflow)	100% in/outflow rate	100% in/outflow rate	100% in/outflow rate	
Loans (financial counterparties) Own portfolio investments Own portfolio investments Own portfolio investments Own portfolio investments Others (inflow/outflow) Sight deposits (commercial clients) Sight deposits (commercial clients) Constant stock 100% outflow Sight deposits (financial counterparties) Sight deposits (financial counterparties) Sight deposits (financial counterparties) Constant stock 100% outflow Constant stock 100% outflow Constant stock 100% in/outflow 100% in/outflo	7	items	Loans (commercial counterparties)	Constant stock	Constant stock	Constant stock	
Own portfolio investments Others (inflow/outflow) Sight deposits (commercial clients) Sight deposits (financial counterparties) Constant stock Constant stock Constant stock To0% outflow Sight loans Constant stock To0% outflow To0% outflow rate To0% outflow To0% outflow rate To0% outflow To0% outflow rate To0% outflow rate To0% outflow	Actor		Loans (financial counterparties)	100% inflow rate	100% inflow rate	100% inflow rate	To be filled by
Others (inflow/outflow) Sight deposits (commercial clients) Sight deposits (financial counterparties) Constant stock Constant stock 100% outflow Constant stock 100% in/outflow 100% in/outflow Constant stock 100% in/outflow 100%			Own portfolio investments	100% inflow rate	100% inflow rate	100% inflow rate	banks on the
Sight deposits (commercial clients) Sight deposits (financial counterparties) Sight deposits (financial counterparties) Sight deposits (financial counterparties) Sight deposits (financial counterparties) Constant stock Constant stock 100% outflow Constant stock 100% in/outflow 100% in/			Others (inflow/outflow)	100% in/outflow rate	100% in/outflow rate	100% in/outflow rate	own business
Sight deposits (financial counterparties) Sight deposits (financial counterparties) Sight deposits (financial counterparties) Constant stock 100% in/outflow Coins banknotes and CB reserves HQLA (L1 & L2) and non tradable assets Post-haircut value Post-haircut value Nominal value Nominal value Nominal value Inmpact from own rating downgrade Not relevant I-notch I-notch I-notch I-notch I-per II-per I	4-6		Sight deposits (commercial clients)	Constant stock	12%-58% outflow ^a	18%-74% outflow ^a	plans and
Sight loans Constant stock Open repos & reverse repos Coins banknotes and CB reserves HQLA (L1 & L2) and non tradable assets eligible for CB Other tradable assets Other tradable assets Outflows from committed facilities Outflows from own rating downgrade Net liquidity position computed as: Constant stock 100% in/outflow 10	THE REAL PROPERTY.	Open	Sight deposits (financial counterparties)	100% outflow	100% outflow	100% outflow	STOTIO
Open repos & reverse repos 100% in/outflow 100% in/outflow Coins banknotes and CB reserves Nominal value Nominal value HQLA (L1 & L2) and non tradable assets Post-haircut value Post-haircut value eligible for CB Other tradable assets Nominal value Undrawn committed facilities received Nominal value Nominal value Outflows from committed facilities Not relevant 12% 60% outflow rateb Impact from own rating downgrade 1-notch ↓ Net liquidity position computed as: 1+2+3+3+4		items	Sight loans	Constant stock	Constant stock	Constant stock	
Coins banknotes and CB reserves Nominal value HQLA (L1 & L2) and non tradable assets eligible for CB Other tradable assets Undrawn committed facilities received Outflows from committed facilities Impact from own rating downgrade Net liquidity position computed as: Nominal value Nominal value Not relevant (excl. from NLP) 1-notch \(\) 1-notch \(\)			Open repos & reverse repos	100% in/outflow	100% in/outflow	100% in/outflow	
HOLA (L1 & L2) and non tradable assets eligible for CB Other tradable assets Other tradable assets Undrawn committed facilities received Outflows from committed facilities Impact from own rating downgrade Net liquidity position computed as: HOLA (L1 & L2) and non tradable assets Post-haircut value Nominal value Nominal value 12% 60% outflow rateb 1-notch 1-n	HED S		Coins banknotes and CB reserves	Nominal value	Nominal value	Nominal value	HC aligned with
Other tradable assets Undrawn committed facilities received Outflows from committed facilities Impact from own rating downgrade Net liquidity position computed as: Other tradable assets Nominal value Nominal value 12% 60% outflow rateb 1-notch 1 1-notch 2		CBC	HQLA (L1 & L2) and non tradable assets eligible for CB	Post-haircut value	Post-haircut value	Post-haircut value	policy
Undrawn committed facilities received Outflows from committed facilities Outflows from own rating downgrade Not relevant (excl. from NLP) I-notch ↓ Indidity position computed as:			Other tradable assets	Post-haircut value	Post-haircut value	Post-haircut value	
Outflows from committed facilities Not relevant Impact from own rating downgrade Net liquidity position computed as: 12% 60% outflow rateb 1-notch 1-notch 1-p+2+3+4	\$5° 5		Undrawn committed facilities received	Nominal value	Nominal value	Nominal value	
Impact from own rating downgrade (excl. from NLP) 1-notch ↓ Net liquidity position computed as:		Continuencies	Outflows from committed facilities	Not relevant	12% 60% outflow rateb	15% 75% outflow rateb	
0+0+0 0+0+0		calonia di minori	Impact from own rating downgrade	(excl. from NLP)	1-notch ↓	3-notch ↓	
			Net liquidity position computed as:	0+0+0	0+6+8+4	0+0+0+0	0+0+0+0

[.] 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 rates relate to deposits from non-financial corporates. The lower rate shall be applied to committed credit facilities whereas the higher rates apply to committed liquidity facilities.

Sight deposits

- → The evolution of the sight deposit stock should follow the cumulated outflows envisaged below for the following five deposit categories (retail and corporate deposits)
- → Banks will be provided with a daily compounding outflow rate

					Cum	ulated	Cumulated outflows	SM					Pro memoria:
Open maturity items (liability side)			Adverse	rse					Extreme	me	ħ		LCR (comparable
	Ē	2m	3m	4m	5m	E E	Ē	Z _m	33	4m	5m	6m	with the 1m rates)
Cash outflows from items with open maturity													
Liabilities resulting from secured lending and capital market driven transactions collateralized by Level 1, 2A, 2B tradable assets and other assets (only open repos)			100%	%					100%	%			
Liabilities resulting from sight deposits received (excluding deposits received as collateral)													
Stable retail sight deposits	2%	4%	%9	%8	10%	12%	3%	1%	10% 13%		15%	18%	3-5%
Other retail sight deposits	1%	14%	21%	27%	32%	37%	%6	17%	24%	31%	37%	45%	10%
Operational sight deposits	10%	19%	28%	35%	45%	48%	15%	27%	38%	47%	54%	61%	2-100%
Non-operational sight deposits from credit institutions			100%	%					100%	%			100%
Non-operational sight deposits from other financial customers			100%	%					100%	%			100%
Non-operational sight deposits from non-financial corporates	13%	25%	35% 44%	44%	51%	28%	20%	36%	46%	%69	%19	74%	100%
Non-operational sight deposits from others	13%	25%	35% 44%		21%	28%	20%	%98	48%	%69	%19	74%	20-40%
Other transactions			100%	%!					100%	%			

Contractual maturity liabilities

LCR includes flows from both open and contractual maturity items. maturing in each time bucket with the below rates (i.e. assume that liabilities rolled over upon maturing stay o Banks should compute outflows on liabilities with contractual maturity by multiplying the amount on the balance sheet beyond the stress horizon)

	Outflow rat	Outflow rates (of flows)	
contractual maturity items (napility side)	Adverse	Extreme	Pro memoria: LCK
Cash outflows			
Liabilities resulting from securities issued (if not retail deposits)	1	-	
Unsecured bonds due	100%	100%	
Regulated covered bonds	100%	100%	
Securitisations due	100%	100%	
Other	100%	100%	
Liabilities resulting from secured lending and capital market transactions (L1, L2A, L2B collat.)	100%	100%	
Liabilities not reported above resulting from deposits received (excl. deposits received as collateral and sight deposits)	ı	1	
Stable retail deposits	18%	27%	3-5%
Other retail deposits	39%	48%	10%
Operational deposits	37%	20%	5-100%
Non-operational deposits from credit institutions	100%	100%	100%
Non-operational deposits from other financial customers	100%	100%	100%
Non-operational deposits from non-financial corporates	52%	26%	100%
Non-operational deposits from others	52%	%92	20-40%
FX-swaps maturing	100%	100%	
Derivatives amount payables other than above	100%	100%	
Other cash outflows	100%	100%	

Open maturity and contractual maturity assets

- → Banks shall assume full inflow from open reverse repos but expect no other inflows
- → Banks should compute inflows on assets with contractual maturity by multiplying the amount maturing in each time bucket with the below rates.

Object topic items (object topic)	Inflows	SMC	
open matanty items (asset side)	Adverse	Extreme	Fro memoria: LCR
<u>Cash inflows</u>			
Open reverse repos from secured lending and capital market driven transactions collateralised by Level 1, 2A, 2B tradable assets and other assets	100%	100%	
Monies due not reported in row 0450 resulting from sight and non-maturing loans and advances	%0	%0	
Other transactions	%50	%0	

Contractual maturity itoms (accat cide)	Inflow rate:	Inflow rates (of flows)	
contractual matunity items (asset side)	Adverse	Extreme	Pro memoria: LCR
<u>Cash inflows</u>			
Monies due from secured lending and capital market transactions (L1, L2A, L2B collat.)	100%	100%	50-100%
Monies due not reported above from loans and advances granted to:			
Retail customers	%0	%0	50-100%
Non-financial corporates	%0	%0	50%
Credit institutions	100%	100%	0-100%
Other financial customers	100%	100%.	0-100%
Others	%0	%0	50-100%
FX-swaps maturing	100%	100%	100%
Derivatives amount receivables other than those reported above	100%	100%	100%
Paper in own portfolio maturing	100%	100%	
Other cash inflows	100%	100%	100%

Drawdowns of committed facilities and impact of rating downgrade

→ The stock of committed credit and liquidity lines should follow the cumulated outflows below

		The second secon				
			Cumulated outflo	Cumulated outflows (draw-downs)	9)	
Type of facility		Adverse			Extreme	
	-T	2m	3m	mt.	2m	Зт
Credit facilities	4%	%8	12%	2%	10%	15%
Liquidity facilities	. 56%	45%	%09	37%	%09	75%

→ Banks shall report the overall impact of a rating downgrade of its own (long-term) issuer rating

	Cumulated outflo	Cumulated outflows (draw-downs)
	Adverse	Extreme
	instantaneous	instantaneous
lating downgrade	1 notch	3 notches -

Counterbalancing capacity

→ The counterbalancing capacity should be reported net of central bank haircuts under the relevant monetary policy framework, i.e. the Eurosystem for assets issued in the euro area

→ The below table of haircuts would apply to non-central bank eligible collateral

1. Equities AAA to A- BBB+ to BBB- Lower/ Not rated by an ECAls	
AAA to A-BBB+ to BBB-LOWer/ Not rated by an ECAIs	,
BBB+ to BBB- Lower/ Not rated by an ECAIs	20%
Lower/ Not rated by an ECAIs	35%
	20%
2. Other HQLA not eligible for Eurosystem/other CB frameworks	%OE.
3. Other tradable assets not eligible for Eurosystem/other CB frameworks	meworks 50%

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Preliminary overview of the Quality Assurance process

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Next steps

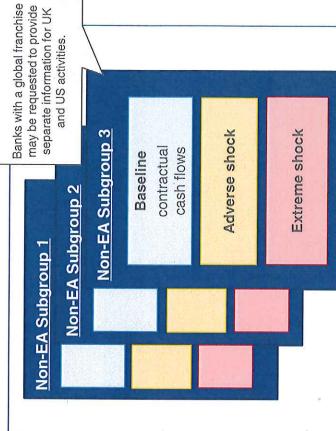
Overview of the intragroup template specificities

Worksheet contains up to twelve maturity ladder tables



 additional lines to capture intragroup flows to / from other
 • additio

 group entities extra EA for just the main items (subtotals), ...
 EA groudistinguishing between secured vs. unsecured



 additional lines to capture intragroup flows to / from the EA group entities for just the main items (subtotals), distinguishing between secured vs. unsecured

Baseline, Adverse shock and Extreme shock assumptions should be filled for EA Subgroup and each Extra EU Subgroup (up to three)

Overview of the intragroup deep dive

Objective

Assess exposure to impediments of intragroup liquidity and collateral flows and identify main liquidity providers / receivers within group

Entities	Templates	Scenarios
Subgroup <u>inside</u> EA	Main maturity ladder + additional lines to capture intragroup flows to / from other group entities extra EA distinguishing between secured vs. unsecured	Contractual cash flows + Adverse & Extreme shocks
Subgroups outside EA	Main maturity ladder + additional lines to capture intragroup flows to / from the EA group entities for just the main items (subtotals), distinguishing between secured vs. unsecured	Contractual cash flows + Adverse & Extreme shocks

JSTs may use the same format for further analyses within the euro area subgroup

Intragroup liquidity: identification of liquidity subgroups

Subgroup inside of EA

- Consolidating all countries within the euro area as a single reporting entity.
- the shall include the euro area group parent company and its euro area domiciled subsidiaries. Euro area entities controlled by other group entities domiciled outside of the euro area could be kept out of the euro area Subgroup, unless material.

Subgroup(s) outside of EA

- Up to three "extra euro area Subgroups": the sub-consolidated groups including entities domiciled outside of the euro area.
- They shall include the subsidiaries directly controlled by the group parent company domiciled outside of the euro area, in turn sub-consolidating their own direct and indirect subsidiaries domiciled outside of the euro area.
- Subgroups shall be tailor-made for each institution to match available information/reporting
- Information request to be customized for each institution
- The exact identification and definition of the extra euro area Subgroup(s) shall be performed by JSTs