

**MONITORING OF LIQUIDITY COVERAGE
RATIO AND NET STABLE FUNDING RATIO
IMPLEMENTATION IN THE EU**

THIRD REPORT

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EBA

EUROPEAN
BANKING
AUTHORITY

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Abbreviations

COREP	Common reporting
EBA	European Banking Authority
ECB	European Central Bank
EU	European Union
EUCLID	European Centralised Infrastructure for Supervisory Data
FINREP	Financial reporting
GDP	Gross domestic product
LCR	Liquidity coverage ratio
NSFR	Net stable funding ratio
OSIIs	Other systemically important institutions
TLTRO	Targeted longer-term refinancing operations

1. Executive summary

1.1 Background

1. As a follow up to the work done in the second EBA LCR monitoring report published in March 2021,¹ in the context of its work on exiting Covid 19 measures with the progressive weaning of policy support leading the path to normalisation and return to pre-pandemic standards, the EBA has assessed the potential impact on LCR and NSFR levels and related implications for the liquidity and funding needs of EU banks considering economic developments such as the upcoming central bank funding repayment (mainly repayments of the ECB's TLTRO), increasing and higher interest rates, inflation and recession risk.
2. To estimate such impacts the EBA developed some broad projections of LCR and NSFR values in 2023 and 2024 considering key events such as central bank funding maturities as well as a potential scenario of higher liquidity risk, particularly affecting government bonds, derivatives and repo markets. The analysis is undertaken at an EU level in an aggregated manner. Whilst the scenarios analysed in this report are unrelated to the circumstances of recent events regarding the failure of a number of US regional banks and the subsequent market turmoil, these market developments underline the importance of the assessment of banks' liquidity and funding positions.
3. Following those projections, the EBA assessed the potential liquidity and funding needs that EU banks may need to cover to maintain regulatory and prudent LCR and NSFR levels. It is important that banks' funding plans include realistic ways in which to seek other funding to replace maturing central bank funding (mainly TLTRO) where needed. In this context, the analysis is complemented with some market related information to have a preliminary view of the capacity of markets to absorb the potential aggregated demand.
4. The analysis builds on COREP and FINREP data, covering an extensive sample composed of all EU banks for which the data is available at the EBA, and qualitative input provided by competent authorities.
5. The objective of this report is to provide some qualitative information of the results of that exercise as well as to share EBA's expectations as to related supervisory and banks' actions.

1.2 EBA's observations and main conclusions

6. In recent years banks have reported strong and stable liquidity buffers, also supported by the accommodative monetary policy. The EBA considers that, pending alternative funding sources are used, the repayment of the central bank funding (mainly the ECB's third TLTRO program,

¹ Monitoring of the LCR implementation in the EU – Second report (available [here](#)).

TLTRO III) might cause a significant reduction of the LCR at EU level (please see item 2.3 on the methodology followed for this analysis). This downward impact would be exacerbated considering the cumulative effect of a reduction of the liquidity buffer and additional outflows due to the impact of an adverse market scenario on derivatives transactions and due collateral in repos. While the weighted average LCR for the entire EBA sample would stay above the minimum requirements, specific institutions (including OSIs) may need to initiate actions to maintain operating with prudent LCR levels.

7. The EBA assessed the amount of additional liquidity these banks may need to attract to avoid that liquidity buffers would fall short compared to various LCR levels (for reasons such as review by market participants banks/rating agencies targeted levels may vary between banks).
8. The EBA also considers that, pending alternative funding sources are used, the maturity of all the remaining central bank funding could cause a fall of the weighted average NSFR that, while still relevant, is assessed as somewhat less material than for the LCR (please see item 2.4 on the methodology followed for this analysis). As for the LCR, the EBA estimated the amounts of stable funding that banks may need to attract in order to maintain operating with various NSFR levels.
9. The EBA welcomes supervisory actions being taken to adequately monitor the liquidity and funding positions of banks in this context. A rigorous supervisory assessment of the banks' funding plans to cover potential liquidity and funding needs is crucial.
10. The EBA would like to highlight the importance of banks developing proper funding plans considering any necessary replacement of central bank funding as well as any potential additional risks that might arise in the current economic environment, to ultimately ensure continuity of normal functioning.
11. Funding plans should address potential funding needs affecting the LCR and NSFR simultaneously. This is to reflect that some funding alternatives that are useful for the LCR might not be the most appropriate for the NSFR, particularly as regards funding tenors or counterparties.
12. Banks and supervisors should monitor on an ongoing basis the real capacity of markets and the economic conditions for potential funding sources. This is particularly important in case of reinforced funding demand by many institutions at the same time or in case of protracted periods of market volatility where primary debt issuance is difficult for some institutions. The regularly published risk assessment reports by the EBA are a good source of information about market performance and market expectations.²
13. Furthermore, banks that do not expect any impact due to the repayment of central bank funding should remain attentive to the evolution of funding markets to ensure that their ordinary refinancing strategies and normal business are not affected.

² <https://www.eba.europa.eu/risk-analysis-and-data/risk-assessment-reports>.

1.3 Next steps

14. In the second EBA report monitoring the LCR implementation in the EU, published in March 2021, potential work on a common understanding for a methodology to assess the required below 3% run-off evidence for the application of a 3% outflow rate in stable retail deposits (Article 24(5) of the LCR DR) was suggested as next steps. At this stage, and in the current environment, the EBA would like to note that no bank in the EU is applying such 3% outflow rate and that indeed the EBA does not intend to elaborate such methodology in the absence of any appetite at the level of the EU supervisory community to authorize the application of such reduced outflow rate.
15. The EBA will continue monitor some specific aspects of the LCR and NSFR due to current circumstances and interest rate environment, in close cooperation with competent authorities.
16. In this regard, the EBA recalls the publication of its two previous monitoring reports in July 2019³ and March 2021⁴ aiming at fostering a higher degree of harmonisation in the implementation of the LCR in the areas where divergent practices have been observed, partly due to insufficient clarity of the regulatory provisions and providing guidance to supervisors and institutions on certain areas like outflows applied to certain categories of deposits.
17. In addition, the recent events and market turmoil, have increased the need to collect additional / more frequent information to analyse further the liquidity situation of EU institutions. Many competent authorities have been doing so in the context of their supervisory powers. In this context, the EBA will provide support as needed to supervisors in their monitoring functions for the elaboration of harmonised templates and instructions, so that they are appropriately equipped. In addition, the EBA will assess further the need to amend/complement the existing regulatory reporting.

³ Monitoring of the LCR implementation in the EU – First report (available [here](#)).

⁴ Monitoring of the LCR implementation in the EU – Second report (available [here](#)).

2. Work done on LCR and NSFR

2.1 Introduction

18. In March 2021 the EBA published its second report on the monitoring of the liquidity coverage ratio implementation in the EU.

19. It included a dedicated item on the liquidity discussions held during the COVID 19 period. The report included a LCR analysis at that time with policy messages to supervisors, institutions, and other market participants particularly on the usage of the liquidity buffer, anticipating the case that a potential LCR stress event might have happened. It also included some messages on subsequent potential long-term funding needs at a higher cost. The report already took into account the impact and possible implications of the material long term liquidity injections provided by the Eurosystem at the time, mainly through TLTRO III.

20. At this stage, an in-depth assessment of implications stemming from maturing central bank funding on the liquidity and funding profile of institutions was deemed necessary. Furthermore, the current economic environment made it necessary to consider additional risk factors.

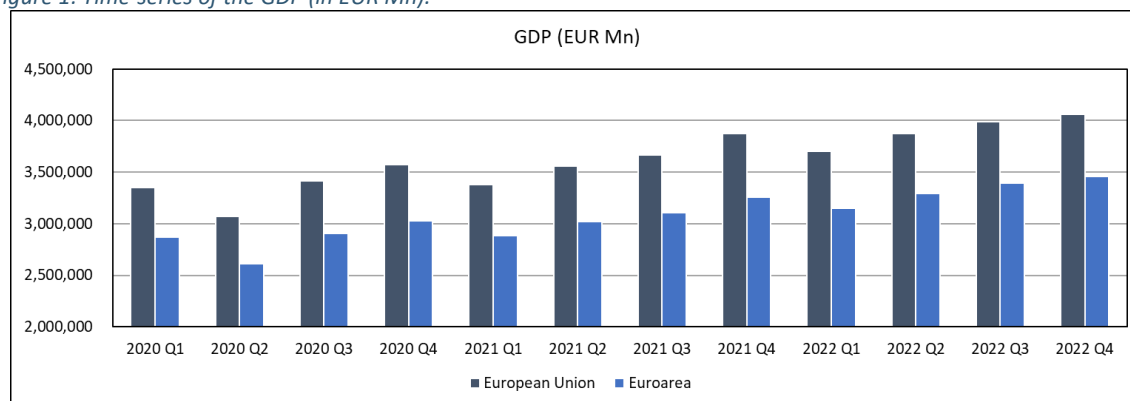
21. Similar considerations are needed in a longer-term horizon as regards medium/long term funding needs. Again, the impact of the repayment of central bank funding (mainly TLTROs) on available stable funding and the potential need of refunding at a higher cost considering the macroeconomic environment are considered.

22. Whilst the scenarios analysed in this report are unrelated to the circumstances of recent events regarding the failure of a number of US regional banks and the subsequent market turmoil, these market developments underline the importance of the assessment of banks' liquidity and funding positions.

2.2 General economic indicators

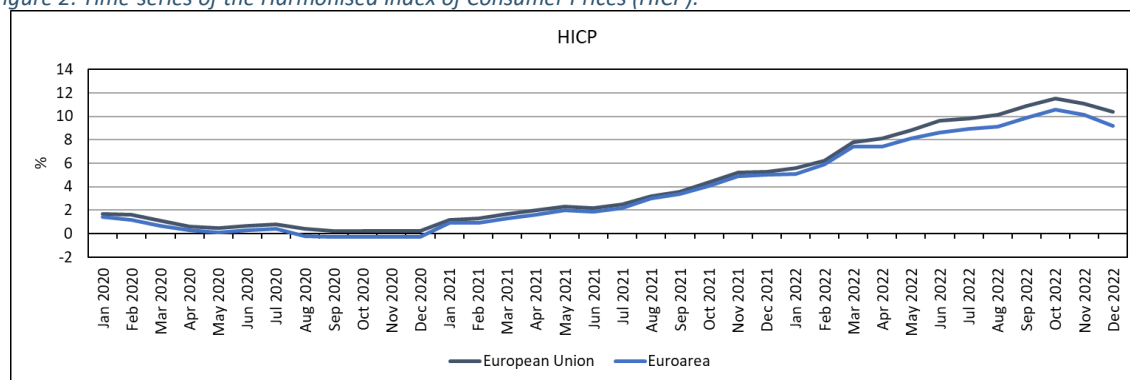
23. The current EU macroeconomic scenario is characterized by a slight increase in the GDP of both the European Union and the Euro area along 2022 (see Figure 1). Furthermore, inflation rates, averaged 2.06 percent from 1991 until 2022, reached an all-time high of more than 10 percent in October 2022 (see Figure 2). Overall energy inflation accounted for more than half of headline inflation in February 2022, with the Russian war in Ukraine increasing the uncertainty about the future path of energy prices and inflation more generally. This entails that the largest part of inflation in the EU reflects shocks generated abroad. Therefore, EU banks need to consider new external factors that have played a key role for both GDP and inflation developments, when managing their risks.

Figure 1: Time-series of the GDP (in EUR Mn).



Source: ECB Statistical Data Warehouse.

Figure 2: Time-series of the Harmonised Index of Consumer Prices (HICP).



Source: ECB Statistical Data Warehouse.

24. The EU macroeconomic scenario described impacts also the country risk premium of EU Member States that now offer a higher bond yield in order to allocate their debt. Table 1⁵ shows the time-series of the sovereign risk premia for all EU member states.

⁵Data are downloaded from the ECB Statistical Data Warehouse. For Bulgaria, the 10-y Government bond yield is reported constant between July and December 2022; for Lithuania, between July 2020 and October 2022.

Table 1: Risk premium (as difference with German 10-y Government bonds) for all the EU Member States.

Member State	Risk premium (10-year Gov. bond yield spread with Germany)													Sovereign (as % of Liquidity Buffer)			
	Jun 2021	Sep 2021	Dec 2021	Jan 2022	Feb 2022	Mar 2022	Apr 2022	May 2022	Jun 2022	Jul 2022	Aug 2022	Sep 2022	Oct 2022	Nov 2022	Dec 2022		
AT	31	28	33	30	39	44	55	59	62	62	65	66	73	63	66		22.56%
BE	41	37	41	38	44	51	56	63	68	72	68	65	65	58	62		18.67%
BG	43	51	82	69	46	81	88	67	32	77	82	5	34	22	23		39.13%
CY	65	59	102	98	144	164	152	174	197	233	204	190	201	212	212		9.27%
CZ	196	226	300	324	288	325	327	366	367	332	308	292	333	304	263		42.63%
DE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		20.22%
DK	40	35	30	23	31	28	30	35	38	51	35	40	41	31	21		8.85%
EE	42	39	49	43	64	92	75	96	103	158	135	113	188	168	138		17.89%
ES	74	69	79	78	96	94	95	109	118	123	112	112	110	99	101		40.69%
FI	27	29	32	30	36	44	44	48	61	64	60	73	71	62	63		11.62%
FR	44	40	43	43	53	50	54	57	61	63	66	61	58	51	54		16.33%
GR	110	116	167	174	231	233	215	259	248	230	243	264	268	235	214		36.21%
HR	78	73	76	81	108	180	169	201	157	223	145	138	183	150	128		27.42%
HU	314	345	478	483	471	564	585	625	650	743	716	742	806	674	655		51.79%
IE	47	43	48	50	63	65	66	68	68	66	68	62	52	52	51		15.62%
IT	117	114	143	147	164	157	170	204	218	228	227	234	234	217	218		46.54%
LT	45	52	54	28	1	12	58	79	129	92	87	164	203	81	80		7.00%
LU	4	1	16	8	25	27	65	71	71	77	81	75	80	63	60		15.20%
LV	43	38	68	50	64	92	85	104	110	139	126	116	162	167	142		30.30%
MT	79	93	97	92	106	98	97	103	114	153	158	150	161	137	151		34.42%
NL	5	2	6	2	9	6	11	10	37	39	38	34	33	28	35		21.37%
PL	207	223	373	412	380	455	522	569	569	529	509	520	531	517	453		75.53%
PT	72	62	73	70	91	88	102	119	113	118	113	109	107	95	102		44.61%
RO	340	436	575	549	545	592	587	689	729	818	711	627	694	558	509		78.75%
SE	65	63	52	48	46	54	73	82	41	45	58	28	8	2	11		11.14%
SI	44	41	55	52	55	76	81	87	64	102	68	10	32	149	144		36.43%
SK	32	28	36	37	56	71	79	92	93	106	100	107	136	130	112		40.59%

Source: ECB Statistical Data Warehouse.

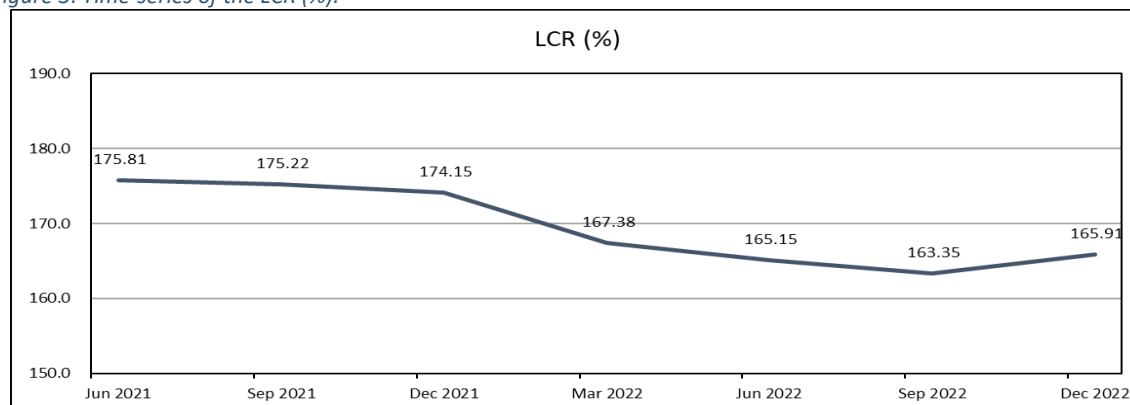
25. This should be read together with the high share of sovereign bonds in the liquidity buffer of EU banks as presented in the table. This share is expected to increase after TLTRO III matures. Moreover, attention is paid to the concentration of exposures of banks in each member state in sovereigns of each member state. Overall, EU institutions concentrate the majority of their government securities portfolios in those issued by the government of the country where they are located. However, there are significant investments in sovereigns issued by other EU central governments and non-EU governments.

2.3 LCR evolution and estimated projections - methodology

2.3.1 LCR evolution

26. Since the end of the COVID 19 period, EU banks have on average reported strong and stable levels of liquidity buffers and the LCR, with LCR values largely exceeding 100% (see Figure 3).

Figure 3: Time-series of the LCR (%).

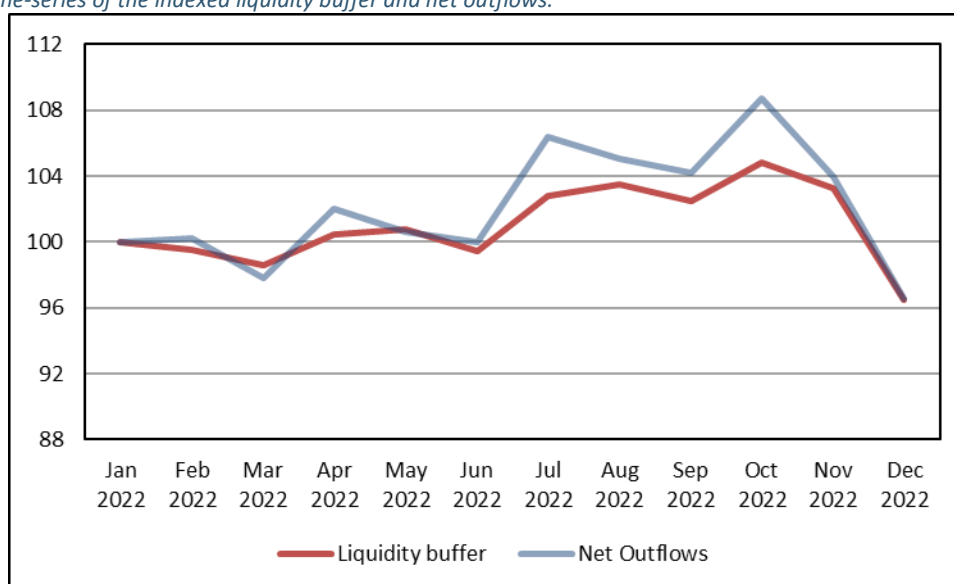


Source: EBA calculations from COREP C.76.

27. The EU LCR level experienced a slight increase during the last quarter of 2022. However, the overall liquidity buffer dropped by 6%, more pronouncedly compared to the first three quarters of the year. This reduction, especially relevant in the last two months of the year, can be related to the TLTRO prepayments⁶ in November and December 2022 compensated partly by liquid collateral released and, in some cases, by net additional funding issued.

28. Nevertheless, the EU LCR level increased thanks to a reduction of the net outflows during the fourth quarter by 7%, again specially strongly in November and December and beyond the reduction of the liquidity buffer, triggered by a decrease of the outflows reported, mainly from non-operational deposits.

Figure 4: Time-series of the indexed liquidity buffer and net outflows.



Source: EBA calculations from COREP C.76.

2.3.2 LCR estimated projections – Methodology

Sample

29. The analysis made by the EBA is based on projections of June 2022 COREP and FINREP of a sample of 832 banks, out of which 239 are O-SIIs, for which the latest and all necessary data is available. No further specification of the sample is made. The banks in the sample represent 85% of total assets in EBA’s EUCLID sample as of 30 June 2022.

⁶ The ECB announced on 27 October 2022 the change of the interest rate on TLTRO III operations that would apply from 23 November. It was also announced the introduction of a number of reference dates for voluntary early repayment of the outstanding EUR 2.1 Tr at that time. In the November 2022 around 14% of the total outstanding amount TLTRO III at that moment was prepaid. An additional approximately 21% was prepaid in the December window. Circa 3% was then prepaid in January 2022. Around 2% was paid in February 2022.

Central bank funding repayment

30. As far as the LCR projections were concerned, the EBA estimated the impact of the upcoming central bank funding repayment (mainly ECB's TLTRO) up to June 2023 and December 2024 as follows:

- The amount of repos to be repaid to the central bank that was outstanding in June 2022 was deducted from the LCR liquidity buffer. The amount of repos with the central bank was estimated by using the liabilities with central banks as reported in the NSFR template.
- The collateral encumbered to these transactions and issued by central governments is deemed as incoming liquid assets when repaying the central bank funding. Information on collateral encumbered in repos with central banks is provided in the asset encumbrance template.
- At the date of elaboration of this report, TLTRO by EUR 1.3 Tr remain outstanding. Prepayments made since October 2022 do not alter the final conclusions of this analysis which focuses on estimating the LCR and NSFR values of banks after central bank funding repayment, before considering banks' funding plans, in which they may envisage to attract additional funding to replace TLTRO.

Sensitivity analysis

31. The EBA assessed potential various decreases of the market value of the liquidity buffer for the June 2022 data. The EBA focused on level 1 central government bonds. Basically, because no haircut applies to them in the LCR and an adjustment to its market value is conceivable in the context of increasing interest rates, tightened monetary policy and possible movements in the country risk premium.

32. The EBA assessed potential different impacts of additional margins to be pledged to cover potential additional negative market value changes of derivatives applied to the June 2022 data. A potential combination of factors like the increase of interest rates, a higher country risk premium and general economic recession aspects might negatively impact the collateral and market value of the derivatives. This would mean that additional collateral might need to be posted and would be reflected with additional outflows.

33. Similarly, additional collateral in repos in private markets were considered due to a lower value of the collateral underlying for the same reasons cited above.

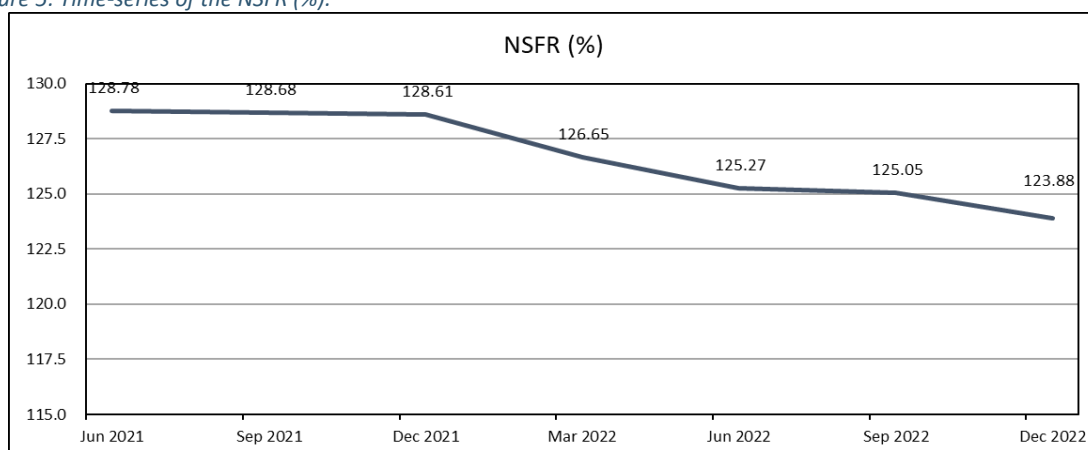
34. The rest of the LCR components are considered to remain constant.

2.4 NSFR evolution and projections - methodology

2.4.1 NSFR evolution

35. On average EU banks report stable NSFR levels higher than 100% (see Figure 5). The decrease of the NSFR level during the last quarter 2022 considers the maturing TLTRO III until June 2023. On 31 December 2022 EUR 0.7 Tr were maturing by 28 June 2023, below six months, and their computation as ASF was reduced from 50% to 0%. As of 31 December 2022, still EUR 0.6 Tr were outstanding, the majority of which still computes at 100% with a residual maturity above 1 year.

Figure 5: Time-series of the NSFR (%).



Source: EBA calculations from COREP C.84

2.4.2 NSFR projections – Methodology

Sample

36. The same sample as for the LCR was used.

Central bank funding repayment

37. The EBA has taken in its analysis the reported NSFR values referring to 30 June 2022 as a basis and subsequently adjusted them considering that the full amount of the outstanding central bank funding is repaid – i.e., they are projected to end 2024.

38. NSFR values are recalculated by adjusting the available stable funding and required stable funding reported. The available stable funding, in the numerator, becomes reduced. Repaid liabilities will not compute anymore as stable funding. The required stable funding, in the denominator, becomes reduced. Lower RSF factors will apply because the collateral will become unencumbered when liabilities are repaid.

39. The rest of the NSFR components are considered to remain constant.

3. Market analysis for potential funding alternatives

40. TLTRO-III repayments will be presumably done through (a combination) of four elements:

- Using excess liquidity (e.g., deposits at central banks),
- Raising more deposits,
- Issuing covered bonds and
- Issuing senior preferred debt.

41. Securitisations are expected to have a minor role given its historical low issuance levels.

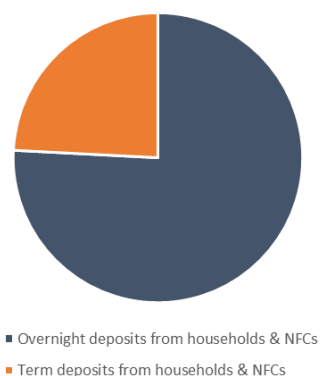
42. Debt ranking below senior preferred would not be a rational replacement given its comparatively high cost. Nonetheless, given the need of some banks to build up their MREL buffers, this might also indirectly contribute to replace central bank funding.

43. Repos could be another refinancing option but given its usually short-term maturity, they are a relatively imperfect substitute of TLTRO III.

3.1 Capacity to raise additional deposits.

44. As of December 2022, EU banks have EUR 9tn of overnight and EUR 2.9tn of term NFC and household deposits.

Figure 6: Overnight and term deposits (as of December 2022).

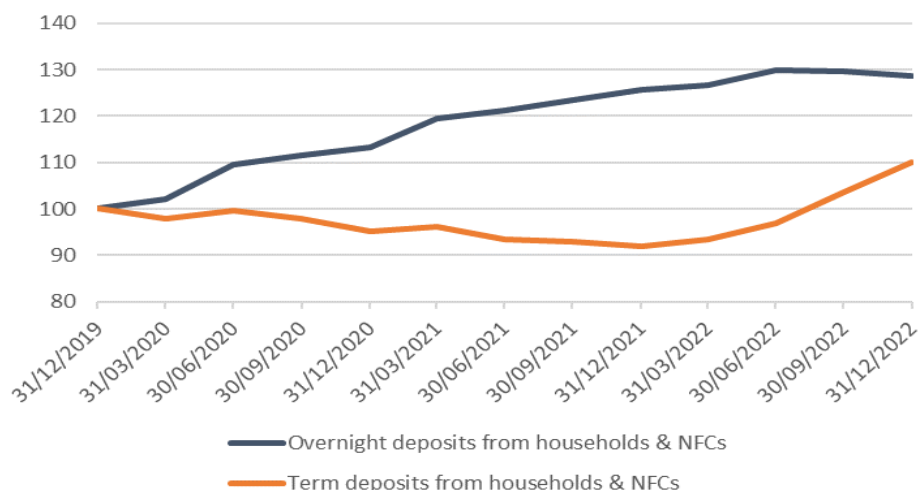


Source: Supervisory reporting.

45. Despite the low and negative interest rate environment, overnight deposits have continuously increased over the past few years. However, the increase recently stopped. Term deposits have

in contrast only started to rise in recent dates. From June 2021 to December 2022, overnight deposits rose by 6.2% while term deposits rose by 18%.

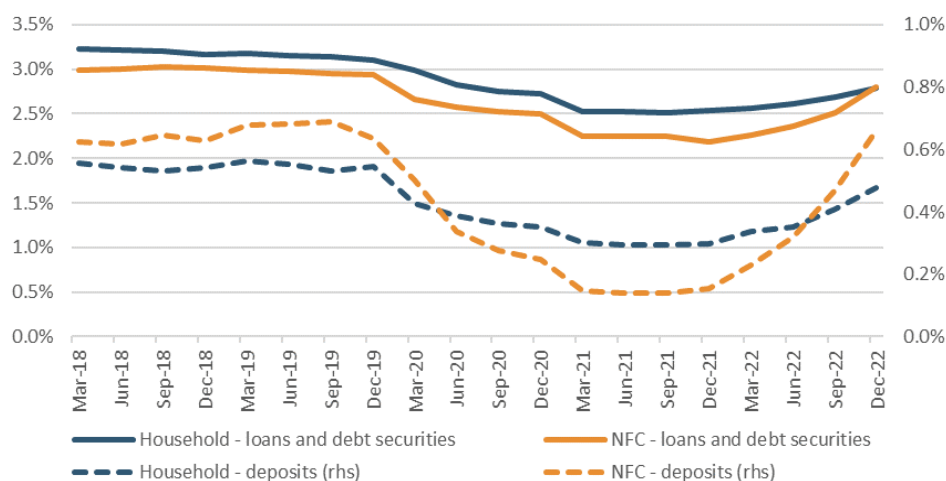
Figure 7: Evolution of overnight and term deposits (Indexed as of December 2018 – i.e., Dec. 2018 = 100).



Source: Supervisory reporting.

46. The cost of deposits has increased over the past year, by around 18bps for household deposits and by around 50bps for NFC deposits.

Figure 8: Cost of NFC and HH loans and deposits.



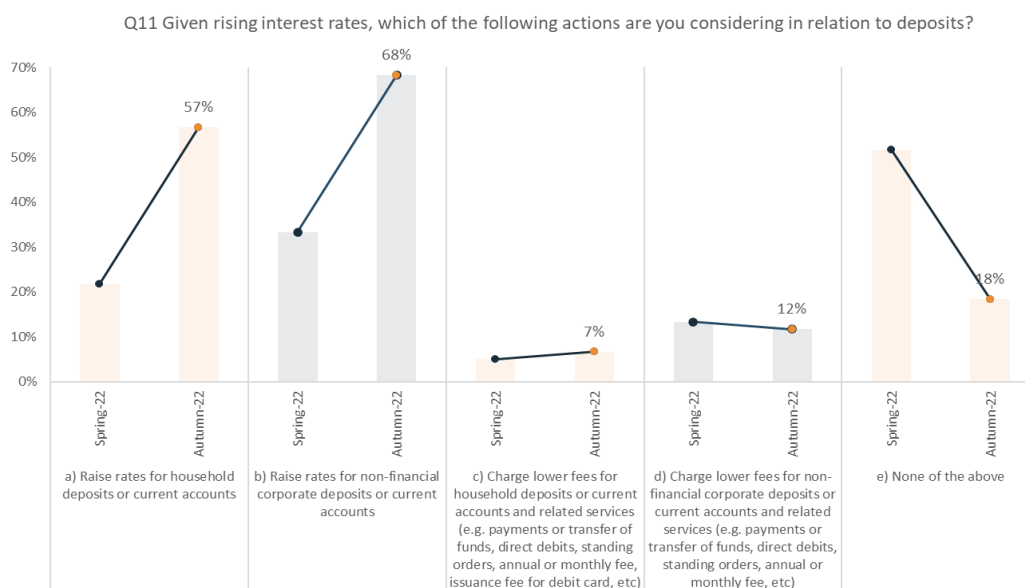
Source: Supervisory reporting.

47. Going forward, the evolution of the volume of deposits is unclear. On the one hand, the growth of deposit volumes might be constrained by decreasing real incomes in an environment of continued heightened inflation. Households and some corporates may increasingly use deposits to cover growing expenses in an inflationary environment. On the other, higher rates and market volatility might lead clients to move their savings from investment funds, pension funds, etc. to term deposits. According to banks' funding plans, deposits from households and NFCs should grow moderately in the period 2022-2024, by 3.1% on average for deposits from households

and 4.5% for deposits from NFCs. Yet these deposit growth expectations may no longer be up to date as they were made before inflation strongly increased, monetary policy was meaningfully tightened, and the Russian aggression broke out.

48. Moreover, if banks embark on a strong competition for deposits, this might result in further increases in deposit rates.

Figure 9: Banks responses to the RAQ (Q11).

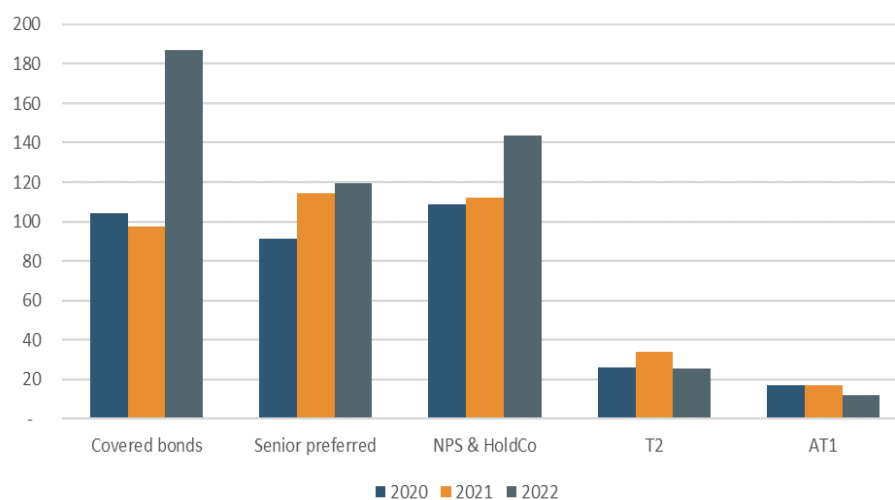


Source: RAQ Autumn 2022.

3.2 Capacity to raise additional covered bonds and senior preferred debt.

49. Banks have significantly increased covered bond and senior preferred issuance in 2022.

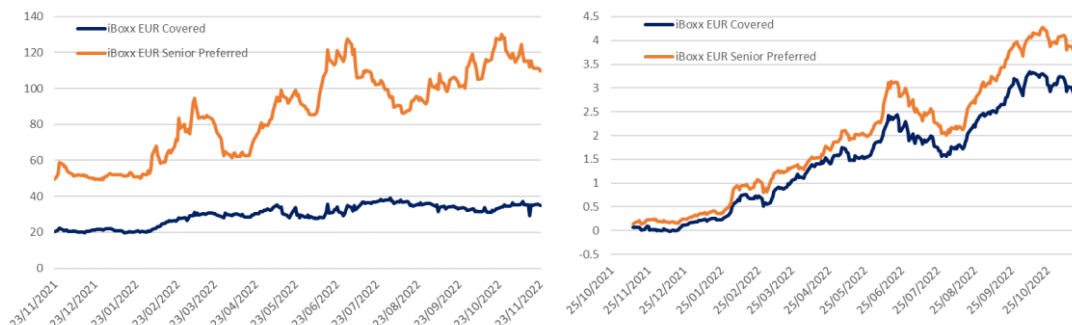
Figure 10: Issuance volumes of EU/EEA banks' debt and capital instruments in the EU, full year 2020 - 2022 (EUR bn).



Source: Dealogic.

50. The increase in issuance has taken place despite a substantial increase in absolute yields and, in the case of senior preferred debt, also on spreads.

Figure 11: iBoxx EUR Covered and Senior Preferred: ASW spreads (bps, left) and yields (%), right).



Source: IHS Markit.

43. According to banks’ funding plans,⁷ over 2022-2024, they plan to increase their total long-term funding by 11.4%, reaching over EUR 4.1 Tr in 2024. The total volume of unsecured debt securities issued (including senior bail-in, T2, AT1 and other subordinated liabilities) is expected to increase strongly by 14%, while the total volume of secured funding is forecast to grow by 8.1%. Yet these expectations based on funding plans were made before the pricing of debt instruments strongly increased in line with rising inflation and monetary tightening, and before the Russian aggression.

⁷ [Funding Plans Report, September 2022.](#)



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