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# Liquid Insight

# ECB operational framework review

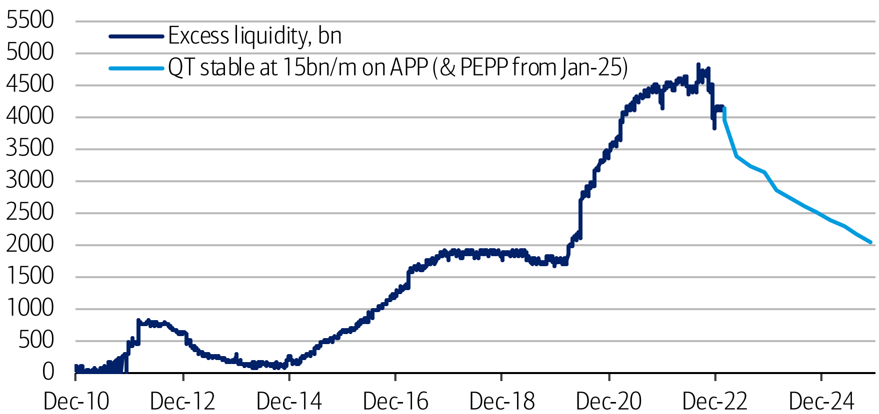
## Key takeaways

- The ECB balance sheet reduction is in full speed as QT starts today and TLTROs mature
- The ECB's framework review on how to steer front-end rates will help determine the end point but also the extra tools needed
- The path for front-end rates could indeed be a volatile one. Reserves could become scarce earlier than currently anticipated

## *By* Sphia Salim

**Chart of the day: Evolution of excess liquidity, with benign scenario of only partial QT**

Excess liquidity in the Euro banking system could drop to €2.5tn by end of 2024, and €2tn by end of 2025, even without an acceleration of QT (assuming no change in govt & foreign CB deposits)




**Source:** ECB, BofA Global Research (*) we assume that QT starts in PEPP in Jan-25, at a run rate of 15bn/m, like for PEPP

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## ECB embarks on QT, but needs more tools ahead

As ECB Quantitative Tightening (QT) officially starts today, we discuss a parallel task that the Central Bank is embarking on, namely a review of the framework to steer front-end rates. The review will inform about the medium-term outlook for QT/ targeted size of ECB's balance sheet, as it helps determine the desired long-run liquidity regime (one of ample or of scarce reserves), but it will also be relevant to select the tools needed to manage any unexpected market rate moves on the way. We think the path of balance sheet reduction and decline in excess liquidity may not be a straight one for front-end rates.

Near-term, the main risk for front-end rates relates to a deterioration in the cash/collateral imbalance esp. if the ECB makes further reductions in the remuneration of government and foreign central bank deposits. However, the US experience and UK surveys suggest that reserve scarcity may happen earlier than previously envisaged, pointing to upside risks for front-end EUR rates from next year already.

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## Current ECB plan: Clear desire to shrink the balance sheet

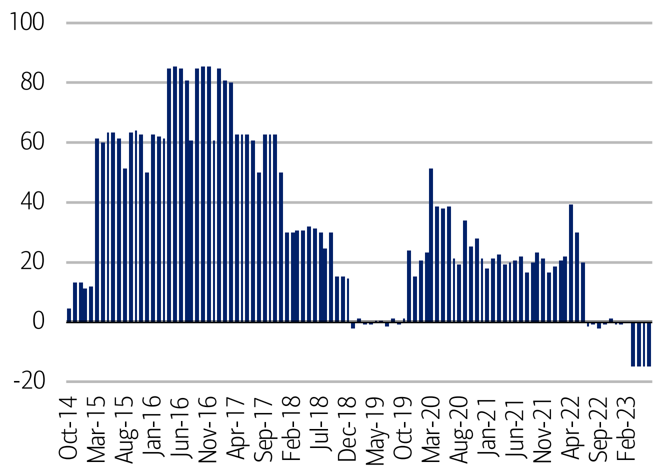
As it sets out to raise rates into the restrictive territory, the ECB expressed its intension to also reduce its balance sheet – ECB's Villeroy De Galhau's comments below. Last year already, it changed the terms of its Targeted Long Term Repo Operations (TLTROs III) to incentivize banks to repay their borrowings early (ie before their set maturities). This resulted in c. €850bn of early repayments in a span of four months (Nov22-Feb23).

> *"It would not be consistent to keep a very large balance sheet for too long in order to compress the term premium, whilst at the same time contemplating tightening policy rates above neutral."*
>
> *"Rising remuneration on very large excess reserves may alter the transmission of the desired tightening through the bank channel."* Villeroy De Galhau, Oct-22

The ECB's balance sheet reduction will continue apace, as QT officially starts today at a rhythm of €15bn/month over Mar-Jun (Exhibit 1); more importantly, €525bn of TLTROs will expire between March (€32bn) and June (€494bn), with the potential for extra early repayments (Exhibit 2).

**Exhibit 1: Monthly net ECB purchases under APP(*)**

The ECB has announced QT to the tune of 15bn/month from Mar-23 to Jun-23




**Source:** ECB, BofA Global Research. (*) Asset Purchase Programme

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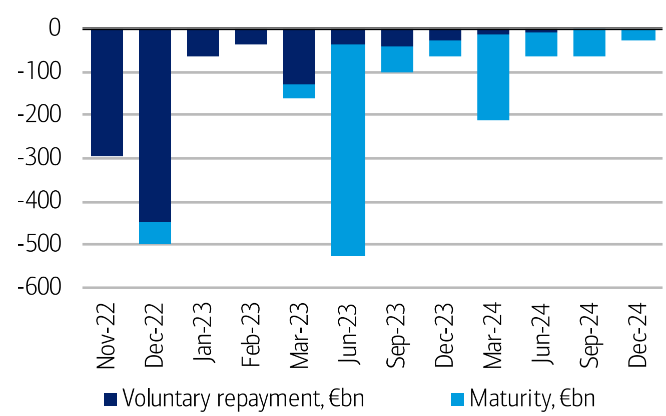
**Exhibit 2: ECB TLTRO early repayments & maturities (BofA projections for future early repayments)**

The ECB's balance sheet will shrink by another €525-690bn due to TLTRO repayments in Mar-Jun 2023. More will follow, albeit in smaller increments




**Source:** ECB, BofA Global Research

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Overall, we expect the ECB's balance sheet to reach €7.1tn by end of 2Q, down from its peak of €8.8tn in mid-2022, ie a 20% reduction in a span of a year (Exhibit 3). We estimate that this will take excess liquidity in the banking system to below €3.5tn by June (Chart of the Day), even if there is a c.100bn reduction in government or foreign central bank deposits at the ECB between now and then (such reduction would mechanically raise the excess liquidity in the banking system) – Exhibit 2.

But we believe the focus is quickly shifting to the path for the balance sheet and excess liquidity reduction beyond June, for three reasons: (1) the ECB will soon have to make a decision on the pace of QT beyond June, with several hawkish voices calling for an acceleration in the APP portfolio roll-off, (2) the outlook for government and foreign CB deposits at the ECB (and thus excess liquidity) will depend on any additional change to their remuneration, beyond a reduction from €str to €str-20bp announced on 1 May, and (3) the ECB has embarked on a review of its framework for steering front-end rates, aiming to conclude it by year-end.

## ECB operational framework review: three key questions

We think there are three fundamental questions the ECB will aim to address in its operational framework review this year:

(1) Will it target to keep the current floor system for front-end rates (ie remain in a regime of ample reserves) or will it want to return to the corridor system (with reserve scarcity, akin to pre-financial crisis, when the ECB was ensuring Eonia traded at or very close to the Refi rate by ensuring close to zero excess liquidity in the system)?

(2) If it decides on maintaining the floor system, what would be the right estimate for the minimum amount of excess liquidity that would ensure a regime of ample reserves, without spikes in overnight rates?

(3) In both cases, what tools should the ECB consider deploying to ensure that, on the one hand, core repo rates do not de-anchor to the downside on renewed cash/collateral imbalance, and on the other hand, €str and/or Euribor rates do not surge during the balance sheet reduction process.

**Regime decision is not 100% straightforward**

While the Fed and BoE appear to have chosen to retain a target of ample reserves, the ECB appears keen to debate a potential return to a more reserve scarce environment as it sees some drawback in the abundant reserves/floor system (see ECB working paper: "Demand for central bank reserves and monetary policy implementation frameworks: the case of the Eurosystem" – Sep-21):

- Reduced reliance on money markets: "It is now easier for [banks] to hold a precautionary buffer of excess liquidity to address liquidity fluctuations rather than relying on money markets for their liquidity management" -> "In the long-run, this may affect prudent liquidity management; market infrastructure; and possibly also knowledge of money market transactions, with fewer market-makers. Such hysteresis may in turn reinforce the need for an additional liquidity buffer, contributing to a less efficient distribution of reserves, which in turn may lead to an additional factor in the demand for reserves."

- Substitution of bonds for reserves: "Holding reserves can even be relatively attractive from a risk/return-investment perspective, given that money market rates and yields of liquid assets such as short-term government bonds have declined below the deposit facility rate." We would add that reserves may also be deemed more attractive from a transaction cost perspective (no need to sell the bonds).

But a corridor system is generally seen as more complex, given the regulatory and structural changes that have taken place since the financial crisis. The same ECB working paper summarizes the challenges of the corridor system as follows:

"A well-functioning corridor system requires an efficient distribution of reserves in the system. If banks face money market frictions, such as regulatory obstacles, perceived liquidity or counterparty risk or – in the case of secured transactions – collateral shortages, this could hinder the efficient distribution of reserves and increase the volatility of money market rates. Moreover, in operating a corridor system, Minimum Reserve Requirements (MRRs) should constitute the leading factor in the demand for reserves. If instead, some banks have a desire to hold a significant precautionary buffer of reserves, exceeding the enforced MRR, other banks would have a shortage. This would require the central bank to conduct fine-tuning of operations more often or accept higher volatility."

**Min level of excess liquidity in ample reserve regime: Maybe > than thought**

Question (2) above is one of those that the ECB will be debating at its money market contact group (MMCG) meeting this week. Indeed, the agenda includes the following discussion point: "What would be the level of excess liquidity to trigger concerns regarding secondary market functioning?"

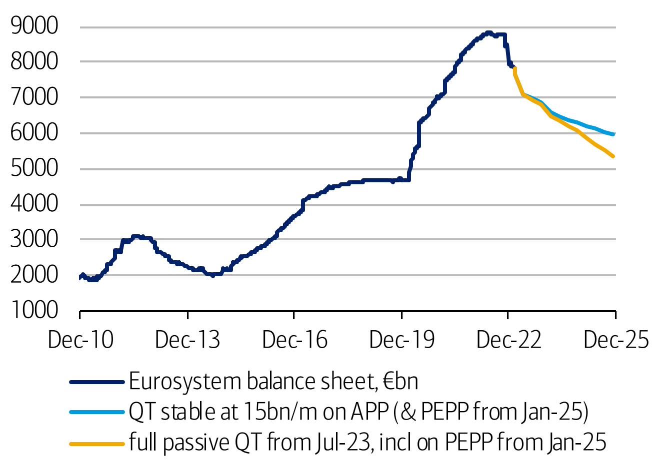
The experience from the US, surveys from the BoE, and analysis from ECB staff all point to significant uncertainty around the minimum amount of excess liquidity to maintain a floor system/ stay in an ample reserve regime (floor required excess liquidity – FREL).

**It is likely this minimum level has increased in the past decade.** Specifically, in the Euro-area, front-end rates may become volatile and subject to spikes well before we reach the €1trillion excess liquidity that triggered an upward shift in Eonia in 2014-16.

- In the US, the Fed has acknowledged the need for a buffer relative to the level of reserves reached in 2019, when overnight and repo rates spiked. It is setting a target of 9% of GDP for end point in reserves, vs. a level of 7% back in 2019. However, recent working papers would suggest the need for an even larger buffer (eg "Reserve Demand and Quantitative Tightening" – from David Lopez-Salido and Annette Vissing-Jorgensen, Federal Reserve Board, argue that Reserves+ONRRP should stay above 13.5% of GDP to remain conservative).
- In the UK, the BoE just published the result of a survey of their commercial counterparts: "What do we know about the demand for Bank of England reserves?" (22-Feb-23). The result is the same: The minimum quantity of reserves needed by UK banks may now be around £325-480bn, compared to an estimated level of £150-250bn back in 2018. They find that the increase is consistent with the higher amount of deposits held by banks and their level of risk aversion.
- In EUR, the above working from the ECB ("Demand for central bank reserves and monetary policy implementation frameworks: the case of the Eurosystem" Sep-21) also lists several factors that would point to the need for a higher level of reserves. LCR requirements are a key consideration. We would also note comments by ECB's Schnabel regarding the dispersion of excess liquidity and thereby of rates: "After 2015, excess liquidity was primarily driven by the Eurosystem's large-scale asset purchases. Although excess reached new highs with the implementation of asset purchases and financial stress remained at relatively low levels, the dispersion index rose substantially in 2015 and 2016." We believe this is particularly relevant as the bulk of the reduction in ECB B/S and excess liquidity over 2022-24 will be a result of TLTRO repayments, leaving greater dispersion of excess liquidity ahead.

**Exhibit 3: BofA scenarios for evolution of ECB balance sheet**

Full passive QT (inc. in PEPP from Jan-25) to take B/S close to 5tn by Dec'25




**Source:** BofA Global research, ECB

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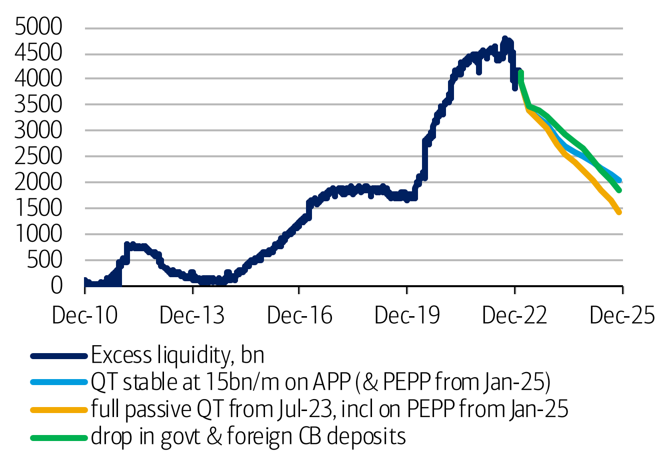
**Exhibit 4: BofA scenarios for evolution of excess liquidity**

A decline in govt & foreign deposits may partly offset full passive QT, but excess would still fall sub €2tn by end of 2025




**Source:** BofA Global research, ECB

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Overall, we are concerned that the minimum level of reserves to contain volatility in front-end rates is now, if anything, above the €2tn outstanding in 2017-2019. This is the period LCR was being fully implemented, and is therefore used as a reference for a comfortable level of excess. But banks' deposit base has grown by 20% since then.

Based on our scenario analysis in Exhibit 4, we therefore see risks that the ECB may have limited room, to accelerate QT much in 2024-25. A full passive QT from Jul-23 could drive excess liquidity down below €2.5tn in Sep-24 already. A reduction in government and foreign CB deposits at the ECB would delay this, but just to 1Q25. The ECB framework review may highlight that the timeline is tighter than currently thought.

**Need for additional tools to limit volatility on both sides of the rates market**

The ECB's desire to normalize the remuneration of government and foreign CB deposits (towards 0% as previously in place under positive Depo rate environment) has been a concern in terms of the potential extra cash/collateral imbalance this can create in the near-term. While the ECB is now considering only a gradual return to 0% (with a first reduction in the remuneration on 1 May, from €str to €str-20bp), we are already witnessing a significant decline in foreign CB deposits, and argue that a tool to limit potential richening of short-dated paper in repo vs. €str would be useful for the ECB to deploy, especially as the environment could turn particularly risk averse (with a bid for high-quality paper) in 2H. ECB bills, term deposits or an RRP open to nonbanks are the options the ECB may consider.

Term deposits could also be relevant if the ECB considers moving to a corridor system, or even for the purpose of complementing the Transmission Protection Instrument (TPI) with a sterilization tool.

But, if it aims to stay in a regime of ample liquidity, and in light of uncertainty around the level of FREL, the ECB may find it useful to:

(1) Maintain important flexibility on the conduct of QT, not only in case of sudden liquidity shocks, but also to address potential volatility in EGB markets when liquidity dries up.

(2) Provide the market with new versions of Long Term Repo Operations (LTROs) that would bear less stigma than the current 1W MRO and 3M LTRO. Having the possibility to provide more liquidity through those, while conducting QT could also help alleviate the risks of negative carry born by that large APP stock in a context where reserves are large and the Depo rate is elevated. Removing the stigma of these LTROs will also be helpful in ensuring that banks can continue with HQLA conversion (from low rated collateral to ECB reserves)- see ECB working paper: "Availability of high-quality liquid assets and monetary policy operations: an analysis for the euro area", Feb-19.

**Exhibit 5: Common acronyms/abbreviations used in our Europe Economics Research reports**

This list is subject to change

| Acronym/Abbreviation | Definition | Acronym/Abbreviation | Definition |
|---|---|---|---|
| 1H | First Half | IT | Italy |
| 2H | Second Half | Jan | January |
| 1Q | First Quarter | Jul | July |
| 2Q | Second Quarter | Jun | June |
| 3Q | Third Quarter | lhs | left-hand side |
| 4Q | Fourth Quarter | m | month |
| ann | annualized | MA | Moving Average |
| APP | Asset Purchase Programme | Mar | March |
| Apr | April | MBM | Meeting-by-meeting |
| AS | Austria | mom | month-on-month |
| Aug | August | Mon | Monday |
| BdF | Banque de France (Bank of France) | MPC | Monetary Policy Committee |
| BE | Belgium | MWh | Megawatt-hour |
| BEA | Bureau of Economic Analysis | NGEU | NextGenerationEU |
| BLS | Bank Lending Survey | NE | Netherlands |

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This list is subject to change

| Acronym/Abbreviation | Definition | Acronym/Abbreviation | Definition |
|---|---|---|---|
| BoE | Bank of England | Nov | November |
| BofA | Bank of America | NRRP | National Recovery and Resilience Plan |
| BoI | Banca d'Italia (Bank of Italy) | NSA | Non-seasonally Adjusted |
| BoJ | Bank of Japan | OAT | Obligations assimilables du Trésor |
| BoS | Banco de España (Bank of Spain) | OBR | Office for Budget Responsibility |
| bp | basis point | Oct | October |
| BTP | Buoni Poliennali del Tesoro | OECD | Organisation for Economic Co-operation and Development |
| Buba | Bundesbank | ONS | Office for National Statistics |
| c | circa | p | preliminary/flash print |
| CA | Current Account | PBoC | People's Bank of China |
| CPI | Consumer Price Index | PEPP | Pandemic Emergency Purchase Programme |
| CSPP | Corporate Sector Purchase Programme | PMI | Purchasing Managers' Index |
| d | day | PSPP | Public Sector Purchase Programme |
| GE | Germany | PT | Portugal |
| Dec | December | QE | Quantitative Easing |
| DS | Debt sustainability | qoq | quarter-on-quarter |
| EA | Euro area | QT | Quantitative Tightening |
| EC | European Commission | RBA | Reserve Bank of Australia |
| ECB | European Central Bank | RBNZ | Reserve Bank of New Zealand |
| ECJ | European Court of Justice | rhs | right-hand side |
| EFSF | European Financial Stability Facility | RPI | Retail Price Index |
| EGB | European Government Bond | RRF | Recovery and Resilience Facility |
| EIB | European Investment Bank | SA | Seasonally Adjusted |
| EMOT | Economic Mood Tracker | SAFE | Survey on the access to finance of enterprises |
| EP | European Parliament | Sat | Saturday |
| SP | Spain | Sep | September |
| ESI | Economic Sentiment Indicator | SMA | Survey of Monetary Analysts |
| ESM | European Stability Mechanism | SNB | Swiss National Bank |
| EU | European Union | SPF | Survey of Professional Forecasters |
| f | final print | Sun | Sunday |
| Feb | February | SURE | Support to mitigate Unemployment Risks in an Emergency |
| Fed | Federal Reserve | S&P | Standard & Poor's |
| FR | France | Thu | Thursday |
| Fri | Friday | TLTRO | Targeted Longer-term Refinancing Operations |
| GC | Governing Council | TPI | Transmission Protection Instrument |
| GDP | Gross Domestic Product | TTF | Title Transfer Facility |
| GNI | Gross National Income | Tue | Tuesday |
| GR | Greece | UK | United Kingdom |
| HICP | Harmonised Index of Consumer Prices | US | United States |
| HMT | His Majesty's Treasury | WDA | Work-day Adjusted |
| IMF | International Monetary Fund | Wed | Wednesday |
| INSEE | National Institute of Statistics and Economic Studies | y | year |
| IP | Industrial Production | yoy | year-on-year |
| IR | Ireland | ytd | year-to-date |
| PCA | Principal Component Analysis | EGB | Eurozone Governmeny Bond |

**Source:** BofA Global Research

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# Notable Rates and FX Research

- **Global Rates, FX & EM Year Ahead 2023 –Year Ahead 2023: Pivot ≠ Peak**, 20 Nov 2022
- China reopening vs. US reacceleration, **Global FX Weekly**, 24 Feb 2023
- Rudderless rates, **Global Rates Weekly**, 24 Feb 2023
- USD buying slows despite no landing, **Liquid Cross Border Flows**, 20 Feb 2023

# Rates, FX & EM trades for 2023

For a complete list of our open trade recommendations, as well as our trade recommendations closed over the past 12 months, see the reports below:

Global FX weekly: China reopening vs. US reacceleration 24 February 2023

Global Rates Weekly: Rudderless rates 24 February 2023

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