Tuomas Välimäki: Central bank liquidity and balance sheet - navigating the shallows after the high tide of liquidity

Speech by Mr Tuomas Välimäki, Board Member of the Bank of Finland, at the Danske Bank Markets Conference "Navigating tomorrow", Copenhagen, 26 November 2025.

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Presentation accompanying the speech

It's a real pleasure to be back in Copenhagen, for the third time this year.

Many thanks to Danske Bank for organizing such a timely and topical event. I must say, I'm delighted to see that Scandinavian banks are becoming ever more ambitious with these seminars, while maintaining excellent taste in their choice of keynote speakers. I'm truly honored to be here with you.

The theme of this seminar, *Navigating Tomorrow*, couldn't be more fitting - especially here in Denmark, a country with a long tradition of maritime navigation, trade and occasionally loosing fleets in storms. Central bankers, too, are very fond of maritime analogies. Perhaps because in the past 15 years we have so often had to navigate uncharted waters.

As you saw from my title, today I'll talk about liquidity and the Central Bank balance sheet. It's a story of expansion, abundance, and a gradual return to a new normality. You Danes know this pattern well. It's basically the lifecycle of Smørrebrød: first abundance, then immediate regret, and then well, Ozempic.

Back to liquidity. If you listen carefully, today's talk will help you navigate the money markets not only tomorrow, but for the next few years.

The high tide of central bank liquidity is receding. But don't worry, we are not sailing straight into the shallows at full speed.

Let me start with the Eurosystem's balance sheet.

During the financial crisis and again during the pandemic, central bank balance sheets became, if not a topic at the family dinner table, at least something the financially literate public started paying attention to. These were years when central banks globally, including the ECB, launched measures at unprecedented scale.

These crisis measures have lapsed, but they are still visible in our oversized balance sheet. In many ways, the Eurosystem remains suspended between two liquidity worlds: the crisis world and the new normal.

Let me stress: I'm not here to speak about monetary policy *stance*. I'll leave that to my colleague, Governor Boris Vuji. I'm sure he'll offer a well-thought and up-to-date policy outlook later today.

Instead, I want to talk about the "plumbing": the art, science and practice of actually steering the market rates to the policy target.

I will highlight what's happening right now, and more interestingly, where I think we should go next.

And here comes the usual disclaimer: these are my views, not necessarily those of the Eurosystem - although, hopefully, they will be, so ignore me at your own risk. For additional reading, I recommend Isabel Schnabel's excellent speech on this topic - and of course double-checking what I say today on the Bank of Finland's website.

I will also touch lightly on payments and digital currencies, since - as you heard in the previous presentation - these topics are increasingly intertwined.

With that, let's lift anchor and move to the first topic.

Monetary Policy Implementation since launch of the euro

At the euro's launch in 1999, our framework was elegant in its simplicity. The banking sector operated at a liquidity deficit, and we provided exactly the liquidity needed through our weekly Main Refinancing Operations (MRO). No more, no less. Interbank markets redistributed liquidity efficiently, and the short-term market rates followed the MRO-rate closely.

And they did. Hardly anyone outside a central bank noticed. This is the perfect monetary policy implementation outcome: *success is when no one notices you exist*.

But by the end of the 2000s, the framework had to be adjusted again and again as we faced crisis after crisis. Unconventional measures became not only part of the toolkit, at times they were part of the euro's survival strategy.

The idea of providing specific amounts of liquidity was no longer feasible when interbank markets stopped functioning as before. Under these circumstances, we introduced fixed-rate full allotment (FRFA): banks could obtain essentially unlimited liquidity at a fixed rate, provided they had eligible collateral. This served us well.

And although unconventional measures may now feel like water under the bridge, it was only in March 2024 that we formalized the key lessons in our operational framework review[1].

We confirmed:

- the deposit facility rate, the lower bound of the interest rate corridor, as our main instrument to steer short-term money market rates;
- FRFA as the permanent procedure to be applied in our short-term credit operations also in the future;
- A mix of other liquidity-providing instruments, including structural bond portfolios and longer-term credit operations;

And yes, we let the crisis-era portfolios continue to run off.

Let's look at what this means.

Balance Sheet remains above pre-crisis levels

The Eurosystem's balance sheet expanded from around 1 trillion euros in 2007 to almost €9 trillion in 2022. It has since declined to around €6 trillion.

With inflation at 2%, inflation outlook around 2%, and the nominal policy rate at 2%, one may say our monetary policy is about as neutral as it can get - assuming the natural real rate is close to 0%.

The balance sheet, however, is not neutral. Even after unconventional credit operations matured and asset purchases continue to run off, our balance sheet remains far above pre-crisis levels and above the new normal.

What is the "normal" size of a central bank balance sheet? Unlike interest rates, we do not have a century-long chart to consult. Here, I find the concept of *natural balance sheet size* as useful.

For a global reserve currency issuer like the ECB, the natural size is liability driven. It originates from the demand for banknotes and reserve requirements. The more people hold cash - or why not digital euros in the future - the larger the liquidity deficit and the larger the natural balance sheet.

This deficit is filled with monetary policy assets. When the marginal unit of liquidity comes from short-term credit operations, their rate sets the focal point for monetary policy and the starting point of the yield curve.

Central banks may also choose to exceed the natural level to fulfill their mandates - especially during crisis. After hitting the effective lower bound, we had to move further along the yield curve and increase monetary policy accommodation with large scale asset purchases. The optimal balance sheet grew beyond the natural level. The asset side began to dominate, and the deposit rate became the focal point for monetary policy. We ended up with a floor system.

In normal times before the 15-year long string of crises, optimal and natural sizes aligned. Hence, the natural balance sheet gives a direction for balance sheet normalization.

Floor Required Excess Liquidity (FREL) maintains rates close to the Deposit Facility Rate (DFR)

However, in today's post-crisis world, a new concept matters: **FREL - floor-required excess liquidity**. This is the amount of liquidity i.e. central bank reserves needed to keep short-term money market rates close to the policy rate under a floor system.

Estimating FREL today is a bit like estimating how many pastries will be left at the end of a Danish breakfast buffet: thanks to the regulatory changes, changes in payments and banks having learned a lesson from crises, history is no longer a reliable guide. Over Eurosystem's almost 30-year history, estimates have over time ranged from €8 billion to €2 200 billion. So, we need caution.

Structural demand for liquidity i.e. central bank reserves has increased

Here surveys become handy. According to banks, they maintain liquidity buffers for settlement purposes, precautionary, regulatory and signaling reasons - all difficult to quantify individually, let alone combined and across all banks.

Given uncertainty, we monitor multiple indicators: money market activity, participation in our operations, portfolio run-off and investor absorption capacity to meet raising debt supply.

Most estimates suggest the FREL won't be reached for 1-3 years. While time stamps catch the headlines, note that FREL is an uncertain and a moving target. For example, declining demand for banknotes reduces the structural liquidity need, and hence increases the level of excess liquidity we have in the system. Similarly, if the euro area National Central Banks were to increase their financial asset holdings closer to level they had before the global financial crisis, the portfolio reductions needed in our legacy monetary policy portfolios will grow substantially. So, we shouldn't obsess over one number or a date.

The key point: short-term euro rates will follow the ECB's deposit rate closely for some time.

Compare this briefly with the Fed: it decided, as of December, to re-invest all proceeds from maturing bonds. In plain terms, they've halted their balance sheet decline as liquidity conditions have tightened. The Eurosystem is *not* close to that point, and our framework behaves differently even once FREL is reached.

Let me clarify.

Even if we are still in a supply-driven environment, our framework contains a strong *demand-driven* element. The narrow 15-basis-points spread between the MRO and the deposit facility rate incentivizes participation in weekly operations. Once FREL is reached, and rates drift up, banks turn to MROs, which adds liquidity and stabilizes rates.

If the FREL-level was clearly bypassed and banking sector returned to a liquidity deficit, i.e. closer to the natural balance sheet, the MRO-rate again would become the de facto policy rate. A situation we know well.

But it's trickier when liquidity sits between FREL and deficit: enough excess liquidity to prevent a full switch to the demand-driven world, but not enough to anchor overnight rate to the floor. Volatility may emerge.

In the operational framework review last year, the ECB explained that it is ready to accept some volatility in this transition. But if it became excessive, there would be several ways to address it. First, overnight volatility could be reduced by cutting the spread between the policy rates further. Secondly, if needed, structural operations can be used to push aggregate liquidity to one of the steady equilibriums – for example with minimum reserve requirement or by adding liquidity with structural operations.

The latter is the approach chosen by the Fed. They have a similar instrument to our MROs, the standing repo facility (SRF). Recent upward pressure on US repo rates has increased SRF usage - but the Fed sees persistent usage as a signal to **buy assets** to maintain ample reserves.

In short: we allow the framework to shift toward demand-driven operations like the MRO. The Fed, by contrast, expands supply.

Looking ahead: as our portfolios keep shrinking, weekly operations cannot expand indefinitely. At some point, we need *structural liquidity providing operations*.

The March 2024 operational framework review did not specify the division between instruments. That is why the review expected to start next year may be important in facilitating our readiness. And it's not just us central bankers. Banks must also be ready to use the tools as intended.

This takes us to the next part, liquidity provision with different operations.

Future Balance Sheet will have new elements

Every time a central bank buys an asset, extends a loan, takes a deposit, or allows a debt security to mature from its balance sheet, it affects central bank liquidity, i.e. reserves in the banking system. As always, size matters, but so does how you do it.

Theory and evidence show that short-term operations are best for balancing liquidity in banking system once the system again operates in deficit. And when the demand for liquidity is uncertain, fixed-rate full allotment (FRFA) has proven to be the optimal procedure to control market rates.

Even if this is our operating mode already, we can improve our framework. Currently, collateral eligibility is the same across all operations. I believe there is a strong case for introducing a tiered collateral system in the future, when the policy is once again set by liquidity provision instead of taking deposits.

One can make the case that in the liquidity providing key policy operations only high-quality liquid assets (HQLA) should be accepted. This would limit the central bank footprint in the markets by ensuring that, for banks, these operations are purely liquidity management rather than a way to make liquidity transformation or regulatory arbitrage.

If and when the demand in these policy setting operations becomes substantial, we will introduce structural long-term operations (SLTROs). Eventually these operations could inject bulk of the standard central bank liquidity provision.

In contrast to the short-term credit operations, where central bank acts as a rate setter, competitive auctions would make more sense for the structural credit operations.

Setting only the volume, and not the rate, would reduce distortions, price liquidity transformation in a more market-oriented way, and reveal more information on reserve demand. With competitive pricing, the maturity of the structural long-term credit operations could extend even beyond a year. And accepting a broad set of non-HQLA collateral in these operations, like credit claims, would also make sense.

Indexing SLTRO rates to the fixed-rate of policy operations makes sense: the spread determined in a market-based manner at auctions would be added to the average policy rate over the SLTRO maturity. This avoids any unintended signaling about the future stance. In addition, this would also lift interest rate risk away from us.

A demand-driven framework relies on banks participating without stigma. Stigma arises when participation signals weakness - especially when central bank lending is more expensive than market funding.

There are several ways to prevent stigmatization of the central bank operations. First, we never publish the names of the institutions that come to our window. Second, if the collateral set eligible to central bank operations was closer to general collateral repo market, the smaller should the issue with pricing be. This element would be enhanced if the collateral sets were differentiated between the rate setting operations on one hand, and the structural operations and marginal lending facility on the other hand. The higher price in the latter operations would reflect maturity and liquidity transformation rather than the weakness of participating institutions.

We naturally welcome all participation in our credit operations as they are integral part of our framework, and we consider banks' participation as business as usual. We also strongly encourage banks to regularly test the credit operations regardless of their actual liquidity needs.

Another source of liquidity supply is structural asset purchases. Once structural liquidity needs grow sufficiently, it becomes logical to establish a structural securities portfolio alongside SLTROs.

Regarding the modalities of such a structural portfolio, the weighted duration of holdings should most likely be considerably shorter than the duration of the market. This way we reduce market footprint, our interest rate risk and - preserve more fire power for times of crisis.

Now, let me finish with a closely related topic: expected changes in payments landscape.

Central Bank and Digital Payments of the future

Shorter settlement cycles and increased need for continuous real time settlement have lately been major trends with payments. This has an impact on banks' liquidity management and the demand for liquidity. Thus, the Eurosystem is looking into whether our main payment system, T2, could operate longer hours, maybe eventually even on 24/7/365 basis.[2]

Second, TIPS already offers broader operating hours. It allows instant payments at any time, but this means banks need to keep a separate prefunded pot of liquidity when T2 is closed. In an ideal world, banks would earn the deposit rate on all central bank balances, without daily reshuffling between TIPS and T2 and the deposit facility.

Third, the digital euro. Think of it as a digital banknote - a public good for everyday payments with central bank money. Something you might use to buy smørrebrød, gløgg, or anything else highly likely to stain your gloves in December.

At present, no such public digital instrument exists for citizens: only banks and a few other institutions can have accounts in a Eurosystem NCB. Actually, we don't have any pan-euro area payment method that would function for all use cases that retail customers have. And those closest to being ones are not governed by European authorities - a situation that we cannot stand forever.

For banks' liquidity management the digital euro would create similar challenges as I mentioned with TIPS. The impact of this depends on the digital euro's popularity and payment volatility.

At the same time, and I want to be clear on this, banks will remain as the core element of the euro area financial system. Digital euro is not questioning or challenging that. In fact, all necessary design choices for the digital euro will be made with financial stability firmly in mind.

Fourth, as distributed ledger technology (DLT) may transform securities markets by increasing efficiency, reducing settlement risk and enabling 24/7 trading - the Eurosystem is also exploring wholesale DLT-settlement to ensure central bank money always remains the safest and most scalable mean of settlement in any possible future architecture.[3]

Concluding remarks

Let me conclude with a summary of my key points.

The ECB's balance sheet needs to decline further before we expect the automatic stabilizers activating themselves.

But with the safeguards we have in place, narrow spread between MRO and DFR rates, and FRFA in place, we don't need to hurry with new structural operations. In the meantime, we still need to give some thought about how structural credit operations best serve policy transmission and financial stability, and how bond purchases best meet their policy goals.

In other words, and other things being equal, the existing legacy monetary policy portfolios need to reduce considerably more before one should expect new kinds of policy holdings.

Meanwhile, the payments landscape is evolving rapidly - instant payments, digital euro, and DLT all have implications for liquidity and monetary policy implementation.

Thank you for your attention, and I wish you an enjoyable and inspiring afternoon!

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[1] The decisions on the monetary policy implementation framework taken in March 2024

[2] The ECB plans to publish a summary and analysis of the responses received to the consultation in the first quarter of 2026.

[3] For a more thorough explanation of D€, Pontes and Appia see speech by Thomas Vlassopoulus on 7 November.