

RESEARCH NOTE | MONETARY POLICY | GLOBAL · MAJOR CENTRAL BANKS

ELIA Insight Series – *Macro Series***The Liquidity Paradox**

Across seven major central banks, the monetary base is shrinking but broad money continues to grow. QT does not tell the full picture.

A B S T R A C T

Quantitative tightening is now well advanced. Across the Federal Reserve, ECB, SNB, Bank of England, Bank of Canada, Reserve Bank of Australia and Bank of Japan, central-bank balance sheets and monetary bases have declined from their post-pandemic peaks. Yet broad money has continued to grow across every jurisdiction reviewed. This paper examines the divergence between central-bank money and broad money and argues that the conventional reading of QT as a binding tightening force overstates its effect on the wider money stock. The implication for portfolios is not that QT does not matter, but that liquidity analysis should track broad money, bank lending and deposit creation rather than central-bank reserves alone.

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KEY TAKEAWAYS

QUESTION	Has quantitative tightening reversed the post-pandemic liquidity expansion?
FINDING	Only partially. Major central banks have reduced their balance sheets and monetary bases from post-pandemic peaks, but broad money has continued to grow across all jurisdictions reviewed. QT has reduced central-bank money, but it has not produced a comparable contraction in the wider money stock.
EVIDENCE	Year-on-year changes through early 2026: Fed monetary base -4.0% / M2 +4.8%; ECB monetary base -8.8% / M3 +1.5%; SNB monetary base now below its pre-COVID level while M2 grew 13.5% in 2025. The same divergence holds for the BoE, BoC, RBA and BoJ.
IMPLICATION	QT is a reduction in central-bank liquidity, not a full reversal of system-wide liquidity. Balance-sheet runoff matters, but it is not sufficient as a standalone liquidity indicator. Investors should distinguish between the reserve layer created by central banks and the deposit layer created through commercial-bank lending.
WHAT TO WATCH	The key variables are bank lending, deposit growth, reserve abundance and funding-market stress. The paradox would begin to unwind if reserves moved toward scarcity or if private-sector credit creation slowed materially. Until then, liquidity conditions cannot be read from central-bank balance sheets alone.

1. Introduction

Since 2022, the major central banks have been shrinking their balance sheets. The Federal Reserve has reduced total assets by roughly USD 2.25tn from peak. The Eurosystem has allowed APP and PEPP redemptions to run off without reinvestment. The Swiss National Bank's monetary base now sits below its pre-COVID level. The conventional reading of these moves is that quantitative tightening is, by construction, a contraction of money. The data shows almost the opposite.

Across the seven major central banks reviewed in this paper, the monetary base has fallen in every jurisdiction, while broad money has grown in every jurisdiction. The divergence between them is the defining monetary feature of the current cycle, and it complicates the standard QT-equals-tightening intuition. This paper sets out the evidence, traces the mechanism, and draws out what the divergence means for how investors should think

about liquidity and sovereign markets. ELIA's reading is that the central bank balance sheet has been demoted as a master variable: it sets the price of liquidity, but no longer the quantity.

2. Background

2.1 *Context: From QE to QT*

Quantitative tightening is generally understood as the reversal of quantitative easing. During QE, central banks purchase securities and create reserves, expanding their balance sheets and injecting liquidity into the banking system. During QT, those assets mature, are sold, or are no longer reinvested, reducing the amount of reserves in the system.

The conventional interpretation is therefore straightforward: if QE expands liquidity, QT should withdraw it. In this view, smaller central-bank balance sheets should mean less money, tighter financial conditions and weaker support for asset prices. This interpretation is directionally correct, but incomplete.

2.2 *Monetary base versus broad money*

The reason is that central-bank money and broad money are not the same thing. The monetary base consists mainly of currency in circulation and commercial-bank reserves held at the central bank. It is money created directly by the central bank.

Broad money, by contrast, includes bank deposits and other liquid money-like instruments held by households, firms and financial institutions. In modern banking systems, broad money is created primarily when commercial banks extend credit. A new loan creates a new deposit; that deposit is part of broad money.

This distinction matters because the current cycle shows a clear divergence between the two. Since 2022, most major central banks have been shrinking their balance sheets, and monetary bases have declined materially from their post-pandemic peaks. Yet broad-money aggregates have not contracted in the same way. Across the jurisdictions reviewed in this paper, M2, M3, M4 and comparable broad-money measures have continued to expand even as central-bank balance sheets and narrow money have been moving lower.

Reserves matter because banks use them to settle payments and meet liquidity requirements. But reserves do not mechanically fund every new loan. In an ample-reserve system, the binding constraints on lending are usually capital, credit demand, funding costs, regulation and risk appetite, not the absolute level of reserves.

This is why QT can reduce central-bank reserves without producing a one-for-one contraction in deposits or broad money. As long as reserves remain sufficient and banks continue to lend, broad money can keep expanding even while the monetary base falls. This is the core liquidity paradox examined in the analysis below.

3. Analysis

The data make three things clear. First, major central banks have moved away from their post-pandemic balance-sheet peaks, although the degree of normalisation differs sharply across jurisdictions. Second, this reduction in

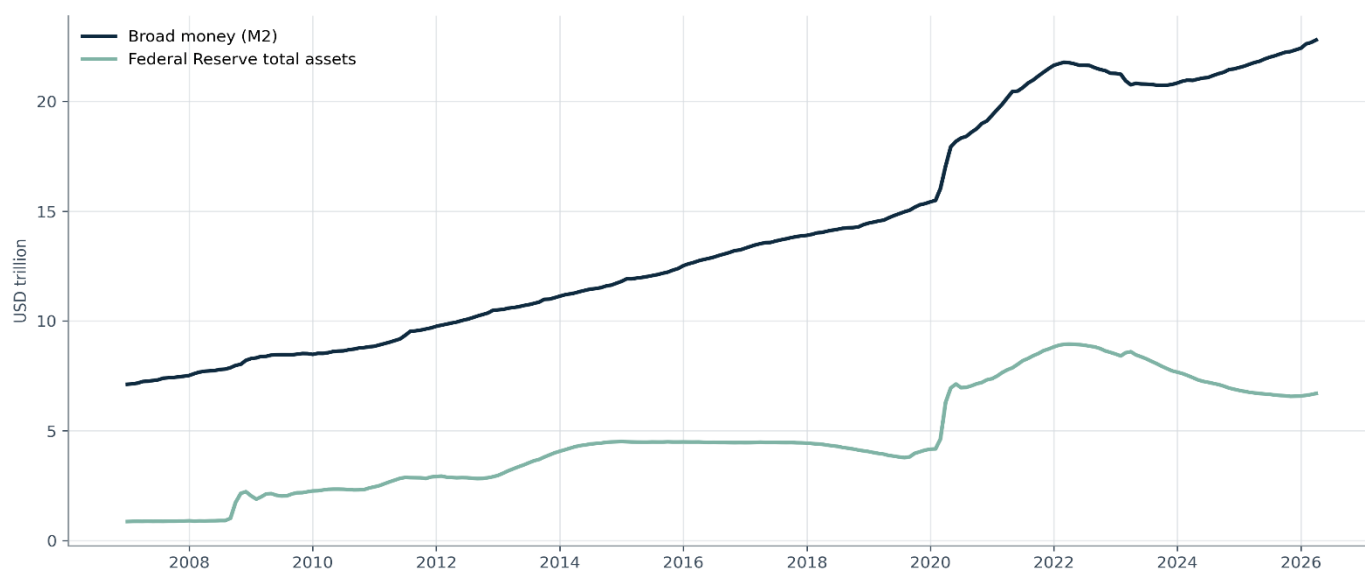
central-bank money has not translated into a comparable contraction in broad money. Third, the divergence becomes understandable once we distinguish between central-bank money — reserves and the monetary base — and the broader money created through commercial-bank lending and deposit creation.

3.1 Balance sheets are shrinking, but normalisation is uneven across countries

The first point is that QT is visible in the balance-sheet data. Most major central banks are now smaller than they were at their post-pandemic peaks. The Federal Reserve, the ECB and the SNB illustrate the broader pattern visible across the full sample: central-bank balance sheets and monetary bases have generally moved away from their highs, but the degree of normalisation differs sharply across jurisdictions. In some cases, the balance sheet remains far above its pre-COVID level; in others, the monetary base has already completed a full round-trip.

The Federal Reserve is the clearest example of partial normalisation from an unusually high starting point. Total assets stood at approximately USD 6.7tn in April 2026, down materially from the April 2022 peak of USD 8.95tn, but still roughly 60% above the February 2020 level of USD 4.71tn. The monetary base shows the same pattern: it has declined from its late-2021 peak yet remains materially above pre-pandemic levels. This distinction between direction and level is crucial. QT describes the direction of travel, but not the amount of liquidity still embedded in the system. The US monetary system has therefore not returned to its pre-COVID configuration; it continues to operate with a large QE-era central-bank footprint, with the Fed’s asset side still dominated by Treasuries and agency MBS. US liquidity conditions should therefore be assessed not only by asking whether the Fed is shrinking its balance sheet, but also from what level that shrinkage is taking place.

Federal Reserve: Broad Money and Central Bank Total Assets

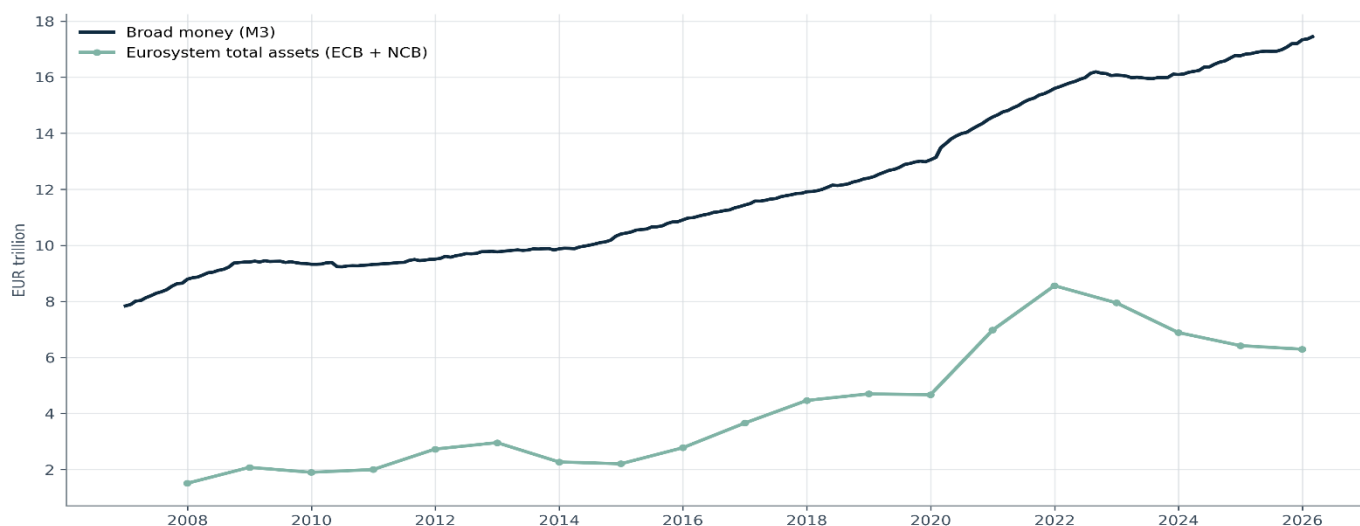


Source: FRED, Federal Reserve Bank of St. Louis. Broad money = M2SL; Federal Reserve total assets = WALCL. Values in USD trillion.

The ECB case shows a similar direction but a different institutional structure. The ECB’s standalone balance sheet declined by EUR 37.3bn in 2025, to EUR 603.3bn at year-end, a reduction of around 5.8%. The main driver was the continued runoff of securities held for monetary policy purposes, as maturing APP and PEPP holdings were no longer fully reinvested. The Asset Purchase Programme was the ECB’s pre-pandemic asset-purchase framework, while PEPP, the Pandemic Emergency Purchase Programme, was introduced in 2020 as the emergency purchase programme during the COVID-19 shock. At the Eurosystem level, the monetary base has

contracted much more sharply, falling by roughly one third from its November 2022 peak and declining 8.8% over the last twelve months. Yet euro-area M3 has continued to grow, standing at approximately EUR 17.3tn with positive annual growth. In other words, the Eurosystem is withdrawing central-bank liquidity, but the wider euro-area money stock has not contracted in parallel.

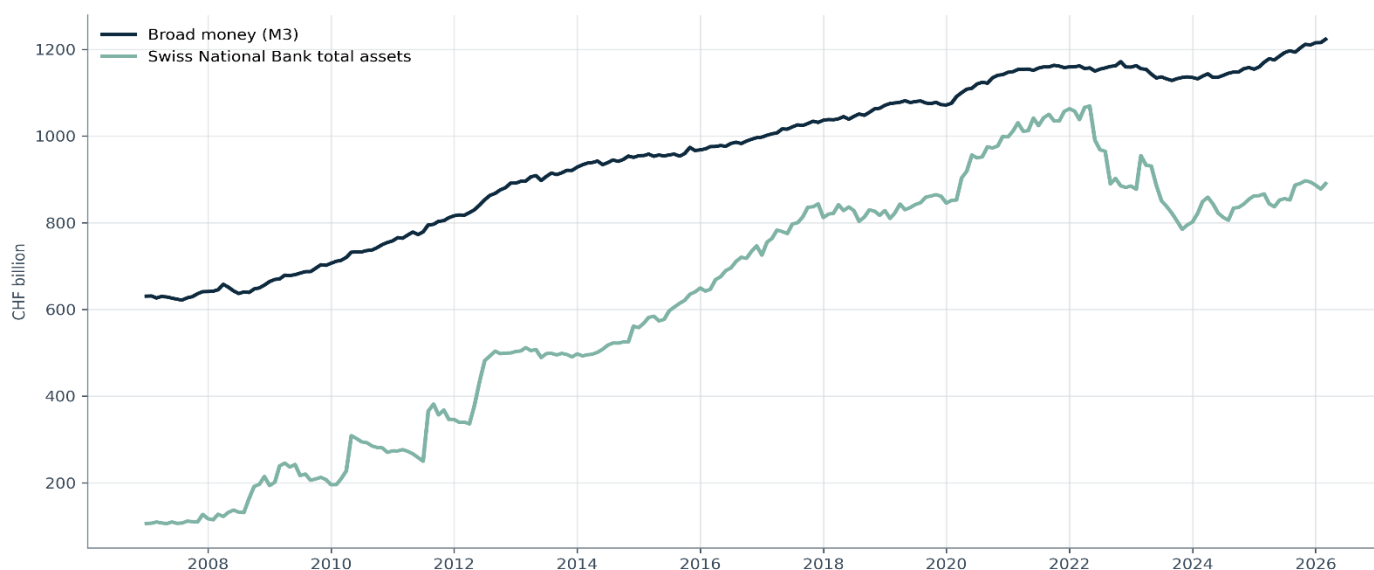
Eurosystem: Broad Money and Eurosystem Total Assets



Source: ECB Data Portal and ECB annual consolidated Eurosystem balance sheet data. Broad money = M3, BSI.M.U2.Y.V.M30.X.1.U2.2300.Z01.E; Eurosystem total assets = annual consolidated Eurosystem balance sheet total assets. Values in EUR trillion. Eurosystem total assets are annual year-end values.

The Swiss case is the most advanced example of narrow-money normalisation. The SNB’s monetary base, proxied by currency in circulation plus sight deposits, stood at CHF 508.9bn at end-February 2026. This is not only far below the April 2022 peak of CHF 757.2bn, but also below the February 2020 pre-COVID level of CHF 584.8bn. On this measure, the pandemic-era liquidity expansion has been more than reversed. Total SNB assets tell a slightly different story: at CHF 893.9bn at year-end 2025, they remain slightly above the pre-COVID level of CHF 851.6bn, though materially below the 2022 peak of CHF 1.07tn. This reflects the SNB’s specific balance-sheet structure, where foreign-currency investments and gold dominate the asset side and valuation effects play a larger role.

Swiss National Bank: Broad Money and Central Bank Total Assets



Source: SNB Data Portal. Broad money = M3, $EPB@SNB.snbmonagg\{B,GM3\}$; Swiss National Bank total assets = $EPB@SNB.snbipo\{T0\}$. Values in CHF billion.

Despite these differences, the monetary message is consistent. The Fed remains far above its pre-COVID balance-sheet level; the ECB is shrinking through the runoff of monetary-policy portfolios; and the SNB has normalised its monetary base more fully than either. Yet in all three cases, broad money has continued to grow. The next section shows that this is not limited to these three examples, but appears across the full set of central banks reviewed.

3.2 The gap is universal: narrow money down, broad money up

The balance-sheet evidence confirms that QT is real. The monetary-aggregate data show why this is not the whole story. In every one of the seven major central banks reviewed, narrow money is shrinking or has normalised materially, while broad money continues to expand. The divergence is not a US-specific phenomenon, nor a euro-area anomaly, nor a Japanese curiosity.

The Federal Reserve case is the most widely discussed. The monetary base has fallen approximately 16% from its December 2021 peak and is contracting at -4.0% year-on-year. M2, by contrast, stands at USD 22.67tn and is growing at $+4.8\%$. The dollar money stock is therefore expanding faster than nominal trend growth, even as the Fed continues to drain reserves at a measured pace.

The ECB case shows the same shape with greater amplitude. The euro-area monetary base has fallen about a third from its November 2022 peak and has contracted -8.8% year-on-year. M3 is nevertheless growing at $+1.5\%$. The Eurosystem is removing liquidity through APP and PEPP runoff. As securities held under these programmes mature and are no longer fully reinvested, the Eurosystem balance sheet contracts. Yet euro-area deposits and bank lending continue to expand. The narrow-money correction has not been transmitted to the wider money stock.

The Swiss case is the most striking version of the pattern. The SNB's monetary base of CHF 508.9bn now sits below the pre-COVID February 2020 level of CHF 584.8bn — a complete unwind of the pandemic expansion. Yet

M2 grew 13.5% in 2025 and M3 grew 4.5%. The divergence between narrow and broad money in Switzerland is the largest of any major jurisdiction reviewed here.

FIGURE 1. THE DIVERGENCE BETWEEN NARROW AND BROAD MONEY IS UNIVERSAL ACROSS THE DEVELOPED CENTRAL BANKS

Year-on-year change in monetary base versus the principal broad-money aggregate, latest data through early 2026.

CENTRAL BANK	BASE MONEY 12 M	BROAD AGGREGATE	BROAD MONEY 12 M
Federal Reserve	-4.0%	M2	+4.8%
European Central Bank	-8.8%	M3	+1.5%
Swiss National Bank	+1.6%*	M3	+4.5%
Bank of England	-6.0%	M4	+3.5%
Bank of Canada	-15.3%	M2++	+5.9%
Reserve Bank of Australia	-15.1%	Broad Money	+7.7%
Bank of Japan	-11.6%	M3	+1.4%

**The SNB monetary base shows a small positive 12-month change due to a slight increase in sight deposits; it remains 31.8% below its April 2022 peak and below its February 2020 pre-COVID level. Sources: FRED monetary base and M2; ECB Data Portal monetary base and M3; SNB Data Portal monetary base, M2 and M3; Bank of England Bankstats monetary base proxy and M4; Bank of Canada monetary base, M1+ and M2++; RBA Statistical Tables money base and broad money; Bank of Japan Time-Series Data Search monetary base and M3*

The pattern repeats in every jurisdiction of the developed world. No counter-example emerges in the data. The persistence of the gap across seven different policy regimes, asset structures and operational frameworks suggests that the pattern deserves closer attention, even if the underlying mechanisms differ across jurisdictions. The gap is not a statistical oddity. It reflects the fact that central-bank money and broad money are created through different channels.

3.3 Reserves are not deposits: why the gap can persist and where the pattern could break

The divergence between shrinking central-bank balance sheets and expanding broad money is possible because reserves and deposits are not the same instrument. Reserves are liabilities of the central bank and settlement assets for commercial banks. Deposits, by contrast, are liabilities of commercial banks and assets of households, firms and other non-bank entities. A reduction in reserves therefore reduces central-bank money, but it does not automatically destroy deposits in the wider economy.

This distinction is central to the current cycle. QT drains reserves by allowing central-bank assets to mature, by selling assets, or by stopping reinvestments. But broad money is created primarily through the commercial banking system. When a bank extends a loan, it simultaneously creates a deposit on its liability side. The loan does not require the bank to “lend out” reserves in a mechanical one-for-one sense. Reserves are needed to settle payments and meet liquidity requirements, but they do not fund every new deposit directly.

The relevant mechanism is therefore not a fixed textbook money multiplier. In modern ample-reserve systems, the relationship between reserves and broad money is variable and endogenous. The ability of banks to create deposits depends on capital, funding costs, regulation, credit demand and risk appetite. As long as reserves remain sufficiently abundant, a decline in the monetary base does not necessarily constrain commercial-bank

balance-sheet growth. This is why broad money can continue to expand even while central-bank balance sheets are shrinking.

Switzerland is the cleanest example of this mechanism: even after a substantial reversal of the SNB monetary base, broad money continued to expand, supported by low interest rates, mortgage credit and deposit creation. The monetary base has normalised, but bank-credit and deposit dynamics have not moved in the same direction.

The paradox is therefore durable, but not permanent. It holds only as long as two conditions remain in place. The first is reserve sufficiency. If QT were pushed to the point where reserves became scarce, funding markets would tighten, and bank balance-sheet growth could become more constrained. In that environment, the decline in central-bank money would begin to matter more directly for the creation of broad money.

The second condition is private-sector credit creation. If banks tighten lending standards, if capital constraints become binding, or if households and firms reduce credit demand, deposit creation slows. Broad money would then weaken regardless of whether central banks continue QT. The key variable is therefore not only the monthly runoff pace of central-bank assets, but the interaction between reserve abundance and the credit impulse in the banking system.

4. Implications

The Liquidity Paradox has several implications for how investors should think about liquidity, asset prices and portfolio construction.

First, QT should be understood as a reduction in central-bank liquidity, not as a full reversal of the post-pandemic monetary expansion. Balance sheets are shrinking, but the starting point matters. The Federal Reserve is the clearest example: total assets are materially below the 2022 peak, yet still far above the February 2020 level. Liquidity is being reduced at the margin, but the stock of central-bank money embedded in the system remains structurally larger than before the pandemic. QT is therefore a flow story, while liquidity is also a stock story.

Second, the central-bank balance sheet should no longer be treated as the master variable for liquidity conditions. It still matters, but mainly as a measure of the reserve layer and as an influence on the price of liquidity: policy rates, funding costs, money-market conditions and the yield curve. It does not, by itself, determine the quantity of money in the wider economy. The relevant liquidity picture requires both layers: central-bank money on one side and commercial-bank money creation on the other.

Third, broad money, bank lending and deposit growth deserve more attention than the monthly pace of QT alone. Across the seven jurisdictions reviewed, monetary bases have contracted or normalised, while broad-money aggregates have continued to grow. For investors, the key question is therefore not only how quickly central banks are reducing reserves, but whether banks are still creating deposits through credit extension. Lending standards, mortgage growth, corporate credit demand, deposit flows and bank funding conditions become central indicators of the liquidity regime.

Fourth, the composition of central-bank balance sheets points to a broader macro-financial question. This paper focuses on money supply and the divergence between central-bank money and broad money. But central-bank balance sheets are also large portfolios of sovereign and government-related securities. In the United States, the Fed's asset side remains dominated by Treasuries and agency MBS; in the euro area, APP and PEPP holdings still shape the public-sector securities market; and in Japan, the BoJ remains deeply embedded in the JGB market. This matters because the unwind of these portfolios affects who absorbs duration, how term premia behave, and how inflation expectations feed into long-end yields. That broader government-debt and duration channel is outside the main scope of this paper, but it is part of the same post-QE legacy.

5. Limitations and Open Questions

Four limitations of this analysis should be named directly.

- The paradox holds in 2025 and early 2026. It is an empirical observation, not a structural law. If reserves were drained into scarcity or if bank lending tightened sharply, the divergence would narrow. We do not forecast either occurring imminently, but neither can be ruled out.
- Monetary aggregates are not directly comparable across jurisdictions. M2 in the US, M3 in the euro area, M4 in the UK, M2++ in Canada and the BoJ's M3 capture different sets of instruments. The directional finding (narrow shrinks, broad grows) is robust; the magnitudes shown in Figure 1 are not strictly comparable on a like-for-like basis.
- This paper does not address velocity. A given expansion of broad money implies different liquidity conditions depending on the speed at which money changes hands. A complete liquidity reading would combine money stock with velocity; we leave that integration for a follow-up note.
- The analysis treats QT as a single phenomenon. In practice, the seven central banks are pursuing different blends of passive runoff (Fed, ECB, BoC, RBA, BoJ), liquidity absorption via debt certificates and repo rebalancing (SNB), and combined asset and lending unwind (BoE through the Asset Purchase Facility). The implications are not identical across jurisdictions, and an investor focused on a single market should look at the local mechanics in detail.

6. Conclusion

The question this paper set out to answer is whether the contraction of central-bank balance sheets has translated into a contraction of money in the wider economy. The evidence suggests that the answer is not straightforward. Across the Federal Reserve, ECB, SNB, Bank of England, Bank of Canada, Reserve Bank of Australia and Bank of Japan, the monetary base has fallen — sometimes sharply — while broad money has continued to grow.

This does not mean that QT is irrelevant. It means that QT captures only one layer of liquidity: the central-bank reserve layer. The wider money stock is also shaped by commercial-bank lending, deposit creation, credit demand, funding conditions and regulation. Once this distinction is made, the divergence between shrinking central-bank balance sheets and expanding broad money becomes less surprising.

For investors, the practical implication is that liquidity analysis should not rely on central-bank balance sheets in isolation. Balance-sheet runoff matters, but it should be read alongside broad-money growth, bank lending, deposit dynamics and reserve conditions. The dominant QT narrative is therefore incomplete rather than wrong: it correctly identifies the withdrawal of central-bank liquidity, but it does not fully capture the behaviour of money in the wider economy.

For institutional allocators, this creates a more nuanced analytical task. Understanding the interaction between reserve regimes, credit creation, deposit dynamics and sovereign-market structure increasingly requires a framework that combines macro analysis, fixed-income expertise and banking-system transmission analysis. This is where ELIA's quantamental investment framework is differentiated: by integrating macro liquidity conditions, sovereign duration risk, credit-market signals and equity-market positioning into a unified process, ELIA seeks to identify where conventional policy narratives may diverge from underlying market realities. The current QT cycle is one such example: investors focused solely on balance-sheet runoff may overlook liquidity drivers still operating through commercial-bank credit creation and deposit expansion.

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