

The central bank balance sheet

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Abstract

Reserves, floor versus corridor systems, why central banks lost money after 2022, and when a balance sheet needs fiscal support.

Every tool so far shows up on the central bank's balance sheet. Purchases add bonds to the asset side and reserves to the liability side; negative rates are a charge on those reserves; the exit in Yield curve control and the exit is the balance sheet shrinking. This lesson explains the accounting and its consequences, because after 2022 the consequences became political.

A stylised balance sheet

Assets	Liabilities
Government bonds and other securities	Banknotes
Loans to banks (refinancing operations)	Bank reserves (deposits of commercial banks)
Foreign reserves (large for the SNB)	Government deposits
	Equity and provisions

Reserves are the central bank's own money, held only by banks. Purchases create them; when the central bank pays interest on reserves, that interest is its main expense; when it charges a negative rate, it is income.

Corridor and floor

Before 2008 most central banks kept reserves scarce and steered the overnight rate inside a **corridor** between a lending rate above and a deposit rate below, with the market rate near the middle. Large purchases flood the system with reserves, so the overnight rate falls to the deposit rate, the bottom of the corridor. That is a **floor system**: the policy rate is the rate paid on reserves, and the quantity of reserves no longer matters for the rate. The Fed formalised this in January 2019 as its “ample reserves” framework, in which the policy rate is implemented through interest on reserves and the balance sheet stays large (Federal Open Market Committee, 2019).

Definition 1 (Floor system). An implementation framework in which reserves are abundant, the overnight market rate sits at (or just below) the rate the central bank pays on reserves, and rate changes are made by changing that administered rate rather than by adjusting the quantity of reserves.

A floor system has a consequence that was easy to miss while rates were zero: the central bank's interest expense moves one for one with the policy rate, while the income on its bonds is fixed for years. Raising rates with a large balance sheet is expensive.

Where the losses came from

Between 2022 and 2024 the Federal Reserve, the Bundesbank, the Dutch, Swedish and Swiss central banks and the Bank of England all reported losses or stopped remitting profits to their treasuries. The mechanism is the same everywhere and follows from the previous paragraph.

- The asset side earns the yields at which bonds were bought: for bonds bought in 2015–2021, close to zero and sometimes negative.
- The liability side pays the current policy rate on reserves: 4 to 5 percent in the United States from 2023, 4 percent in the euro area.
- The difference, multiplied by trillions of reserves, is a running loss. The Fed records it as a “deferred asset”: future profits will be retained until the loss is recouped, and remittances to the Treasury stop in the meantime.

The Swiss case adds a second channel. The SNB’s assets are mostly foreign currency, so a stronger franc produces valuation losses regardless of interest rates; its 2022 loss of about 132 billion francs was overwhelmingly a valuation loss and led to cancelled distributions to the Confederation and cantons.

Whether a loss “matters” is a question about the consolidated government. Reis argued that a central bank’s balance sheet is best read together with the treasury’s: a central bank loss is a fiscal cost that would otherwise have appeared as higher government borrowing costs, and the mystique around central bank equity obscures this (Reis, 2013). Del Negro and Sims made the limits precise: a central bank can operate with negative equity indefinitely as long as the public expects the treasury to back it if needed, but without that backing a sufficiently large loss can force the central bank to inflate to restore its solvency (Del Negro & Sims, 2015). Fiscal support is therefore not a technicality; it is what makes the balance sheet a safe tool.

Reserves are not lending

A widespread misreading of purchases is that banks “sit on” reserves instead of lending them out. Reserves cannot leave the banking system: a bank that lends creates a deposit, and reserves move between banks as payments clear, but the total is set by the central bank. High reserves are a consequence of purchases, not evidence that banks refused to lend. The relevant question is whether lower long rates and higher asset prices raised the demand for credit, which is the subject of Asset purchases: evidence.

Size

The Fed’s balance sheet peaked near 9 trillion dollars in 2022, about a third of GDP; the Eurosystem’s near 9 trillion euro, about two-thirds of euro-area GDP; the Bank of Japan’s exceeds Japan’s GDP; the SNB’s is close to Swiss GDP for the foreign-reserve reason above. None of these ratios has a theoretical ceiling; what limits them is the exit, next.

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Federal Open Market Committee. (2019). *Statement regarding monetary policy implementation and balance sheet normalization*. Press release, 30 January. <https://www.federalreserve.gov/newsevents/pressreleases/monetary20190130c.htm>

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