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Do central banks' losses matter?

Central bank losses should have limited practical consequences, but could create fiscal risks

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FLASH NOTE

SUMMARY

- Several central banks have started to record financial losses as interest rates normalise rapidly following a decade of unconventional monetary policies and balance sheet expansion. Central banks' losses are likely to increase further as the gap widens between the interest rate they pay on bank deposits and the return they get on the assets they hold.
- Monetary policy has always had a fiscal dimension. Central banks have generated large profits for their governments in the past 12 years. The prospect of financial losses can be seen either as the flip side of this era of monetary activism or the price to pay for previous policy choices.
- Central banks cannot 'run out of money', and there is no reason for financial losses to impact central banks' capacity to deliver price stability. But, in some cases, these losses can have real consequences, including an increase in the issuance of government bonds, an incentive to accelerate the reduction of excess liquidity, or changes to the remuneration of bank reserves.
- If central banks continue to make large losses for too long, political pressure could mount on them to rebuild their capital, even without financial or legal obligation to do so. This could raise concerns over central banks' independence, but also their credibility as inflation fighters.

CAN CENTRAL BANKS GO BROKE?

The Swiss National Bank (SNB) has reported a CHF142 bn loss so far this year. The UK Treasury will have to transfer around GBP 20-30 bn per year to the Bank of England (BoE) to indemnify it for the losses generated by the sale of debt securities held on the BoE's balance sheet and the negative interest margin from its QE programme. The Reserve Bank of Australia (RBA) announced a AUD37 bn accounting loss on its pandemic bond purchase programme, reducing its equity to negative AUD12 bn. The European Central Bank (ECB) has warned that it could make financial losses as policy rates rise, and the Dutch central bank has recently issued a warning about its future capital position. Even the US Federal Reserve (Fed) is 'in the red' as its remittances to the Treasury have collapsed to negative USD12bn so far this year.

What's going on? Does it matter that central banks make losses? Can they go broke? When the economist Willem Buiter asked the question in 2008, it was largely a rhetorical one. Fast forward to 2022, and the question looks more topical as central banks' balance sheets have ballooned by over USD20 trn following years of monetary activism sparked by the great financial crisis, two global recessions and a pandemic.

With inflation rising to decades highs and interest rates normalising rapidly, central banks will make losses for two main reasons. First, in terms of **flows**, central banks have to remunerate large amounts of bank reserves (base money) created by their asset purchase programmes (quantitative easing, QE) and their bank lending operations. In most cases, the interest rate paid on bank reserves has risen above the average return on the assets held by central banks, including the coupon yield on QE holdings, leading to a drop in monetary income and, in some cases, to a loss.

Second, central banks may also incur losses on the **stock of assets** they hold if the market value of these assets drops below their purchase price. These assets include bonds purchased above par. In most cases, the losses will remain unrealised as central banks don't need to mark to market their holdings. Instead, they receive the coupon flows and are repaid at par. However, the Fed and the BoE have started to sell debt securities as part of quantitative tightening (QT), realising some losses in the process. **The RBA is a special case, being one of the few central banks to report valuation losses on its QE holdings on a mark-to-market basis**, whereas the Fed and ECB account for QE holdings at amortised cost (defined as the purchase price less the premium or discount that has been already recognised, ultimately converging to its face value at maturity).

CENTRAL BANK LOSSES DON'T MATTER...UNTIL THEY DO

The problem looks simple at first sight: central banks cannot run out of money. They can always discount future flows of income based on seigniorage or, in plain English, they can print as much money as they want to offset realised losses. Importantly, there is no reason for central bank financial accounting to impact the normal conduct of monetary policy, including the return to price stability.

While central bank losses are a non-event in theory, they can have important consequences in practice, including on the fiscal front. The BoE and the RBA are cases in point. In an adverse scenario, their losses could mechanically lead to an increase in government bond issuance, and could force both these banks to recapitalise. The prospect of large losses at the ECB or Fed could push both to reduce their balance sheets at a faster pace than planned. In particular, we believe the risk of large financial losses helped drive the ECB's decision to change the terms of its Targeted Longer Term Refinancing Operations (TLTROs) in November, the idea being to encourage banks to repay TLTRO loans earlier.

More broadly, if central bank losses were to rise significantly for a long period of time, political pressure could mount for recapitalisation. In turn, the need for quasi-fiscal support may threaten central banks' credibility when it comes to delivering price stability, even for bad reasons. In other words, the ultimate threat from financial losses could be the question marks they raise over central banks' independence. As the ECB noted more than ten years ago: "if the financial health of a central bank deteriorates, it might seek recapitalisation from the government, which then might try to influence the central bank's decisions in return for committing public money." In other words, central banks' profit and loss accounting is not only a technical topic. It has crucial political implications which need to be included in any debate about fiscal-monetary coordination.

WHAT CAN CENTRAL BANKS DO?

In theory, central banks have several options to deal with losses:

1. **Do nothing.** In most cases, income losses can be accounted for on their balance sheets without any impact on monetary policy. Many banks have built provisions in recent years. Even if the losses exceed, the provisions several central banks have operated with negative equity without facing any issue in the conduct of monetary policy. This includes central banks in the Czech Republic, Sweden, Chile, Israel or Mexico. In practice, a central bank's equity position will account for any loss, while on the asset side of the balance sheet the same amount will show up as a deferred asset that declines over time as new income accumulates. This is largely the case with the Fed.
2. **Reduce commercial banks' excess reserves.** The main driver of central bank losses will be the persistently high level of bank reserves to be remunerated at positive policy rates. Central banks can decide to accelerate the winding down of excess bank reserves by selling debt securities, which the BoE has had to do earlier and faster than it planned given the longer maturity structure of its QE programme. The ECB has decided to accelerate the repayments of TLTROs, but it has yet to make a decision on its QE programmes. Alternatives could include the withdrawal of excess liquidity via open-market operations or the issuance of central bank debt certificates.
3. **Reduce the remuneration of bank reserves.** Central banks could lower the interest rate they pay on excess reserves or introduce a form of 'reverse tiering' limiting the share of bank reserves remunerated at a positive interest rate.
4. **Use financial buffers to cover the losses** (including reserves and risk provisions) in the event that income losses lead to a negative equity position.
5. **Ask shareholders (governments) to increase their capital.** This is a political decision involving the taxpayer. Note that the ECB decided to increase its subscribed capital by EUR5bn at the beginning of the euro crisis in 2010.

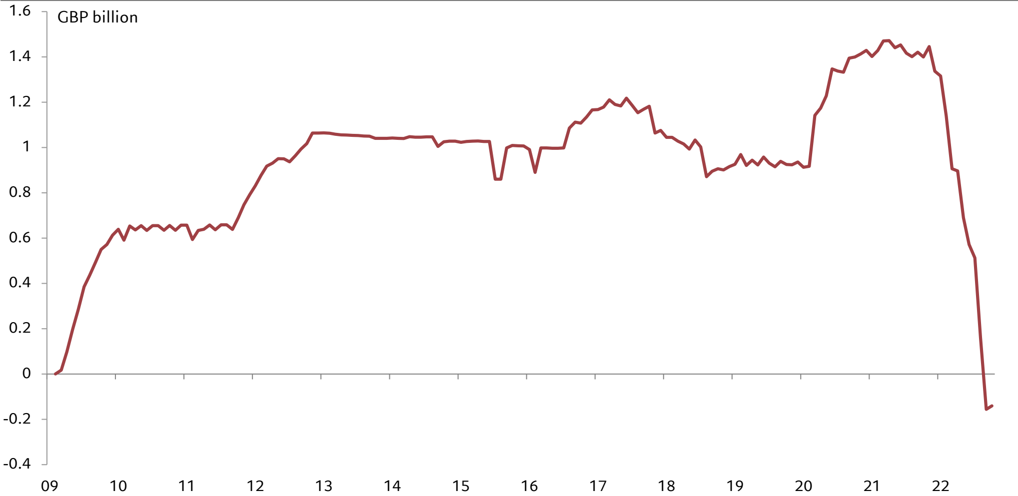
UK TREASURY'S ARRANGEMENT WITH THE BOE COULD WEIGH ON PUBLIC FINANCES

The BoE designed a rather unique arrangement with the UK Treasury when it launched its QE programme in 2009. The idea was that most of profits from the programme would flow directly to the Treasury, which would also cover any losses. This was the translation of the BoE's independence principle with QE being backstopped by Treasury, not by future money creation via bank reserve. **This arrangement is what sets the Bank of England apart from other major central banks.**

Since the BoE's losses will in practice be covered by more debt issuance, **we could see much more sizeable UK government borrowing in the future**.

The Bank of England's QE programme (referred to as "Asset Purchase Facility" or APF) has earned GBP113 bn for the Treasury since 2009, according to the Office of Budget Responsibility (OBR). But the OBR now estimates in its November report the APF will mean Treasury-BoE flows of GBP 2.9bn in fiscal year 2022-23, mounting to 22.3bn in 2023-24 and 31.9bn in 2024-25. The OBR predicts public sector net borrowing of 7.1% of GDP during the current fiscal year (ending in March 2023), moderating to 5.5% the next fiscal year and 3.2% of GDP the following fiscal year.

Chart 1: Net interest from the Bank of England's Asset Purchase Facility



Source: Pictet WM CIO Office & Macro Research, Bank of England, 2 December 2022

Worth noting that what keeps the BoE apart, especially from the Federal Reserve, is that the BoE has not only decided to let existing bonds mature (no reinvestment), but it has also decided to actively sell a portion of its holdings. The **market consensus is for about GBP80 bn of gilts each year**.

There are several routes being explored to deal with the extra burden on public finances stemming from the Treasury-Bank of England arrangement (see for instance Paul Tucker's analysis, October 2022). Options include:

- **Re-discussing the Treasury's arrangement with the BoE**, with a view to allowing the latter to carry losses (negative equity). The problem with this is that it would contravene the principle of central bank 'independence' that underpinned the arrangement in the first place. Also, it is not clear that the BoE has the legal right to carry negative equity contrary to most other central banks.
- **'Tiering' bank reserves** so that the BoE reduces its interest bill, with interest only paid on a portion of bank deposits. This would raise the question of whether the Bank continues to have control over market interest rates.
- **Stopping the sales of its gilt holdings.** This would go against the principle that BoE runs an independent monetary policy. Moreover, this is not where the bulk of losses will come from.
- **Taxing surplus bank profits to recoup some of the interest payments (from the Bank of England to commercial banks)**. This option is not to be dismissed

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but the government seems to have side-lined it for now. In November, it rather augmented the taxation of energy groups as well as electricity producers to get more tax revenues, along with other measures targeting individual taxpayers.

US: FED IS LIKELY RELAXED ABOUT 'NEGATIVE EQUITY' DESPITE THE OPTICS

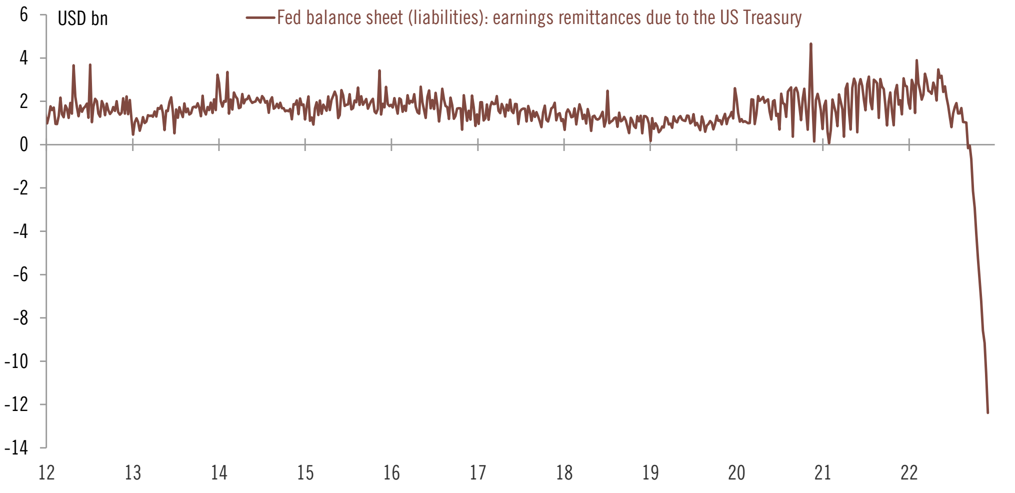
Like most other major central banks that have been raising rates aggressively, the Fed is confronted with the fresh challenge of posting negative operating income (as a reminder, this is mostly due to the interest on the stock of existing debt accumulated during its QE programme being lower than the strong rise on the interest paid on commercial banks' reserve balances). In fact, positive Fed earnings earmarked for the US Treasury have ceased since September (see Chart 2).

However, the practical consequences of the Fed posting an operating loss are likely to be limited. Thanks to its accounting rules, the **Fed will just accumulate a 'deferred asset' until it returns to profitability**—which eventually should happen if the Fed's balance sheet returns closer to its pre-covid size.

This is not to say that it is going to be completely smooth sailing. First of all, since **the Fed has transferred USD83.6 bn on average to the US Treasury in the past three years**, Congress will now have to find alternative sources of funding (even though, arguably, balancing the books has never been a priority for the federal government). Second, losses could increase the psychological pressure politicians exert on the Federal Reserve. These operating losses come just as the Fed's handling of the inflation surge in 2021-22 is under close scrutiny.

The key question is whether a Fed operating loss would hurt the institution's credibility among the wider public and therefore confidence in fiat money. It's difficult to see a direct link between what remains mostly an accounting matter and trust in the US currency, but one cannot ignore the fallout from possible media hype over losses, including the impact such hype could have consumers' inflation expectations (which have remained high of late).

Chart 2: Weekly Fed remittances to the US Treasury



Source: Pictet WM CIO Office & Macro Research, US Federal Reserve, 2 December 2022

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The Fed itself is unlikely to prioritise a return to 'profitability'. Instead, it will probably reiterate that, as set down by Congress, it is sticking to its "dual mandate" of maximising employment and ensuring stable prices and that potential operating gains or losses will not hamper its efforts to respect this mandate. In other words, the Fed will likely argue that the total 'welfare gains' to society from tackling the inflation problem (via higher interest rates) far outweigh the potential lack of annual remittances to the Treasury that tackling this problem may entail.

As discussed in a recent Brookings Institute paper, there is still a theoretical case when the Fed would need to be recapitalised by the US Treasury, if the central bank is unable to show convincing evidence that it will be able to return to profitability in the long run. Still, **recapitalisation on these grounds seems highly unlikely**. In normal times, excluding the QE era, the Fed's main liability is the currency (i.e., banknotes) on which it pays no interest.

ECB: PRESSURE FROM RESERVES REMUNERATION DESPITE THICK BUFFERS

When it comes to the ECB, profit and loss accounting is more complicated. First, the Eurosystem, made up of the ECB and the national central banks (NCBs) of the 19 euro area countries, is a very complex institution, with differences in the rules governing income transfers between NCBs. One notable example of this complexity is **the risk-sharing framework** that the ECB has applied to its asset purchases: 20% of government debt purchases are held by the ECB and subject to risk sharing (i.e., profits and losses are shared between the ECB and NCBs), while 80% of these bonds are held by NCBs and the risks are not shared. **This raises difficult questions in case of large realised losses for some NCBs** even if others continue to make profits, which is a plausible scenario in coming years.

Second, while the ECB accounts for asset purchases on an amortised cost basis, and thus doesn't need to mark to market any valuation loss, it may be more exposed to interest-rate risks than other central banks as **it has purchased some government bonds at negative yields** in the past, including some at yields below its own deposit rate. Moreover, the ECB has generated large 'flow losses' on interest income from bank lending operations at negative interest rates (TLTROs). These rates were below the interest rate paid on bank reserves (the deposit rate) for over two years.

During her testimony to the European Parliament in November 2020, ECB President Christine Lagarde gave a blunt answer to a question on the central bank losses: "As the sole issuer of euro-denominated central bank money, the Eurosystem will always be able to generate additional liquidity as needed. So, by definition, it will neither go bankrupt nor run out of money. Any financial losses, should they occur, will not impair our ability to seek and maintain price stability."

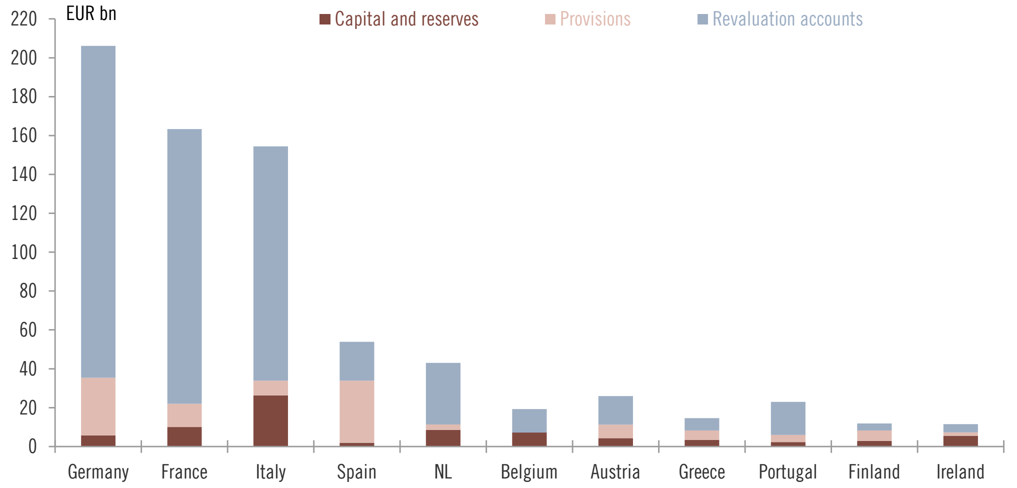
Again, the reality of the Eurosystem is more complex. Profits are shared across NCBs in proportion to the prevailing ECB capital key shares. In case of losses at the consolidated level, they can first be absorbed by the ECB's general risk provision (EUR8.3 bn in 2021), then by the monetary income of the relevant financial year[1]. If that were not enough, the ECB is allowed to offset remaining shortfalls on its

[1] Article 33 of the ECB statutes reads: "In the event of a loss incurred by the ECB, the shortfall may be offset against the general reserve fund of the ECB and, if necessary, against the monetary income of the relevant financial year in proportion and up to the amounts allocated to the national central banks [based on their capital keys]".

balance sheet against any net income received in the future, in the same spirit as the Fed's 'deferred assets'.

The bottom line is that the ECB's financial buffers are thick enough, building up on past profits. As explained on the ECB's website, the Eurosystem has built large financial buffers over the past decade, such as general provisions and reserves, thanks to "sizeable profits" (EUR300 bn between 2012 and 2021) from its QE portfolio and the negative interest paid on banks' deposits. The ECB's consolidated balance sheet also shows the accumulated valuation gains on other assets, including gold and foreign currencies, between their market value and their acquisition cost. Assets in these so-called 'revaluation accounts' totalled EUR555 bn at end-2021. These unrealised gains aren't supposed to be 'spent', but they contribute to the ECB's prudent accounting principle and provisioning.

Chart 3: National Central Banks' capital, provisions and revaluation accounts



Source: Pictet WM CIO Office & Macro Research, NCB annual accounts, 2 December 2022

The remaining grey area concerns NCBs. In theory, the NCBs can use their own income and provisions to cover remaining losses (see Chart 3). Most NCBs have increased their provisions for financial risks in recent years, but there is no harmonisation in practices across countries. For instance, the central bank of Belgium has more capital (EUR7.2 bn) than the Bundesbank (EUR5.7 bn), while the latter has increased provisions to EUR29.6 bn in 2021. The Dutch National Central Bank has increased them to EUR2.8 bn while warning against the risk of cumulative losses rising to EUR9 bn (see their excellent explainer on the topic).

What would happen in case of persistent financial losses at some NCBs is less clear. The Treaty doesn't include automatic loss-sharing mechanisms. There is a precedent of different nature, when the Eurosystem recorded losses in 2009 following the default of Lehman Brothers' counterparts. Back then, the ECB ruled that "any shortfall should eventually be shared in full by the Eurosystem NCBs [...] in proportion to the prevailing ECB capital key shares of these NCBs". Some argue that the ECB could make a similar decision in the future based on its statutes which rule that "the Governing Council may decide that NCBs shall be indemnified against costs incurred [...] *in exceptional circumstances for specific losses arising from monetary policy operations*". Still, some NCBs could face growing political pressure to be recapitalised, with uncertain consequences for the ECB itself.

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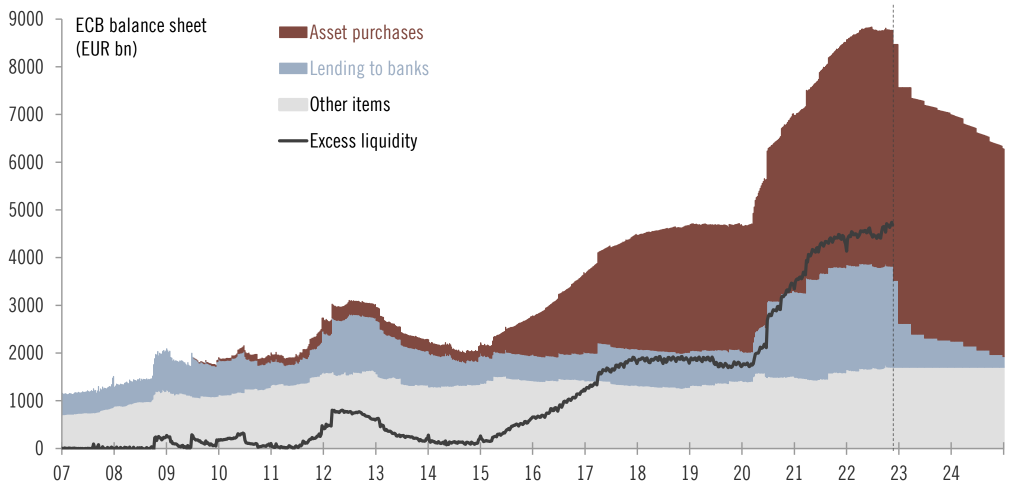
Either way, the ECB shouldn't be overly concerned by 'stock losses' on its QE portfolios. It is difficult to estimate these losses as they remain unrealised but even in the more adverse scenarios, they are likely to be spread over a long period of time, more than offset by past profits, and remain manageable at the euro area level. We don't expect the ECB to sell any debt holdings outright any time soon.

The more immediate issue for the ECB is 'flow losses', which are likely to increase further because of interest paid on bank reserves. Total bank reserves are currently EUR4.5 trn following a first TLTRO repayment of EUR248 bn in November. Assuming a larger TLTRO repayment in December of up to EUR800 bn, along with gradual a start to QT in 2023 at a monthly pace of EUR20 bn, excess liquidity would still be above EUR2.5 trn at the end of 2023. With the ECB expected to hike the deposit rate to at least 2.50% in 2023, **banks would earn close to EUR70 bn in interest income on their reserves in 2023 under these assumptions**.

The repayments of TLTROs and the start of QT are unlikely to fix the underlying issue, which is that the Eurosystem was not built to deal with large bank reserves. Even under a favourable scenario of faster balance sheet reduction or lower policy rates, **the ECB may still be paying close to EUR50 bn on bank reserves by 2024**.

Chart 4: ECB balance sheet including projections



Source: Pictet WM CIO Office & Macro Research, ECB, 2 December 2022

The prospect of persistently large income losses could force the ECB to change the remuneration of bank reserves in the future, and/or to withdraw liquidity by other means. Moreover, it doesn't look good for a central bank to be seen transferring large amounts of money to the banking sector in the middle of an economic crisis—even if paying interest on bank reserves is monetary policy 101.

We have long flagged the possibility of the ECB issuing debt certificates, although it has shown no appetite for these instruments. Central banks that have used this option, such as the Swiss National Bank, have done so to stimulate interbank lending activity, which is not a priority for the ECB. The best case scenario would be one in which interest rates don't rise too high and the Eurosystem returns to profitability. Then the whole topic of central bank losses would rightfully fade away again.

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SNB: RECORD LOSSES COULD HAVE A FISCAL IMPACT

The Swiss National Bank (SNB)'s balance sheet has increased dramatically in recent years, resulting in **large swings in its earnings**. In the first nine months of 2022, the SNB reported a loss of CHF142.4 bn (nearly 20% of Swiss GDP), of which CHF141 bn came from losses on foreign currency positions. This is by far the largest loss on record (see Chart 5).

Unlike other central banks such as the ECB, the SNB's losses have not stemmed from negative net interest. Instead, they were mainly due to valuation changes, with CHF70.9 bn due to losses on bonds and CHF54.2 bn to losses on equities. Exchange rate-related losses totalled CHF24.4 bn.

The losses could have significant fiscal implications since the SNB distributes part of its net profits to the Swiss confederal and cantonal governments. Under the profit distribution agreement for 2020 to 2025, **the SNB can pay out up to CHF6 bn per year (0.8% of 2021 GDP), with one-third going to the Confederation and two-thirds to the cantons**[2]. The SNB's net profit must be at least CHF40 bn for the maximum CHF6 bn to be paid out.

Before distributing profits to the Swiss authorities and its own shareholders, the SNB every year sets aside money in the form of 'provisions for currency reserves'. The amount remaining after these provisions is referred to as the 'distributable profit'. Not all the distributable profit is paid out at once. Instead, the SNB smooths the distributions to make them less dependent on variable annual results. Any undistributed profit is transferred to the 'distribution reserve'. In a bad year, when the SNB makes a loss or only a small profit, this reserve is used to make up the shortfall in the allocation to provisions, as well as to pay dividends and make payments to the Confederation and the cantons.

The distribution reserve could be negative if the equity capital falls below the level of the provisions as a result of a loss. '**Distributions would then be stopped until the equity capital is sufficiently stocked again from future earnings**'[3].

According to its interim results, the SNB's equity capital declined from CHF204 bn at end-2021 to CHF56bn at end-September 2022. The SNB may have to replenish its reserves if its portfolio does not swing back into profit, and it may have to forego profit distribution. This has happened only once before, in 2013 (see Chart 6), and could cause funding problems for some cantons that have counted on SNB money in recent years.

[2] The net profit accruing to the cantons is distributed in proportion to their resident population.
[3] Thomas Jordan, "SNB distributions – no matter of course even when profits are high", speech at the 113th Ordinary General Meeting of Shareholders of the SNB, Zurich, 30 April 2021.

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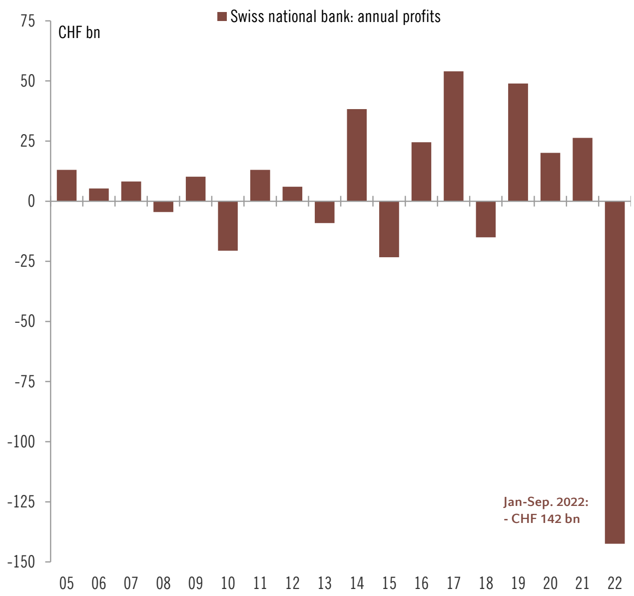
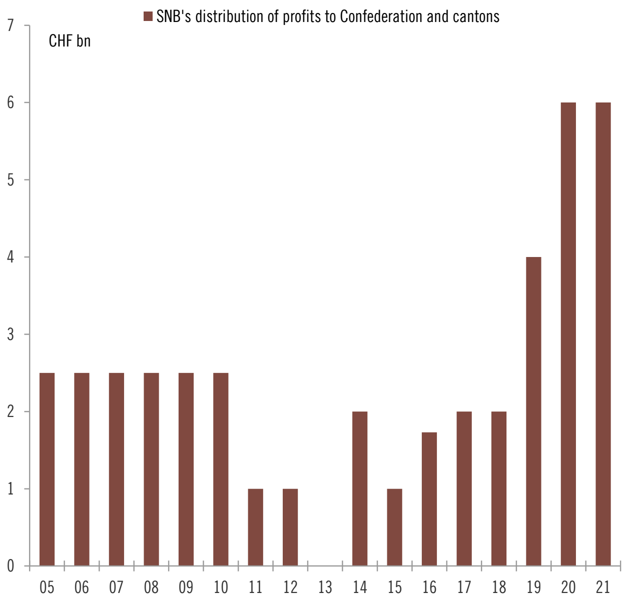
Chart 5: SNB's annual results



Source: Pictet WM CIO Office & Macro Research, SNB, 2 December 2022

Chart 6: SNB's distribution of profits to government



Source: Pictet WM CIO Office & Macro Research, SNB, 2 December 2022

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