

115th Annual Report Swiss National Bank 2022

SCHWEIZERISCHE NATIONALBANK
BANQUE NATIONALE SUISSE
BANCA NAZIONALE SVIZZERA
BANCA NAZIUNALA SVIZRA
SWISS NATIONAL BANK



115th Annual Report
Swiss National Bank
2022

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Ladies and Gentlemen

It is our pleasure to present the Swiss National Bank's Annual Report for 2022. The first part of the report comprises the accountability report submitted by the Governing Board to the Federal Assembly, and sets out how the SNB has fulfilled its tasks pursuant to art. 5 of the National Bank Act (NBA) during the past year. The second part comprises the financial report, which provides information on organisational and operational developments as well as the financial result. The financial report is submitted for approval first to the Federal Council and then to the General Meeting of Shareholders.

In 2022 there was a loss of momentum in both the global and the Swiss economy, while inflation in advanced economies rose very sharply. The global slowdown in growth was in part attributable to many national economies having already largely recovered in 2021 from the previous year's pandemic-related recession. At the same time, existing supply chain disruptions, as well as new waves of the pandemic and consequent containment measures, weighed on economic activity in individual countries. The recovery in demand and supply bottlenecks put pressure on prices. Another factor was Russia's attack on Ukraine in the year under review, which resulted in higher energy prices that further increased inflation. Given the elevated level of inflation, many central banks changed course towards a more restrictive monetary policy.

The SNB, too, tightened its monetary policy in the year under review and ended the phase of negative interest. From February, inflation in Switzerland was above the range that the SNB equates with price stability. In the fourth quarter of 2021, the SNB had already allowed the Swiss franc to appreciate to a certain extent in order to curb inflation from imported goods and services. At its monetary policy assessments in June, September and December 2022, the SNB increased its policy rate in three steps, from -0.75% to 1.0% .

With its decision at the monetary policy assessment in September to raise the SNB policy rate into positive territory, the SNB adjusted the implementation of its monetary policy. Sight deposits held by banks and other financial market participants at the SNB are now remunerated, which makes it possible to effectively steer money market rates when the SNB policy rate is positive and there is high excess liquidity. A system of tiered remuneration is used. In addition, sight deposits are absorbed by way of open market operations. In order to ensure appropriate monetary conditions, the SNB also engaged in foreign currency purchases and sales in 2022.

The SNB comprehensively reviewed its monetary policy strategy during the year under review and concluded that it has fundamentally proven its worth. There was no need to adjust the first two elements, namely the definition of price stability and the conditional inflation forecast. The third element describes how the SNB implements its monetary policy by influencing the interest rate level and the exchange rate. The formulation of this element has been adjusted to take explicit account of the increased importance of foreign exchange market interventions and other monetary policy instruments in recent years.

As part of this review, the SNB also decided to hold a news conference following every monetary policy assessment, in order to explain the monetary policy decision to the public in greater detail. This change was implemented for the first time at the September assessment.

The Bank Council approved a partial revision of the SNB's Organisation Regulations for submission to the Federal Council, which in turn gave its approval at the beginning of May. At the core of the partial revision is the increase in the number of Alternate Members of the Governing Board to a maximum of two per department. This adjustment should help the SNB to continue to cope well with the challenges that have risen strongly in recent years.

In addition, in 2022 the Bank Council approved the further developments made in the previous year to the diversity strategy. The strategy contributes to creating conditions that enable all employees to be committed and successful in terms of the performance mandate, and to feel they are part of the institution.

The COVID-19 measures were lifted in spring, and the SNB's operations gradually returned to normal. At the same time, the SNB introduced new, flexible arrangements for working from home.

The SNB's 2022 annual financial statements closed with a loss of CHF 132.5 billion, following a profit of CHF 26.3 billion in the previous year. The negative annual result was mainly attributable to valuation losses on foreign currency positions.

The allocation to the provisions for currency reserves amounts to CHF 9.6 billion. After taking into account the distribution reserve of CHF 102.5 billion, the net loss comes to CHF 39.5 billion. In accordance with the NBA and the profit distribution agreement signed in January 2021 between the SNB and the Federal Department of Finance, the SNB is unable either to pay a dividend to the shareholders or to make a profit distribution to the Confederation and the cantons for 2022.

We would like to thank our employees for their hard work and valuable support, which we were again able to count on in the past year.

Berne and Zurich, 3 March 2023

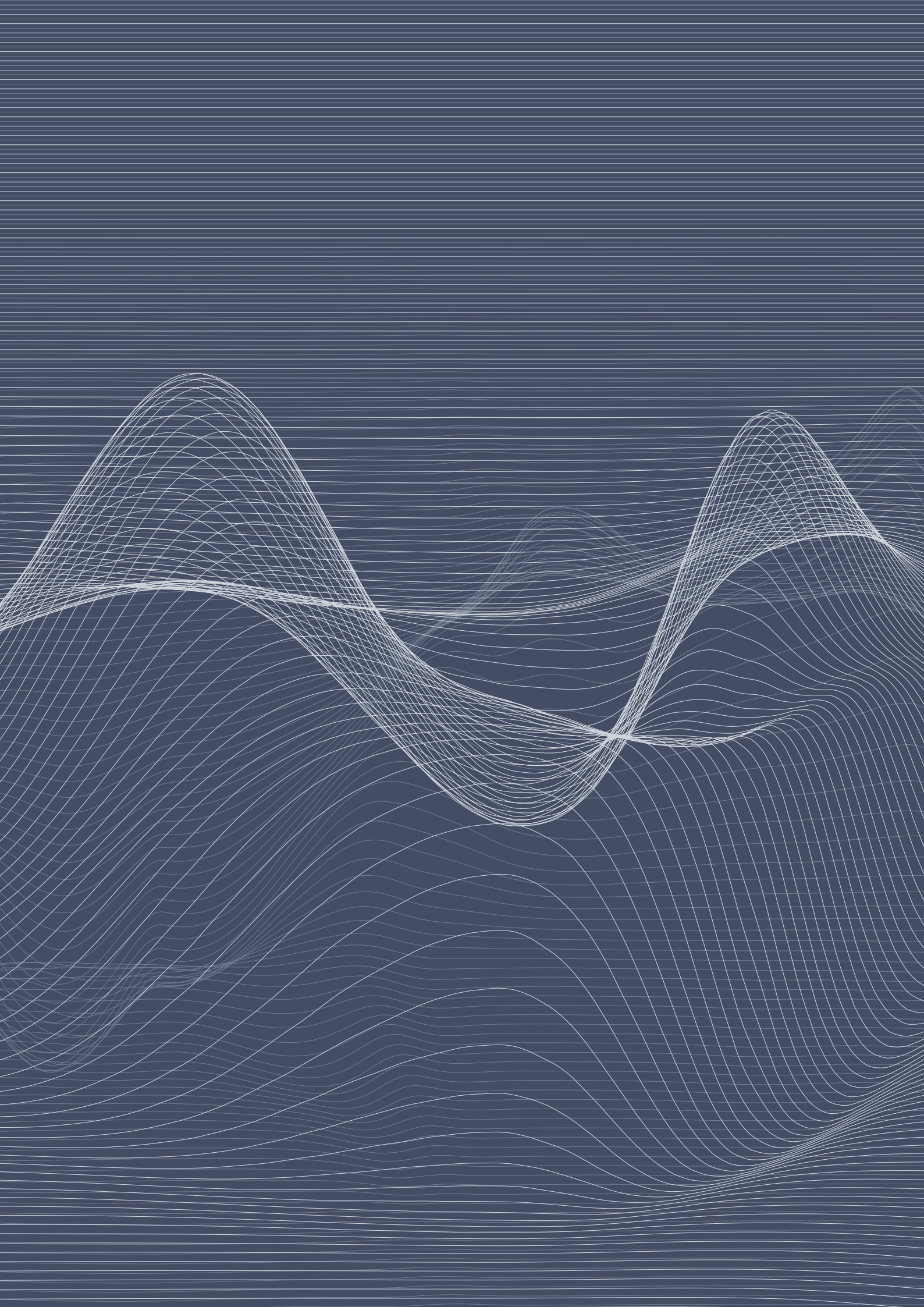


BARBARA JANOM STEINER
President of the Bank Council



THOMAS J. JORDAN
Chairman of the Governing Board

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| <p>The Swiss National Bank conducts the country’s monetary policy as an independent central bank. It is obliged by Constitution and statute to act in accordance with the interests of the country as a whole. Its primary goal is to ensure price stability, while taking due account of economic developments.</p> | <p>Mandate</p> |
| <p>Price stability is an important condition for growth and prosperity. The SNB equates price stability with a rise in consumer prices of less than 2% per annum. Deflation – i.e. a sustained decrease in the price level – also breaches the objective of price stability.</p> | <p>Price stability</p> |
| <p>The SNB implements its monetary policy by steering the interest rate level on the money market. It sets the SNB policy rate and seeks to keep the secured short-term money market rates close to the SNB policy rate. If necessary, the SNB can also use additional monetary policy measures to influence the exchange rate or the interest rate level.</p> | <p>Implementation of monetary policy</p> |
| <p>The SNB is entrusted with the note-issuing privilege. It supplies the Swiss economy with banknotes that meet high standards with respect to quality and security. It is also charged by the Confederation with the task of coin distribution.</p> | <p>Cash supply and distribution</p> |
| <p>The SNB facilitates and secures the operation of cashless payment systems. To this end, it is involved in the Swiss Interbank Clearing (SIC) payment system. Payments in the SIC system are settled via sight deposit accounts held with the SNB.</p> | <p>Cashless payment transactions</p> |
| <p>The SNB manages the currency reserves, the most important component of its assets. It requires currency reserves to ensure that it has room for manoeuvre in its monetary policy at all times. The level of the currency reserves is largely dictated by the implementation of monetary policy.</p> | <p>Asset management</p> |
| <p>The SNB contributes to the stability of the financial system. It fulfils this mandate by analysing sources of risk to the financial system and identifying areas where action is needed. In addition, it helps to create and implement a regulatory framework for the financial sector, and oversees systemically important financial market infrastructures.</p> | <p>Financial system stability</p> |
| <p>The SNB participates in international monetary cooperation. To this end, it works in conjunction with the federal authorities. It participates in multilateral institutions, cooperates with the federal government in providing international monetary assistance, and works on a bilateral level with other central banks and authorities.</p> | <p>International monetary cooperation</p> |
| <p>The SNB acts as banker to the Confederation. It keeps accounts for and processes payments on behalf of the Confederation, issues money market debt register claims and bonds, handles the custody of securities and carries out foreign exchange transactions.</p> | <p>Banker to Confederation</p> |
| <p>The SNB compiles statistical data on banks and financial markets, the balance of payments, direct investment, the international investment position and the Swiss financial accounts.</p> | <p>Statistics</p> |



Accountability report

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On 22 March 2023, the Governing Board of the Swiss National Bank submitted its accountability report for 2022 to the Federal Assembly in accordance with art. 7 para. 2 of the National Bank Act (NBA). The report provides information about how the SNB has fulfilled its mandate pursuant to art. 5 NBA – in particular as regards its conduct of monetary policy and its contribution to the stability of the financial system. It is submitted to the Federal Council and the General Meeting of Shareholders for information purposes.

SUMMARY

Monetary policy

The SNB pursues a monetary policy serving the interests of the country as a whole. It must ensure price stability, while taking due account of economic developments. In its monetary policy strategy, the SNB sets out the manner in which it operationalises its statutory mandate. The strategy consists of three elements. The first element specifies what the SNB understands by price stability. The second element refers to the conditional inflation forecast as the main indicator for monetary policy and as a central instrument of communication. The third element describes how the SNB implements its monetary policy by influencing the interest rate level and the exchange rate.

The SNB subjected its monetary policy strategy to a comprehensive review in 2022. The review concluded that the strategy has fundamentally proved its worth. There was no need to adjust the first two elements. The formulation of the third element, however, has been adjusted. The SNB implements its monetary policy by setting the SNB policy rate. The third element now explicitly provides for the SNB to also use additional monetary policy measures to influence the exchange rate or the interest rate level, if necessary. With this adjustment, the SNB is taking into account the increased importance of such measures in recent years. Until now they have been mentioned in explaining the strategy, but were not explicitly included in the third element.

As part of this review, the SNB also decided to hold a news conference following every monetary policy assessment, in order to explain the monetary policy decision to the public in greater detail. This change was implemented for the first time at the September assessment.

The global economy lost momentum in 2022. At the same time, inflation in the advanced economies rose further and on a broad base. The global slowdown in growth was in part attributable to the economies in many countries having already largely recovered in 2021 from the previous year's pandemic-related recession. The catch-up effect was therefore significantly smaller in 2022. There was also a range of factors that dampened economic development. The still persisting supply bottlenecks, as well as renewed waves of the pandemic and associated containment measures, weighed on economic activity in individual countries. Consumer and business sentiment also deteriorated worldwide due to Russia's attack on Ukraine. Furthermore, Russia successively reduced gas supplies to Europe. The resultant rise in energy prices pushed inflation higher, which in turn weakened household purchasing power and dampened demand.

Many central banks tightened their monetary policy in view of the high level of inflation, and interest rates rose significantly. Differences in the scale and pace of monetary policy tightening by the central banks in the advanced economies led to larger movements on the foreign exchange markets. The US dollar strengthened against most currencies, while the yen depreciated significantly. By contrast, the euro moved sideways overall on a trade-weighted basis.

The Swiss economy also lost momentum in 2022, and there was a marked rise in inflation. GDP growth was slightly above average at 2.1%. However, this represented a clear slowdown compared with 2021, when many parts of the economy recovered strongly from the coronavirus crisis and GDP expanded by 3.9%. Although the direct impact of the war in Ukraine was comparatively modest, the economy was nonetheless affected indirectly via various channels. Among the factors having a dampening effect were the markedly higher commodity prices. The risk of gas scarcity and electricity shortages led to heightened uncertainty. Industrial activity also weakened as a result of the economic slowdown abroad. However, the situation in the labour market continued to improve; employment increased significantly and unemployment declined to 1.9% by the end of the year.

Annual inflation as measured by the Swiss consumer price index (CPI) rose, from 2.1% in the first quarter to 3.4% in the third, before declining again to 2.9% in the fourth quarter. The average for the year stood at 2.8% (2021: 0.6%). This significant rise was attributable to the marked increase in prices for imported goods and services, but also to elevated inflation in the case of domestic goods and services. Over the course of the year, inflation increasingly spread to goods and services which had initially hardly been affected by price increases. From February onwards, inflation was above the range between 0% and 2% that the SNB equates with price stability.

The SNB tightened its monetary policy with the goal of restoring price stability over the medium term and keeping long-term inflation expectations well anchored within the range consistent with price stability. The SNB had already allowed the Swiss franc to appreciate to a certain extent in the fourth quarter of 2021 and communicated this at its monetary policy assessment in December. The appreciation of the Swiss franc counteracted a rise in prices domestically given that the increase in the prices of imports was less pronounced. At its monetary policy assessments in June, September and December 2022, the SNB increased its policy rate in three steps, from -0.75% to 1.0% . The SNB indicated in each case that further interest rate rises could not be ruled out. The almost eight-year period of negative interest ended with the decision in September 2022 to increase the SNB policy rate from -0.25% to 0.5% . In addition, at the monetary policy assessment in June, the SNB signalled its willingness to sell foreign currency as necessary to ensure appropriate monetary conditions. Accordingly, it also sold foreign currency from the third quarter onwards.

The SNB's monetary policy remains focused on ensuring price stability. While the SNB's quarterly conditional inflation forecasts for 2022 and 2023 were outside the range between 0% and 2% that the SNB equates with price stability, those for 2024 remained within this range throughout.

The SNB takes into account the possible consequences of climate change for monetary policy, financial stability and the management of currency reserves within the framework of its statutory mandate. In this context, it works closely with other central banks, authorities and universities, as well as international organisations and forums, and actively participates in the international exchange of experience on climate issues.

In view of a possible power shortage in the winter of 2022/23, the SNB made far-reaching preparations. In August 2022, an internal committee aimed at crisis management began working on the task of ensuring the fulfilment of the SNB's mandate as well as possible under relevant electricity saving or electricity rationing scenarios.

Until September 2022, the SNB implemented its monetary policy by charging negative interest on the sight deposits held by banks and other financial market participants at the SNB which exceeded a given exemption threshold. The negative interest rate corresponded to the SNB policy rate, which was -0.75% until June, and then -0.25% until September.

In deciding at its September monetary policy assessment to raise the SNB policy rate to 0.5% , and thus into positive territory, the SNB adjusted the implementation of its monetary policy. The new approach uses two levers, which together ensure that the secured short-term Swiss franc money market rates are close to the SNB policy rate. The focus in this regard is the interest rate for secured overnight money, SARON (Swiss Average Rate Overnight), which had fully replaced the Swiss franc Libor (London Interbank Offered Rate) as the reference rate at the end of 2021.

The first lever is a remuneration of the sight deposits that banks and other financial market participants hold at the SNB. This remuneration enables effective steering of money market rates when the SNB policy rate is positive and there is high excess liquidity. A system of tiered remuneration is used. The tiered remuneration of sight deposits creates an incentive to trade sight deposits in the Swiss franc money market, and thus contributes to the robustness of SARON. Sight deposits up to a certain threshold are remunerated at the SNB policy rate. Sight deposits above the applicable threshold are remunerated at the SNB policy rate minus a discount. This discount was set at 0.5 percentage points at the September monetary policy assessment. As a result, the interest rate on sight deposits above the threshold was initially 0% . The SNB policy rate was raised to 1.0% at the December assessment; this then meant that sight deposits above the threshold were remunerated at 0.5% . The discount of 0.5 percentage points thus remained unchanged.

The second lever is the absorption of reserves by way of open market operations. Liquidity-absorbing repo transactions and the issuance of short-term SNB debt certificates (SNB Bills) were used to reduce sight deposits, and thereby the liquidity supply in the money market. As a result, SARON was close to the SNB policy rate in 2022.

In order to contribute to appropriate monetary conditions, the SNB also engaged in foreign currency purchases and sales, as necessary. Over the course of the year, it made net sales of foreign currency equivalent to a total of CHF 22.3 billion.

Cash supply and distribution

With the coronavirus pandemic waning and social life and the economy largely back to normal, the demand for cash as a means of payment stabilised below its pre-crisis level. Following the SNB policy rate hike in June 2022, cash flows back to the SNB increased from July onwards. Cash does not earn interest, so when interest rates rise, demand for large-denomination banknotes, which are primarily used as a store of value, falls. The value of banknotes in circulation thus decreased. It averaged CHF 87.2 billion in 2022, a 1.3% decline year-on-year. The total number of notes in circulation was 1.1% higher than in 2021, averaging 537.6 million. This slight increase suggests that, despite digitalisation, the Swiss population continues to use cash – especially the smaller denominations – for payment purposes.

In August, data collection commenced for the third survey on the payment methods of households. The results will be published in the first half of 2023.

Cashless payment transactions

In 2022, a daily average of approximately 3.7 million transactions amounting to CHF 200 billion were settled via the Swiss Interbank Clearing (SIC) payment system. Compared to the previous year, the average number of transactions settled per day rose by 6.4% and turnover increased by 22.7%. One of the main drivers of the higher turnover was the tightening of monetary policy in 2022. The cash side of the SNB's liquidity-absorbing operations, such as repo transactions and issuing SNB Bills, is settled in the SIC system and has therefore contributed significantly to the higher turnover.

The SNB and SIX Interbank Clearing Ltd continued work in 2022 on the SIC5 project initiated two years previously to further develop the SIC system. Among other things, SIC5 allows the settlement of instant payments, i.e. cashless retail payments that are processed around the clock with the amount being made available for use by the final recipient within seconds. The new SIC5 platform is expected to be launched at the end of 2023, thus creating the technical framework required for instant payments.

Further advances were also made in the project launched together with SIX Group Ltd (SIX) to develop a secure network for the Swiss financial centre (Secure Swiss Finance Network, SSFN). The SSFN communication network was approved in June 2022 as a means of connecting to the SIC system in addition to the existing communication links. The SNB has since been using the SSFN for its own connection. SIX will replace the existing Finance IPNet with the SSFN for all of its services by September 2024.

In October, the SNB published a requirements catalogue ‘Endpoint security in SIC system’ which contains binding measures for the SIC participants. Endpoints is the collective term for all devices, applications and systems used for exchanging payment messages between participants and the SIC system. The goal of the catalogue is to increase the security of endpoints and thus also their protection against unauthorised third-party access.

In 2022, the SNB’s balance sheet total contracted for the first time in 15 years. At year-end, the SNB’s assets amounted to CHF 881 billion, compared to CHF 1,057 billion one year earlier. This reduction was principally due to valuation losses on investments, with foreign currency sales also a contributing factor. At the end of 2022, total currency reserves amounted to CHF 853 billion. The majority of these reserves was held in the form of foreign currency investments, the remainder in gold.

Asset management

The most important risk factor to which the investments are exposed is currency risk, followed by risks related to share prices, interest rates and the gold price. In 2022, however, the loss on investments was principally due to sharply declining share prices and rising interest rates. The appreciation of the Swiss franc, meanwhile, was only a moderate contributor. Measured in Swiss francs, the return on currency reserves was –13.1%. Gold and foreign exchange reserves yielded 0.7% and –13.9% respectively.

The SNB makes most of its foreign currency investments in government bonds. However, it also invests in shares and corporate bonds in order to take advantage of the positive return contribution of these asset classes and improve the long-term risk/return ratio. When managing such securities of private sector issuers, the SNB also takes non-financial aspects into consideration. For instance, owing to its special role vis-à-vis the banking sector, it refrains from investing in shares of systemically important banks worldwide.

The SNB also takes account of Switzerland’s fundamental standards and values in its investment policy. Consequently, it does not invest in shares and bonds of companies whose products or production processes grossly violate broadly accepted values. The SNB therefore does not purchase securities issued by companies that seriously violate fundamental human rights, systematically cause severe environmental damage, are primarily active in the mining of coal for energy production or are involved in the production of internationally condemned weapons.

The growth in the balance sheet in recent years has resulted in higher loss risk in absolute terms. The SNB aims for a robust balance sheet with sufficient equity capital, to ensure that it can also absorb potentially high losses such as those incurred in 2022. Equity capital is composed of the provisions for currency reserves and the distribution reserve. Annual allocations to the provisions for currency reserves are necessary to ensure a solid equity base. For 2022, the allocation amounted to CHF 9.6 billion; the provisions thus totalled CHF 105.2 billion. By contrast, after the appropriation of profit, the distribution reserve fell into negative territory (CHF –39.5 billion). This precludes the payment of a dividend and a profit distribution to the Confederation and the cantons for 2022. The large loss incurred in 2022 highlights the importance of holding a sufficient level of provisions.

Financial system stability

Within the context of monitoring the financial system, the SNB analyses developments and risks in the Swiss banking sector. Its assessment is published, in particular, in its annual Financial Stability Report.

In 2022, the SNB emphasised the different development of the two globally active banks, particularly in terms of profitability. While UBS Group AG (UBS) increased its profits, Credit Suisse Group AG (Credit Suisse) reported a heavy loss again for the 2022 financial year. In view of its ongoing losses, Credit Suisse announced a comprehensive restructuring of its investment bank at the end of October as part of its strategic reorientation. At the same time, it strengthened its capital base by CHF 4 billion. The SNB welcomed the reorientation of Credit Suisse's business model, which is intended to reduce risks in the medium term.

As regards the domestically focused banks – which concentrate on deposit and lending business – the SNB noted that their profitability had risen slightly, with a further decline in the interest rate margin offset by various factors including low value adjustments and improved cost efficiency. By historical comparison, the profitability of the domestically focused banks remains low. However, it should now gradually improve as interest rate margins benefit from the rise in long-term interest rates during 2022.

The domestically focused banks' exposure to the mortgage and real estate markets continued to increase. Both mortgage volume at these banks and affordability risks rose once again in 2022. At the same time, driven by continued strong demand and tight supply, transaction prices for single-family houses and apartments continued to increase further despite the higher interest rates. Meanwhile, there were growing signs of a slowdown in prices for apartment buildings.

In January 2022, given the continued build-up of vulnerabilities on the Swiss mortgage and real estate markets, the Federal Council reactivated the sectoral countercyclical capital buffer targeted at mortgage loans financing residential real estate in Switzerland, following a proposal by the SNB. Since September, banks have been required to hold a sectoral capital buffer of 2.5%.

Measures are in place to facilitate recovery or orderly wind-down (resolution) in a crisis where a bank can no longer continue to operate as a going concern (and is thus a 'gone concern'). For a successful resolution, the systemically important banks (Credit Suisse, UBS, Zürcher Kantonalbank, Raiffeisen Group and PostFinance) must have both sufficient gone-concern loss-absorbing capacity and sufficient liquidity (funding in resolution). Regarding funding in resolution, important regulatory progress was made in the year under review. First, amendments to the Liquidity Ordinance came into force on 1 July 2022. These amendments are intended to ensure that systemically important banks hold sufficient liquidity to cover their needs even in the event of a resolution. Second, on 11 March 2022 the Federal Council announced its intention to introduce a public liquidity backstop in Switzerland, by means of which the SNB could provide liquidity assistance to a systemically important bank in the form of a state-guaranteed loan.

In the context of its oversight function and with respect to business continuity management, the SNB called on the systemically important financial market infrastructures (FMIs) to deal more systematically and comprehensively with extreme but plausible scenarios as well as with the management of associated risks. In particular, the rapidly changing threat situation with regard to cyberattacks must be taken into consideration to a greater degree.

Not only can cyberincidents impact individual financial institutions, but they can also jeopardise the functioning of the financial system. While responsibility for protecting themselves against cyber risks lies with the individual financial institutions, the authorities also contribute to the cybersecurity of the financial sector within the scope of their mandates. Since 2020, the authorities (FDF, FINMA and SNB), working together with the private sector (banks, insurance companies, FMIs and industry associations) and under the direction of the National Cyber Security Centre (NCSC), have been developing the basis for the Swiss Financial Sector Cyber Security Centre (Swiss FS-CSC) association. This was founded in April 2022. The SNB is a founding member of the association and participates in its committees. The Swiss FS-CSC association's mission goals include facilitating a better exchange of information on the threat situation and specific incidents and supporting financial sector participants in managing systemic cyberincidents.

International monetary cooperation

The SNB participates in international monetary cooperation through its involvement in the relevant multilateral institutions and bodies, and its collaboration on a bilateral level with other central banks and authorities. The multilateral institutions and forums include the International Monetary Fund (IMF), the Bank for International Settlements (BIS), the Financial Stability Board (FSB), the G20 Finance Track, the Organisation for Economic Co-operation and Development (OECD), and the Central Banks and Supervisors Network for Greening the Financial System (NGFS).

In April, the IMF's Executive Board approved the creation of a Resilience and Sustainability Trust (RST). With this vehicle, the IMF can finance concessional, longer-term loans to help low-income and vulnerable member countries overcome structural challenges. The RST is funded by voluntary contributions from IMF members with strong external positions. Switzerland held out the prospect of a contribution.

In 2021, the IMF had launched a new financing round to support the sustainability of the Poverty Reduction and Growth Trust (PRGT). Funds from this trust are used for interest subsidies as well as loans. In December 2022, the Swiss parliament voted in favour of contributing CHF 50 million to PRGT interest subsidies.

At the end of 2022, Switzerland's commitment to financing the IMF's regular lending amounted to a maximum of CHF 24.5 billion; the effective outstanding amount was CHF 2.1 billion. Moreover, CHF 873 million in loans to the PRGT were outstanding under borrowing agreements between the SNB and the IMF. Under these agreements, the maximum amount still available to the IMF for drawdown was CHF 969 million. The SNB finances these commitments, with loans granted under the bilateral borrowing agreements being guaranteed by the Confederation.

In the context of its Article IV consultation with Switzerland in spring 2022, the IMF acknowledged the effectiveness of the SNB's monetary policy during the coronavirus crisis. At the same time, it emphasised that there is a risk that inflation could rise further and be more persistent. Moreover, the IMF welcomed the financial sector's continued resilience and the steps taken to further strengthen financial stability, including the reactivation of the sectoral countercyclical capital buffer.

In 2022, employees from the BIS and the SNB worked on four different projects at the BIS Innovation Hub Swiss Centre. In Project Rio, the platform built to monitor fast-paced markets, such as foreign exchange markets, was developed further ahead of a potential launch. Project Titus investigated ways of reducing liquidity needs in the payment system. Project Mariana, which was launched in 2022 in cooperation with the Banque de France and the Monetary Authority of Singapore, explores how a decentralised foreign exchange market for wholesale central bank digital currencies might look. Project Tourbillon is developing a prototype CBDC payment system that can process large transaction volumes, protects the privacy of payers, and is also secure in a world of quantum computers.

Since 2020, the FSB has been coordinating work to improve cross-border payments. The goal is to make cross-border payments faster, cheaper, more transparent and more accessible. To this end, the FSB realigned its work in the year under review and began a close exchange with the public and private sector.

In the autumn edition of its biannual Economic Outlook report, the OECD recommended that the SNB continue pursuing its policy of monetary tightening to contain core inflation and prevent a de-anchoring of inflation expectations.

At the invitation of the Indonesian G20 presidency, Switzerland again participated in the Finance Track in 2022. Discussions were heavily influenced by the war in Ukraine and its negative consequences for the global economy.

In the year under review, the SNB also participated in NGFS workstreams examining, among other things, the development of climate scenarios and the macroeconomic analysis of climate risks, including their impact on monetary policy.

As part of its bilateral monetary cooperation, the SNB collaborates with other central banks, cultivates contacts with foreign authorities and provides technical assistance. The main recipients of technical assistance are the central banks of countries in Central Asia and the Caucasus, i.e. the members of the Swiss constituency at the IMF and the World Bank. The Swiss constituency met in Bad Ragaz in July to celebrate its 30th anniversary.

From 27 June 2022, Ukrainian adults with protection status ‘S’ were able, in a one-off transaction, to exchange Ukrainian banknotes worth up to approximately CHF 300 for Swiss francs at selected bank branches in Switzerland. The SNB was responsible for handling operational implementation on behalf of the federal government and worked closely with the participating commercial banks. The SNB concluded an agreement with the National Bank of Ukraine to ensure the exchange and repatriation of the notes. At the NBU’s request, the cash exchange programme was discontinued as of 25 November 2022 due to low demand latterly. A total of approximately CHF 330,000 worth of Ukrainian notes was exchanged.

Banking services for Confederation

In 2022, the Confederation’s short-term financing needs declined somewhat year-on-year. On behalf of and for the account of the Confederation, the SNB issued, by auction, money market debt register claims amounting to CHF 33.5 billion and Confederation bonds amounting to CHF 6.8 billion.

Statistics

The SNB compiles statistical data on banks and financial markets, the balance of payments, the international investment position, direct investment and the Swiss financial accounts. To this end, it collaborates with the relevant federal government bodies, with the Swiss Financial Market Supervisory Authority (FINMA), and also with the authorities of other countries and international organisations.

The SNB's data portal was further expanded in 2022. Since March, more detailed data have been available on the balance of payments, the international investment position, and direct investment. Additional data on payment transactions have been published since May, and banking statistics data have been expanded to include data on the 'domestic office' perspective.

In 2022, the SNB, together with FINMA, launched a project to introduce an individual-loan survey. Within the framework of this survey, the major lending banks are to regularly report their total loan portfolios on an individual-loan basis. The information obtained gives the SNB and FINMA improved options for analysis. It also reduces the costs for reporting institutions associated with additional surveys.

The SNB completed work on the new current account survey in the year under review. Various activities have been underway since 2017 to improve the recording of global production in Switzerland's balance of payments statistics. Reporting institutions have been informed that they will have to submit their current account survey data to the SNB in line with the new requirements as of the reference date 31 March 2023.

1

Monetary policy

1.1 MANDATE AND MONETARY POLICY STRATEGY

Constitutional and statutory mandate

Article 99 of the Federal Constitution entrusts the Swiss National Bank, as an independent central bank, with the conduct of monetary policy in the interests of the country as a whole. The mandate is explained in detail in the National Bank Act (art. 5 para. 1 NBA), which requires the SNB to ensure price stability and, in so doing, to take due account of economic developments.

Significance of price stability

Price stability is an important prerequisite for growth and prosperity. It means that money retains its value over time. By seeking to keep prices stable, the SNB creates an environment in which households and companies can make plans on a reliable basis. Inflation (a sustained increase in the price level) and deflation (a sustained decrease in the price level) both impair economic development. They hinder the role of prices in allocating labour and capital to their most efficient use, and result in a redistribution of income and wealth. Because inflation hits low-income households hardest, price stability makes an important contribution to social cohesion.

Monetary policy strategy

In its monetary policy strategy, the SNB sets out the manner in which it operationalises its statutory mandate. The strategy consists of three elements. The first element specifies what the SNB understands by price stability. The second element refers to the conditional inflation forecast as the main indicator for monetary policy and as a central instrument of communication. The third element describes how the SNB implements its monetary policy by influencing the interest rate level and the exchange rate.

Review of monetary policy strategy

The SNB's monetary policy strategy with its three elements has been in force since 2000. It provides the framework for monetary policy decision-making and communication. A strategy that is applied consistently over time lends credibility to monetary policy and thereby increases its impact. That said, such a strategy must be continuously reviewed and, if necessary, adapted to changing framework conditions in order to enable an effective monetary policy.

The steady and global decline in the general level of interest rates over the past decades has limited the scope for monetary policy easing through interest rate cuts, since there are limits on the extent to which the monetary policy rate can be lowered into negative territory. In order to ensure appropriate monetary conditions in the face of very low inflation in recent years, the SNB also intervened in the foreign exchange market.

Against the backdrop of the various changes in the economic environment during this period, the SNB subjected its monetary policy strategy to a comprehensive review in 2022. To this end, a series of analyses were carried out in which the monetary policy strategy and possible adjustments were evaluated.

The review of the monetary policy strategy showed that it has fundamentally proved its worth. There was no need to adjust the first two elements, namely the definition of price stability and the conditional inflation forecast. The strategy has enabled the SNB to fulfil its mandate of price stability well, despite repeated strong external shocks in recent years. The definition of price stability has allowed the SNB to react flexibly to such shocks and to weigh up the costs and benefits of monetary policy measures. The conditional inflation forecast has also proved its worth as the main indicator for the orientation of monetary policy and as a tool for its communication. It summarises the need for monetary policy action and helps to communicate monetary policy decisions in an understandable manner.

Adjustments in
monetary policy strategy

The formulation of the third element, however, has been adjusted. The SNB implements its monetary policy by setting the SNB policy rate. The third element now explicitly provides for the SNB to also use additional monetary policy measures to influence the exchange rate or the interest rate level, if necessary. With this adjustment, the SNB is taking into account the increased importance of such measures in recent years. Until now they have been mentioned in explaining the strategy, but were not explicitly included in the third element.

As part of this review, the SNB also decided to hold a news conference following every monetary policy assessment, in order to explain the monetary policy decision to the public in greater detail. This change was implemented for the first time at the September assessment.

The individual elements of the SNB's revised monetary policy strategy are explained in more detail below.

Definition of price stability

The SNB equates price stability with a rise in the Swiss consumer price index (CPI) of less than 2% per annum. Deflation, i.e. a sustained decrease in the price level, also breaches the objective of price stability. The SNB does not aim for a specific inflation rate in the range between 0% and 2%. As long as inflation is within this range, the objective of price stability is fulfilled. A precise steering of inflation is neither necessary nor possible. The SNB's definition of price stability means it can allow inflation to remain at the upper or lower end of the range between 0% and 2% for a longer period of time, depending on the situation. For example, in an environment of shrinking global supply, the SNB could accept inflation at the upper end of the range.

The SNB seeks to keep inflation within the range consistent with price stability in the medium term. It usually only reacts to short-term price movements, e.g. due to fluctuations in commodity prices or in the exchange rate, if there is a threat of a sustained inflationary or deflationary development. The reason for this medium-term focus is that monetary policy can only influence inflation with a certain time lag.

Conditional inflation forecast

The inflation forecast published quarterly by the SNB serves as the main indicator for monetary policy decisions and is a key element in its communications. The forecast refers to the next three years, which reflects the medium-term focus of monetary policy. With this approach, the SNB takes account of the fact that output and prices react to monetary policy stimuli with – at times considerable – lags. Besides the inflation forecast, the SNB takes into consideration a large number of indicators of domestic and international economic and monetary developments and of financial stability for its monetary policy decisions. The SNB also uses the information from the talks with companies conducted by its delegates for regional economic relations.

The SNB's inflation forecast assumes that the level of the SNB policy rate applicable at the time of its publication will remain constant over the next three years. The inflation forecast published by the SNB is thus a conditional forecast that shows how the SNB expects consumer prices to develop with an unchanged interest rate. In this way, the SNB enables the public to gauge whether there will be a need for monetary policy action in the future. The SNB's inflation forecast differs from the forecasts of banks or research institutions, as these generally factor in the interest rate adjustments they anticipate.

To ensure price stability, the SNB maintains appropriate monetary conditions. These are determined by the interest rate level and exchange rates. The SNB sets the level of the SNB policy rate and communicates this in its monetary policy decision. It seeks to keep the secured short-term Swiss franc money market rates close to the SNB policy rate. The most important secured short-term Swiss franc interest rate is SARON (Swiss Average Rate Overnight). If necessary, the SNB may also use additional monetary policy measures to influence the exchange rate or the interest rate level. For example, in recent years the SNB has intervened in the foreign exchange market as necessary to ensure appropriate monetary conditions. In 2022, it sold foreign currency to that end.

Implementation of monetary policy

The interest rate level in Swiss francs is significantly influenced by the SNB policy rate. An increase in interest rates tightens monetary conditions and dampens demand for goods and services. As a result, the utilisation of production capacity declines, and inflation falls. Conversely, a reduction in interest rates stimulates aggregate demand, which leads to an increase in the utilisation of production capacity and a rise in inflation. Moreover, the interest rate level also influences the exchange rate.

Role of interest rate level

Changes in the exchange rate, like changes in interest rates, have an effect on the economy and inflation. A depreciation of the Swiss franc makes imported goods and services more expensive, thereby increasing inflation. At the same time, Swiss franc depreciation stimulates exports and thus economic activity, which over time also leads to higher inflation. Conversely, an appreciation of the Swiss franc has a dampening effect on economic activity and inflation.

Role of exchange rate

Foreign exchange market interventions

An independent monetary policy that is geared towards the objective of price stability fundamentally requires flexible exchange rates. Nevertheless, the SNB intervenes in the foreign exchange market as necessary to ensure appropriate monetary conditions. In doing so, it does not focus on individual currency pairs, but rather takes the overall currency situation into account. A need for foreign currency purchases arises in particular when the scope for interest rate cuts is small and the appreciation of the Swiss franc threatens to result in a deflationary development. Conversely, foreign currency can also be sold to ensure appropriate monetary conditions. In addition, foreign exchange market interventions can serve to ensure orderly market conditions in phases of high uncertainty.

Macroprudential instruments

Like price stability, financial stability is a prerequisite for sustainable economic growth. Experience from the financial crisis has shown that achieving price stability does not necessarily ensure the stability of the financial system. The authorities have macroprudential instruments at their disposal that can be applied in a targeted manner to address credit market imbalances which threaten financial stability (cf. chapter 6).

Research

Research activities help the SNB fulfil its constitutional and statutory mandate. They enhance the understanding of complex economic interrelationships, promote further development of analytical methods, and provide an important basis for monetary policy decisions. The SNB researches subjects connected with its core tasks, the focus being on monetary policy and financial stability.

Research and studies by SNB employees are published in the SNB Working Papers series, as well as in recognised academic journals. The SNB Research Report, which is published on an annual basis, provides an overview of the latest research activities at the SNB.

The SNB maintains a dialogue with other central banks, universities and research institutes in order to promote knowledge-sharing. It regularly holds conferences and seminars for this purpose. Five research conferences were held in 2022, as well as 28 research and 20 technology and finance seminars. The number of events was similar to 2021.

1.2 INTERNATIONAL ECONOMIC DEVELOPMENTS

The global economy lost momentum in 2022. At the same time, inflation in the advanced economies rose further and on a broad base. The global slowdown in growth was in part attributable to the economies in many countries having already largely recovered in 2021 from the previous year's pandemic-related recession. The corresponding catch-up effect was therefore significantly smaller in 2022. There was also a range of factors that dampened economic development. The still persisting supply bottlenecks, as well as renewed waves of the pandemic and associated containment measures, weighed on economic activity in individual countries. Added to this was Russia's attack on Ukraine. As a result, consumer and business sentiment deteriorated worldwide. Russia also successively reduced gas supplies to Europe, causing companies in Europe to adapt their production processes. At the same time, there was a sharp rise in energy prices and thus also inflation, which in turn weakened household purchasing power and dampened demand.

Global growth slowdown

Financial conditions became significantly more restrictive in most economies. This was primarily due to many central banks tightening their monetary policy in view of high inflation. Bond yields subsequently rose significantly. The stock markets suffered substantial losses overall due to the development of interest rates and increasing concerns over the economy. Differences in the scale and pace of monetary policy tightening by the central banks in the advanced economies led to larger movements on the foreign exchange markets. The US dollar strengthened against most currencies, while the yen depreciated significantly. By contrast, the euro moved sideways overall on a trade-weighted basis.

More restrictive financial conditions and stronger US dollar

The international supply chain problems eased gradually, and the affected goods trade thus returned to normal, as did the international transport prices that had risen sharply in 2021. However, this was accompanied by a decline in global demand momentum in the second half of the year, which weighed on global trade. For the year as a whole, global trade volume grew by 3.2%.

Volatile development of global trade

Strongly fluctuating commodity prices

Commodity prices fluctuated strongly, especially in the case of energy sources. At the beginning of the year, a barrel of Brent crude cost just under USD 80 and rose to over USD 120 following the outbreak of war in Ukraine. As the global supply of oil increased thereafter and demand weakened in the wake of the economic slowdown, the oil price fell again. At the end of 2022, it stood at slightly over USD 80. In Europe, natural gas and electricity prices rose strongly, in particular due to a reduction in the supply of gas from Russia. Energy-saving measures and well-stocked gas storage facilities contributed to the situation easing again somewhat towards the end of the year. Industrial metal prices also fluctuated strongly over the course of 2022, closing slightly lower than at the beginning of the year.

Economic slowdown in US

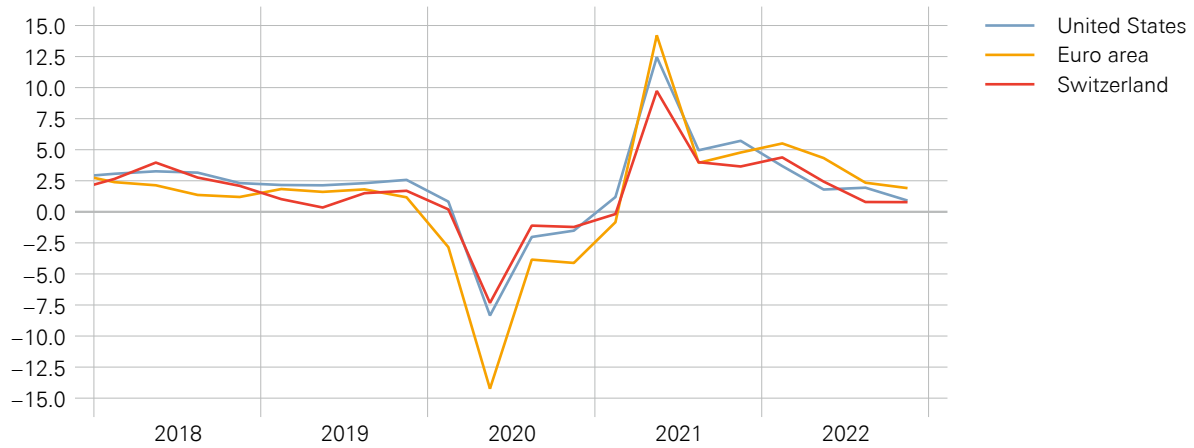
Following a strong rebound in 2021, economic activity in the US slowed noticeably, although GDP nonetheless showed solid annual growth at 2.1%. The economy was curbed in particular by the high level of inflation, which weighed on household purchasing power and consumer sentiment. Added to this came the effects of tighter monetary policy and a less expansionary fiscal policy. As a result, domestic demand increased only modestly. Despite the economic slowdown, the labour market remained strong. There was above-average growth in employment, and the unemployment rate was low at 3.5% in December. Overall, labour market conditions indicated that production capacity was well utilised. This was also reflected in above-average momentum in wages and prices.

Further recovery in euro area

In the euro area, GDP expanded by 3.5%, this following strong growth in 2021. However, the growth momentum slowed significantly over the course of the year. With Russia's attack on Ukraine and the reduction in gas deliveries from Russia, there was a sharp increase in energy prices for companies and households. The resultant higher inflation and the gas scarcity increasingly dampened economic growth. At the same time, the catch-up effect in the first half of the year resulting from the lifting of coronavirus containment measures gradually waned. GDP growth in the fourth quarter was therefore only weak. However, the labour market remained favourable; the unemployment rate fell markedly and in December reached a historical low of 6.6%.

GROWTH OF GROSS DOMESTIC PRODUCT

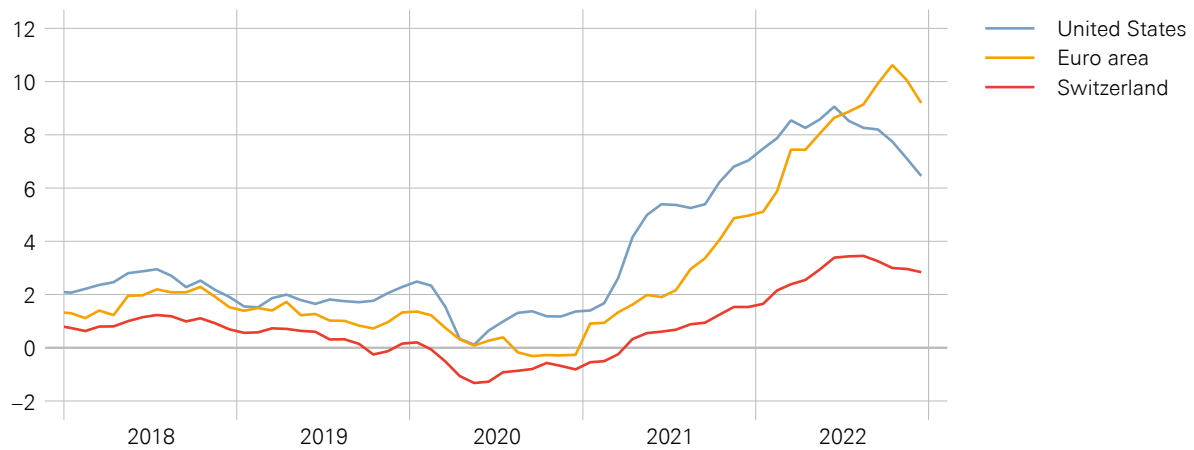
Real, year-on-year change in percent



Source(s): Refinitiv Datastream, SECO, SNB

INFLATION

Consumer prices, year-on-year change in percent



Source(s): Refinitiv Datastream, SFSO

... and in Japan

Japan's GDP grew by 1.1%. The moderate recovery thus continued, supported by expansionary monetary and fiscal policy. Repeated waves of the pandemic and procurement problems in the automotive industry contributed to volatility in economic activity over the course of the year. Added to this, the recovery in consumption was dampened by losses in real income in the wake of rising inflation. The procurement problems in manufacturing eased somewhat in the second half of the year, which supported exports. The unemployment rate declined only marginally, and stood at 2.5% in December, still slightly higher than before the pandemic.

Moderate growth in China
owing to zero-COVID policy

GDP growth in China was very modest by historical comparison (3.0%). The coronavirus pandemic and the containment measures imposed as part of the zero-COVID policy repeatedly impaired economic activity over the course of the year. Furthermore, the crisis in the residential real estate market continued to weigh on the economy. Against this backdrop, unemployment increased and was somewhat elevated by historical comparison. To support the economy, the Chinese authorities announced infrastructure investment and tax relief for companies in particular, as well as measures to support the real estate market.

High inflation in advanced
economies

In the advanced economies, inflation as measured by the consumer price index rose further. Energy and food prices were the key drivers. However, core inflation, which excludes these two volatile categories of goods, also continued to rise, and in the US and the euro area in particular was well above the central banks' targets at the end of the year.

US inflation at highest
level since 1980s

In the US, inflation stood at 8.0% in 2022, significantly above the 4.7% recorded in 2021 and the highest level seen in around 40 years. Having previously been primarily attributable to higher energy prices and pandemic-related special factors, price increases became significantly more widespread. The rise in commodity prices worldwide due to the war in Ukraine also contributed to inflation. The Federal Reserve's preferred price inflation measure for its target of 2.0%, the personal consumption expenditure (PCE) deflator, was significantly above this level at 6.2%. Even when excluding the volatile prices for energy and food, it was still high at 5.0%.

In the euro area, headline inflation rose to 8.4% on an annual average basis (2021: 2.6%). This was primarily driven by energy and food prices, which increased substantially with the war in Ukraine. Core inflation was also higher at 3.9%. It rose markedly over the course of the year, and by the end of 2022 had reached 5.2%, its highest level in the euro area's history. This reflected both higher inflation in services and price increases for various goods, due in part to the high energy costs.

Higher inflation in euro area, too

Consumer prices also rose in Japan (2.5%), this following a modest decline in 2021. Excluding food and energy prices, however, inflation was only slightly positive (0.2%), this being partly due to special factors having dampened inflation in the first half of the year. It rose again over the course of 2022, however, and in December stood at 1.5%.

End of deflation in Japan

In China, inflation stood at 2.0%, around 1.0 percentage points higher than in 2021, this being above all attributable to higher food prices. Core inflation remained essentially unchanged at 0.9%.

Moderate inflation in China

In light of the high level of inflation and strong labour market, the Fed tightened its monetary policy significantly. Over the course of 2022, it raised its policy rate by a total of 4.25 percentage points, with the target range thus ending the year at 4.25–4.50%. The last time it had been that high was in 2007. The Fed signalled additional interest rate hikes and the end of its monetary policy tightening cycle during 2023. Furthermore, in June, it started to reduce the size of its balance sheet.

Significant tightening of monetary policy in US

The European Central Bank (ECB) gradually raised its key rates from July onwards. In December, its deposit facility rate reached 2.0%, having been –0.5% for more than two years. Further interest rate hikes were signalled for 2023. At the end of March, the ECB discontinued its net asset purchases under the Pandemic Emergency Purchase Programme (PEPP). Maturing securities are to be reinvested until at least the end of 2024. The ECB also discontinued its net purchases under the Asset Purchase Programme (APP) at the beginning of July. The asset portfolio is to be gradually reduced in 2023. However, the ECB approved the Transmission Protection Instrument (TPI) in July. This programme enables the ECB to purchase securities issued in individual member countries in order to combat a tightening in financing conditions not warranted by fundamentals that impedes the transmission of monetary policy.

Departure from loose monetary policy in euro area

Monetary policy still expansionary in Japan

The Bank of Japan regarded the inflation resulting from higher import prices as being temporary, and assumed that inflation would fall back below 2.0% in 2023. Against this backdrop, it maintained its expansionary monetary policy stance, and confirmed its willingness to take further easing measures if necessary. Through to the end of the year, it left its short-term deposit rate at -0.1% and the target for 10-year government bond yields at around 0%. However, in December it decided to expand the range of fluctuation for long-term bond yields in a move aimed at improving market functioning.

Monetary policy easing in China

In light of the economic weakness, the People's Bank of China lowered its policy interest rates slightly in January and August, including a 0.2 percentage point reduction in the reverse repo rate to 2.0%. Added to this, it lowered the reserve requirement ratio for banks in April and December. It also made increasing use of targeted monetary policy instruments.

1.3 ECONOMIC DEVELOPMENTS IN SWITZERLAND

Weakening in economic momentum

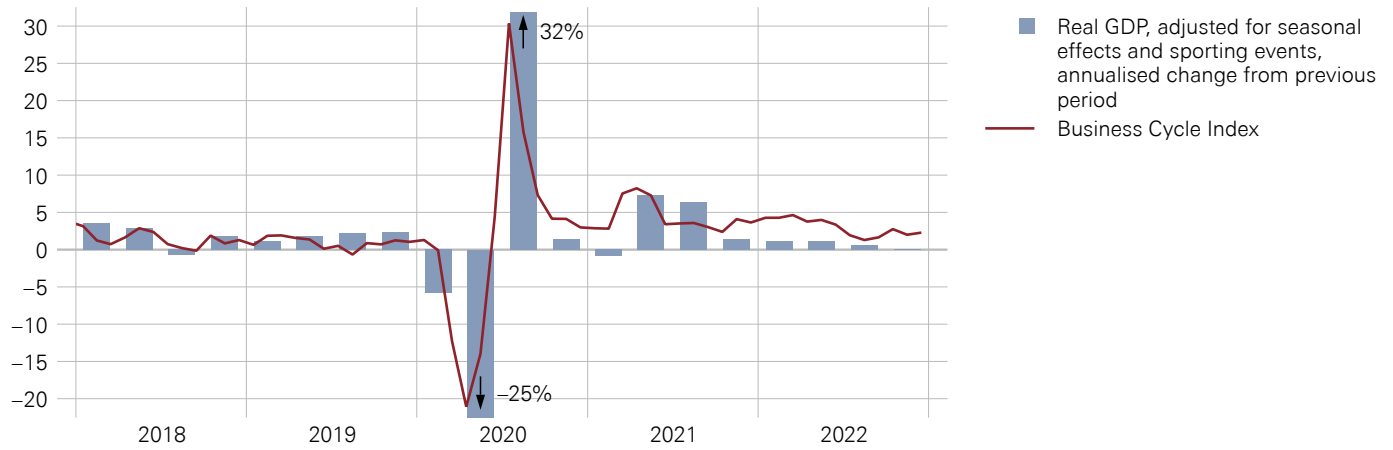
The Swiss economy lost momentum in 2022, and inflation rose significantly. Although the direct impact of the war in Ukraine was comparatively modest, the economy was nonetheless affected indirectly via various channels. Among the factors having a dampening effect were the markedly higher commodity prices. The risk of gas scarcity and electricity shortages led to heightened uncertainty. Industrial activity also weakened as a result of the economic slowdown abroad. However, the situation in the labour market continued to improve; employment increased significantly and unemployment declined.

GDP growth slightly above average

According to the initial estimate by the State Secretariat for Economic Affairs (SECO), growth in GDP adjusted for seasonal effects and sporting events was slightly above average at 2.1% in 2022. Nevertheless, this represented a clear slowdown from the 3.9% recorded in 2021, when many parts of the economy recovered strongly from the coronavirus crisis.

BUSINESS CYCLE INDEX AND GDP GROWTH

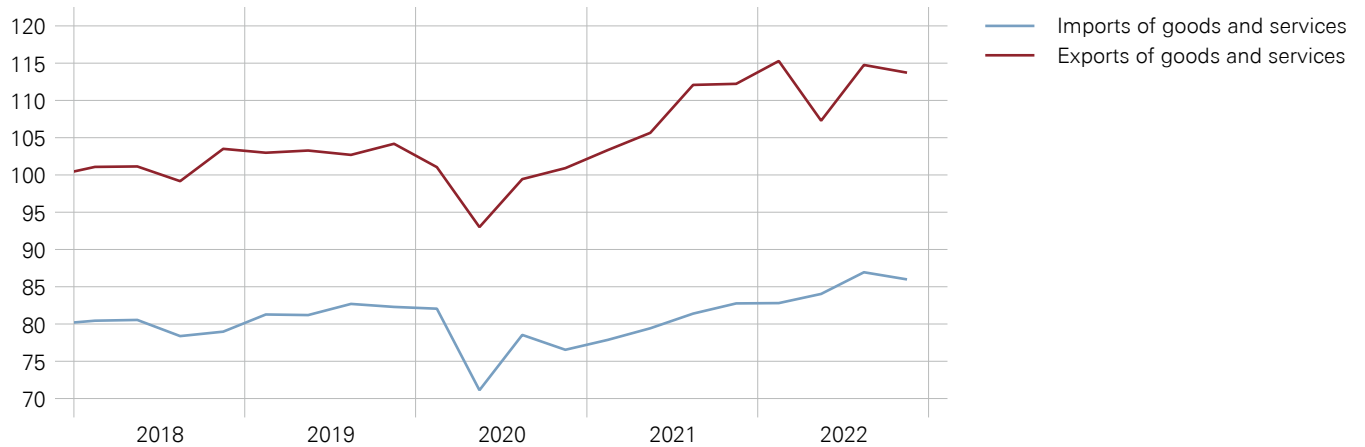
In percent



Source(s): SECO, SNB

FOREIGN TRADE

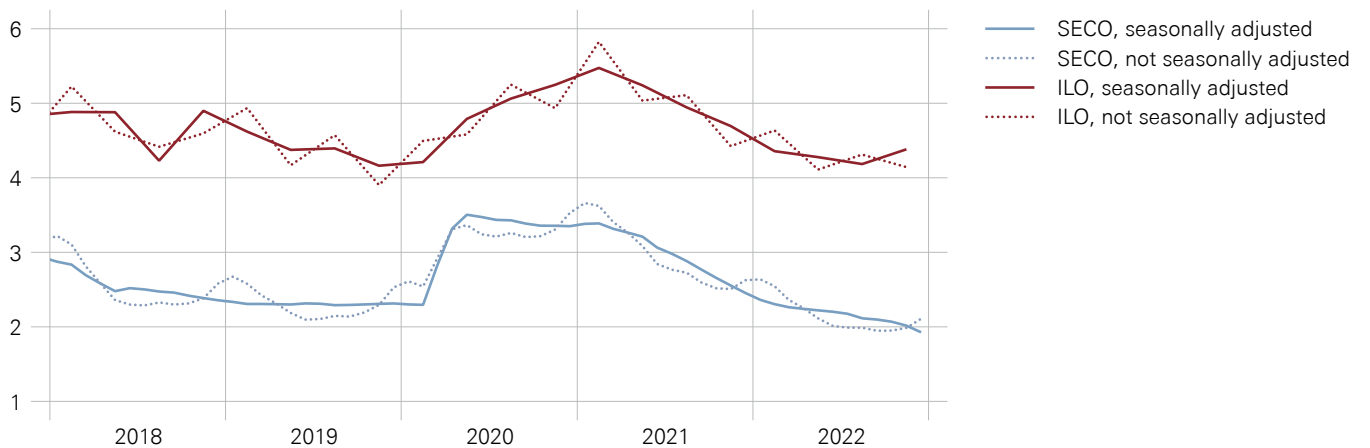
In CHF billions, in real terms, adjusted for seasonal effects and sporting events



Source(s): SECO

UNEMPLOYMENT RATE

In percent



Source(s): SECO, SFSO

**Well-utilised
production capacity**

Production capacity was well utilised overall. GDP slightly exceeded the estimated potential output, and the output gap was thus slightly positive. Utilisation of technical capacity was above the long-term average both in manufacturing and in the construction sector. In the services sector, which had been hard hit by the effects of the pandemic, utilisation returned to normal overall in 2022. Companies experienced even greater difficulties with the staffing situation. Staff levels were said to be tight in many industries, and recruitment more problematic.

**Slowdown in growth
in many industries**

The slowdown in growth was seen in many industries. This was in part due to the fact that the previous year's expansion was exceptionally strong in some cases owing to the recovery from the coronavirus crisis, and this was followed by a return to normal in 2022. Furthermore, the war in Ukraine adversely affected the development of certain industries via various channels. Banking was hit by weak commission business owing to the unfavourable performance on the stock markets. Rising commodity prices weighed on construction in particular. Manufacturing also quickly lost momentum in the wake of the global economic slowdown. By contrast, the personal services industries – in particular hospitality – recovered strongly with the lifting of the coronavirus containment measures.

**Historically strong growth
in private consumption**

Consumer spending showed strong growth. With the lifting of the containment measures, there were significant increases in particular in spending on restaurants and hotels, as well as on recreational and cultural activities. Although the war in Ukraine and the rise in inflation weighed heavily on household sentiment, the poor mood and weak development in real incomes was barely reflected in consumer spending.

**Weakening in export
momentum**

Export growth was average overall. Services exports continued to benefit from tourism returning to normal. With global demand still strong at the beginning of the year, growth in goods exports was initially robust. However, export momentum weakened overall as the global economy slowed down over the course of 2022. The immediate impact of the war in Ukraine on Swiss foreign trade was modest, given Switzerland's limited direct economic ties to Ukraine and Russia.

Against the backdrop of high capacity utilisation, companies increased their spending on equipment further. The relaxation setting in on the supply side made it easier to import capital goods from abroad. However, investment growth slowed amid signs of an economic downturn and more restrictive financing conditions.

Moderate rise in equipment investment

Construction investment continued to decline, however. The shortage of staff and the lack of intermediate goods weighed on construction activity, as did the associated high inflation in construction prices. With residential construction weak, there was a further significant decline in the dwelling vacancy rate.

Ongoing decline in construction investment

The favourable development in the labour market continued. The number of people registered as unemployed at the regional employment offices declined further. Over the course of 2022, the unemployment rate published by SECO on the basis of the employment office data declined from 2.4% to 1.9%, and was thus latterly lower than before the pandemic. The unemployment rate calculated by the Swiss Federal Statistical Office (SFSO) in line with the definition of the International Labour Organization (ILO) also fell year-on-year, and stood at 4.4% in the fourth quarter.

Lower unemployment

The number of people in employment increased significantly, by 2.6%. New jobs were created in the manufacturing, construction and services sectors alike.

Broad growth in employment

With the positive development of the labour market, the use of short-time working declined once more. According to provisional figures from SECO, the number of people in short-time work fell from 82,000 to around 2,000 over the course of 2022, thus leaving less than 0.1% of all economically active persons affected by short-time working.

Decline in short-time working

The total real wage bill rose slightly (0.7%). While employment increased, real wages declined markedly owing to the high level of inflation. The share of labour income in GDP declined somewhat year-on-year, but remained high by historical comparison.

Weak growth in total real wage bill

REAL GROSS DOMESTIC PRODUCT

Seasonally adjusted, year-on-year change in percent

| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|--|------------|------------|------------|-------------|------------|------------|
| Private consumption | 1.2 | 0.6 | 1.2 | -4.2 | 1.7 | 4.0 |
| Government consumption | 1.0 | 0.8 | 0.8 | 3.5 | 3.5 | -0.5 |
| Gross fixed capital formation | 3.5 | 0.8 | 0.9 | -3.1 | 4.1 | -0.8 |
| Construction | 1.5 | 0.0 | -0.9 | -1.0 | -3.0 | -4.3 |
| Equipment | 4.7 | 1.2 | 1.8 | -4.2 | 8.1 | 1.1 |
| Domestic final demand¹ | 1.8 | 0.7 | 1.1 | -2.9 | 2.7 | 2.0 |
| Exports of goods and services ^{1,2} | 4.8 | 3.8 | 2.0 | -4.5 | 9.9 | 4.1 |
| Aggregate demand^{1,2} | 2.8 | 2.7 | 1.9 | -3.6 | 4.0 | 3.2 |
| Imports of goods and services ^{1,2} | 5.2 | 3.1 | 2.9 | -5.9 | 4.3 | 5.7 |
| Gross domestic product² | 1.8 | 2.5 | 1.5 | -2.5 | 3.9 | 2.1 |

1 Excluding valuables (non-monetary gold and other precious metals, precious stones and gems as well as objets d'art and antiques).

2 Adjusted for sporting events.

Source(s): SECO, SFSO

Economic picture derived from discussions with companies

The SNB bases its economic assessment on a broad array of information. This includes information gathered every quarter by the SNB's delegates for regional economic relations during discussions with over 200 companies from different industries. The findings of these talks are summarised in the 'Business cycle signals' section of the SNB's Quarterly Bulletin.

The pandemic still played an important role in the talks in the first quarter of 2022. The somewhat lower growth compared to the previous quarter was primarily due to the services sector and in particular those companies directly affected by the consequences of the rapid spread of the Omicron variant. Turnover in manufacturing again increased significantly, however, despite the persisting difficulties in procuring intermediate products. Company representatives cited the shortage of staff as being increasingly challenging, and recruitment difficulties continued to worsen. After Russia's attack on Ukraine at the end of February there was a massive increase in uncertainty regarding global economic development in the subsequent quarters.

The talks in the second quarter indicated robust economic development overall. There was a dynamic showing from the services sector. Personal services in particular recorded a significant rise in turnover thanks to the lifting of pandemic containment measures. However, the previously strong growth momentum in manufacturing weakened somewhat. Only a few companies were directly affected by the war in Ukraine because of production facilities or trading partners in the region. On the other hand, most companies said that uncertainty was markedly elevated.

Momentum slowed again in the services sector in the third quarter. The catch-up effects following the lifting of coronavirus measures were no longer on the same scale as in the previous quarter. Turnover growth in manufacturing was still stable at an average level, however, and the outlook also remained intact. Companies in both the services and manufacturing sectors expected turnover to rise in the coming quarters. Nevertheless, heightened uncertainty again cast a pall over the positive outlook. For many companies, the risk of an electricity shortage in the coming winter came to the fore.

The talks in the fourth quarter showed that turnover growth had weakened slightly overall. Various export-oriented companies felt the cooling in global economic activity. Added to this, weak retail sales growth indicated waning momentum in demand for consumer goods. At the same time, some companies benefited from a certain easing in supply chain difficulties and thus in the procurement of intermediate goods. Companies remained cautiously optimistic about the further development of their business activity in 2023. Concerns over a possible electricity shortage eased, but uncertainty about the global economic situation increased. The tight labour market and elevated inflation led to higher wage agreements for 2023 at the end of the year.

Higher producer and import price inflation

Inflation as measured by the producer and import price index reached a high of 6.9% in summer 2022, and declined thereafter to 3.2% in December. The annual average for 2022 was 5.6%, up from 2.7% the year before. There was a significant increase in the inflation rate for oil products above all, but also for intermediate goods. The increase in prices for the latter was likely due to global supply bottlenecks, which only began to ease again towards the end of the year.

Significant increase in CPI inflation

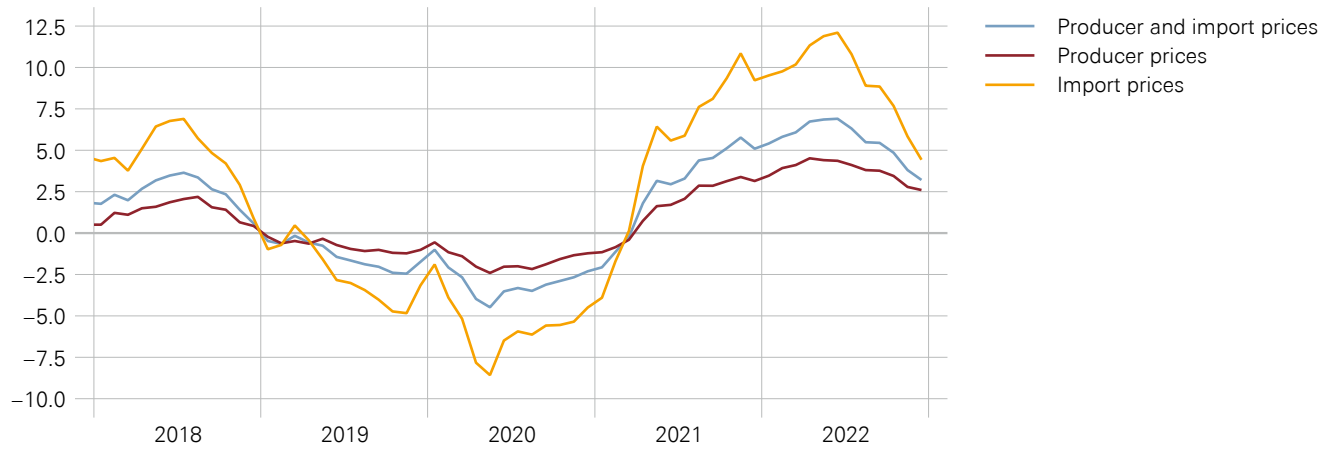
Annual inflation as measured by the Swiss consumer price index (CPI) also rose, from 2.1% in the first quarter to 3.4% in the third, before declining again to 2.9% in the fourth quarter. The average for the year stood at 2.8% (2021: 0.6%). This significant rise was attributable to the marked increase in prices for imported goods and services, but also to elevated inflation in the case of domestic goods and services.

The inflation rate for imported goods and services reached a high of 8.3% in the third quarter, before declining to 6.3% in the fourth. This dynamic was primarily determined by the development of oil product prices, which eased back again through to December after having risen sharply in the first half of the year. Averaged over the year, inflation for imported goods and services was 6.7% (2021: 1.5%). Besides the higher prices for oil products, the price increases for gas, cars and food in particular contributed to this rise in inflation.

The increase in the inflation rate for domestic goods and services was comparatively moderate, rising from 0.3% in 2021 to 1.6% in 2022. It rose steadily throughout the year, from 1.2% in the first quarter to 1.8% in the fourth. This was primarily attributable to the substantial increase in inflation for domestic goods to 2.9% in 2022 (2021: 0%). Inflation for domestic services stood at 1.1% in 2022, up from 0.4% the year before. Rent inflation also increased, from 0.9% in 2021 to 1.4% in 2022.

PRODUCER AND IMPORT PRICES

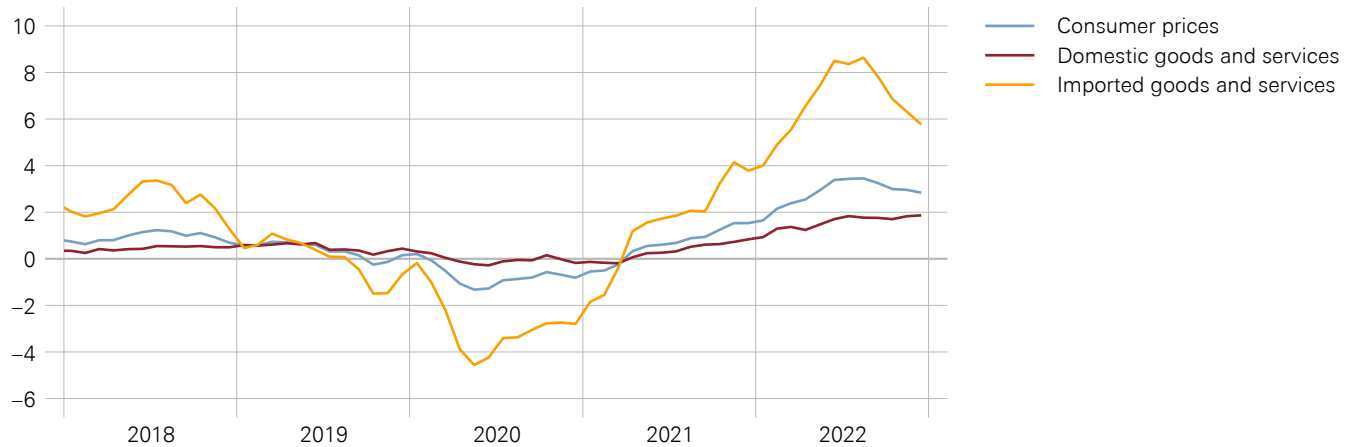
Year-on-year change in percent



Source(s): SFSO

CONSUMER PRICES

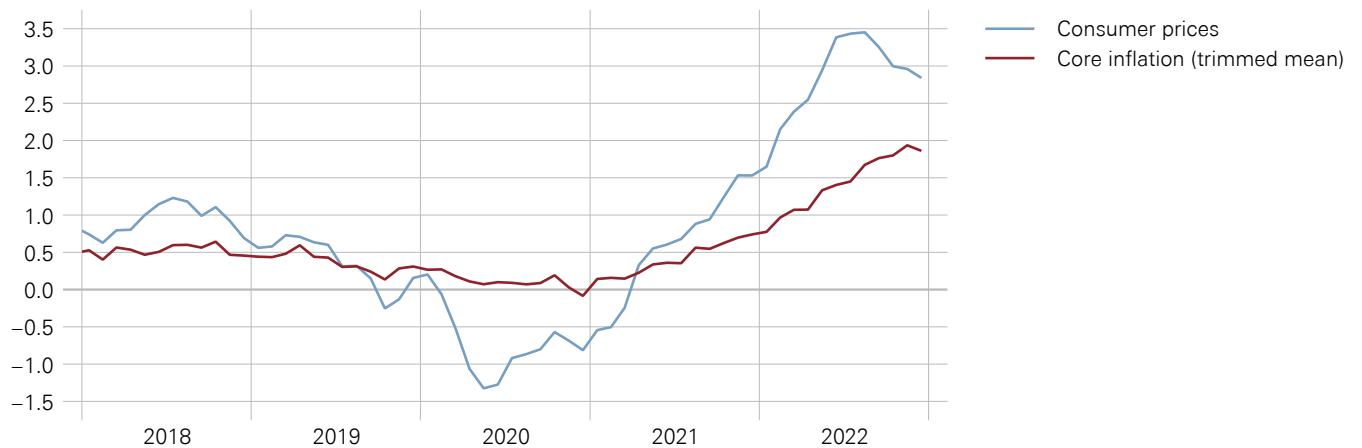
Year-on-year change in percent



Source(s): SFSO

CORE INFLATION

Year-on-year change in percent



Source(s): SFSO, SNB

Higher core inflation

In the short term, CPI headline inflation can be significantly affected by fluctuations in specific price components. In order to analyse the underlying inflation, the SNB therefore calculates core inflation using a trimmed mean. This measure excludes, each month, those goods and services with the largest and the smallest price changes compared to the same month one year earlier. Specifically, it factors out the 15% of items in the CPI basket with the highest price inflation and the 15% with the lowest. The core inflation rate calculated using the trimmed mean also rose significantly during 2022 and averaged 1.4% for the year (2021: 0.4%).

Longer-term inflation expectations consistent with price stability

Short-term inflation expectations derived from surveys rose substantially and exceeded the range consistent with price stability that the SNB equates to a rise in the CPI of less than 2.0% per year. However, these expectations did not increase further towards the end of the year. By contrast, there was little change in longer-term expectations, which remained within the range consistent with price stability throughout 2022.

SWISS CONSUMER PRICE INDEX AND COMPONENTS

Year-on-year change in percent

| | 2021 | 2022 | Q 1 | Q 2 | Q 3 | 2022 Q 4 |
|--------------------------------------|------------|------------|------------|------------|------------|-------------|
| Consumer price index, overall | 0.6 | 2.8 | 2.1 | 3.0 | 3.4 | 2.9 |
| Domestic goods and services | 0.3 | 1.6 | 1.2 | 1.5 | 1.8 | 1.8 |
| Goods | 0.0 | 2.9 | 1.2 | 2.5 | 3.3 | 4.3 |
| Services | 0.4 | 1.1 | 1.2 | 1.1 | 1.2 | 0.9 |
| Private services (excluding rents) | 0.3 | 1.1 | 1.4 | 1.3 | 1.3 | 0.4 |
| Rents | 0.9 | 1.4 | 1.4 | 1.5 | 1.4 | 1.4 |
| Public services | -0.1 | 0.5 | 0.0 | 0.0 | 0.7 | 1.2 |
| Imported goods and services | 1.5 | 6.7 | 4.8 | 7.5 | 8.3 | 6.6 |
| Excluding oil products | -0.4 | 3.9 | 2.1 | 3.6 | 4.7 | 5.0 |
| Oil products | 17.9 | 31.8 | 28.1 | 42.5 | 39.6 | 18.0 |
| Core inflation | | | | | | |
| Trimmed mean | 0.4 | 1.4 | 0.9 | 1.3 | 1.6 | 1.9 |

Source(s): SFSO, SNB

1.4 MONETARY POLICY IN 2022

After already having allowed the Swiss franc to appreciate to a certain extent in the fourth quarter of 2021, the SNB tightened its monetary policy in 2022. At the beginning of 2022, economic growth remained subdued while inflation gained momentum and increasingly spread to goods and services which had initially hardly been affected by price increases. From February onwards, inflation was above the range that the SNB equates with price stability, and peaked at 3.5% in August. Against this backdrop, the SNB's monetary policy was geared towards restoring price stability over the medium term and keeping long-term inflation expectations well anchored within the range consistent with price stability.

Monetary policy tightening

The SNB raised the SNB policy rate in three steps from -0.75% to 1.0% . The first interest rate hike took place at the monetary policy assessment of 16 June 2022, when the SNB increased its policy rate by 0.5 percentage points. This was the first adjustment since January 2015 and the first rise since September 2007. At the monetary policy assessments of 22 September and 15 December, the SNB decided to raise its policy rate by a further 0.75 and 0.5 percentage points respectively. The SNB indicated in each case that further interest rate increases could not be ruled out.

Increase in SNB policy rate

The phase of negative interest ended with the decision in September 2022 to increase the SNB policy rate from -0.25% to 0.5% . Negative interest was introduced to counteract the appreciation pressure on the Swiss franc following the discontinuation of the minimum exchange rate at the beginning of 2015. In combination with foreign exchange market interventions, negative interest helped to provide appropriate monetary conditions in recent years and thus ensure price stability (cf. box 'End of negative interest phase').

End of negative interest phase

Adjusted implementation of monetary policy on money market

With the increase in the SNB policy rate into positive territory, the implementation of monetary policy was also adjusted to the new environment. Until September 2022, the SNB charged negative interest at the SNB policy rate on sight deposits held with it by banks and other financial institutions that exceeded a certain exemption threshold. Since the monetary policy assessment in September, the SNB has been paying interest on sight deposits held with it up to a certain threshold at the now positive SNB policy rate. Sight deposits above this threshold are remunerated at this rate minus a discount. In addition, the SNB conducts operations to absorb sight deposits in order to reduce the supply of liquidity in the money market. The tiered remuneration of sight deposits and the liquidity-absorbing measures together ensure that secured short-term money market interest rates remain close to the SNB policy rate also in an environment of positive interest rates (cf. chapter 2.3). The tiered remuneration of sight deposits moreover encourages trading activity on the money market and thus leads to a robust basis for the calculation of SARON (Swiss Average Rate Overnight), the most important short-term Swiss franc interest rate.

Money market rates close to SNB policy rate

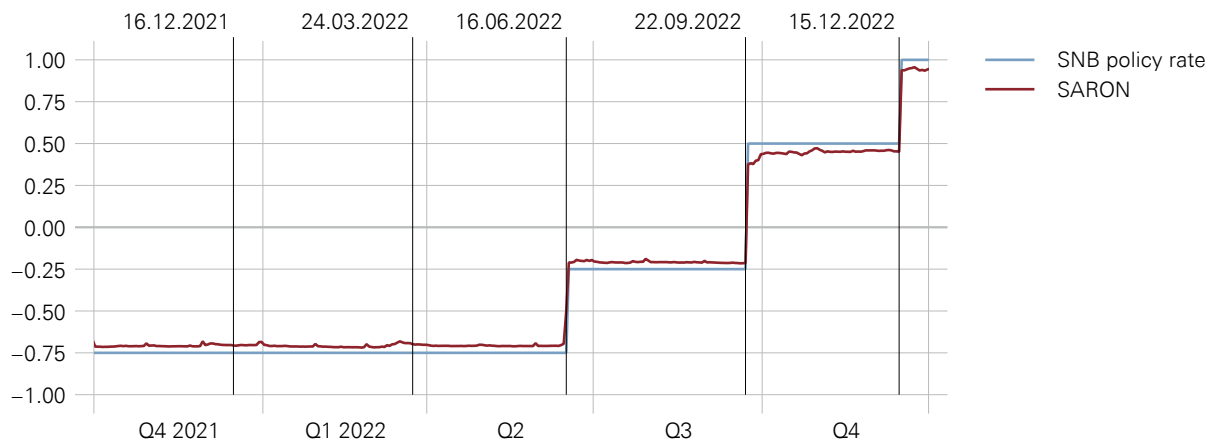
The SNB seeks to keep the secured short-term money market rates close to the SNB policy rate. Until September 2022, in an environment of negative interest rates, SARON remained slightly above the SNB policy rate at all times. After the implementation of monetary policy was adjusted in September following the increase in the SNB policy rate into positive territory, SARON settled slightly below the SNB policy rate (cf. chapter 2.1).

Increase in interest rate differentials versus euro area and US

Like the SNB, the European Central Bank (ECB) and the US Federal Reserve (Fed) also increased their policy rates in 2022. The Fed led the way with an initial interest rate move in March, followed by the ECB in July. The ECB raised its main refinancing rate and deposit rate in four steps over the course of the year, from 0% to 2.5% and from -0.5% to 2.0% respectively. The Fed's target range for the federal funds rate rose in seven steps over the same period from 0-0.25% to 4.25-4.50%. Thus the differentials between short-term Swiss franc interest rates and short-term euro and dollar interest rates widened significantly. Measured by one-month overnight index swap rates, they increased from around 0.1 and 0.8 percentage points at the beginning of 2022 to around 1.0 and 3.4 percentage points at the end of the year respectively. The growing interest rate differentials were the result of the much sharper increase in inflation in the euro area and the US compared to Switzerland, which prompted a stronger monetary policy response from the ECB and the Fed.

SNB POLICY RATE AND SARON

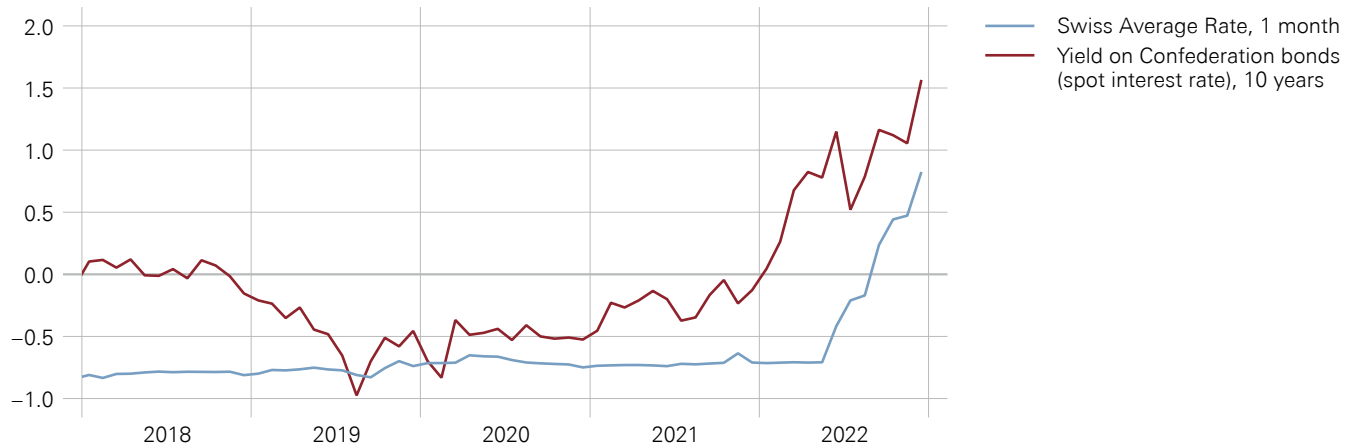
End-of-day values in percent, with dates of quarterly monetary policy assessments



Source(s): SIX Swiss Exchange Ltd, SNB

MONEY AND CAPITAL MARKET RATES

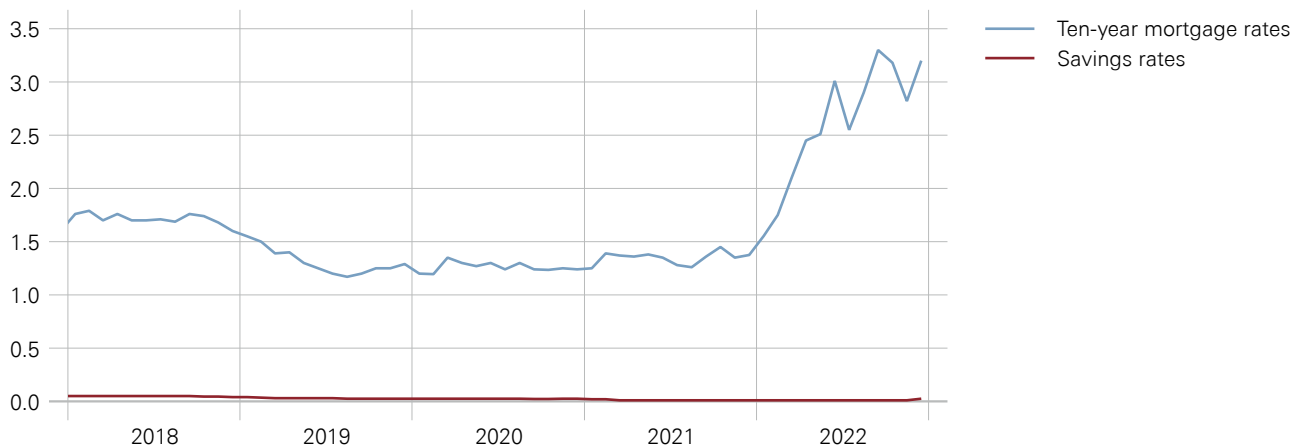
Monthly averages in percent



Source(s): SIX Swiss Exchange Ltd, SNB

BANK INTEREST RATES

Month-end values in percent



Source(s): SNB

Increase in capital market yields

Capital market yields increased significantly in 2022 amid high volatility. Yields on long-term bonds rose earlier and more sharply than short-term yields, as their longer maturity means that they reflect all of the expected monetary policy tightening. This led to a steeper yield curve at the beginning of the year, which flattened again with the rise in money market rates from June. The yield on ten-year Confederation bonds rose from around 0% at the beginning of 2022 to almost 1.6% at the end of the year, essentially following the movements of its counterparts abroad. However, the increase was less pronounced given the significantly lower inflation expectations in Switzerland.

Increase in lending and deposit rates

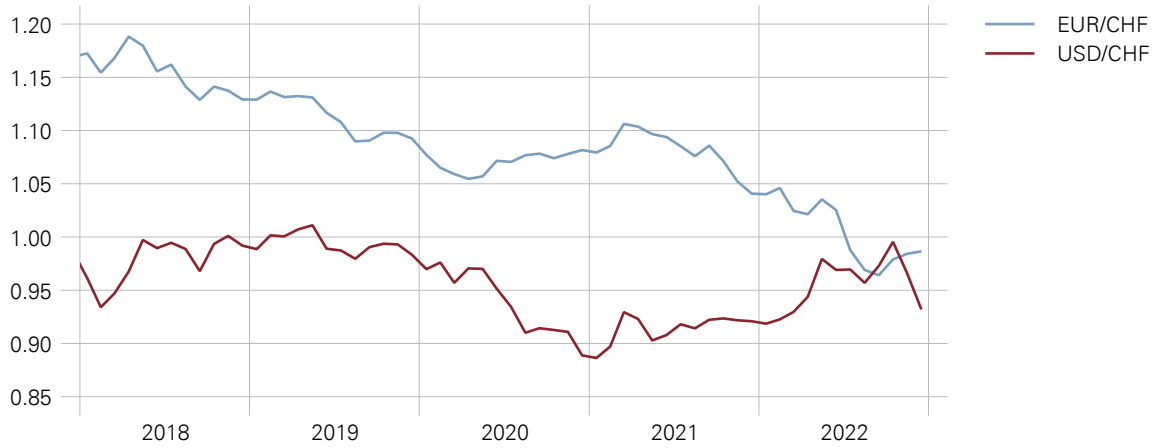
The higher yields on the financial markets passed through to the interest rates offered by the banks. Published interest rates for new mortgages increased in the second half of 2022. By contrast, the mortgage reference rate relevant for residential and commercial rents, which corresponds to the volume-weighted average interest rate of all bank mortgages in Switzerland and is rounded to a quarter of a percentage point, remained at 1.25%. Compared to the interest rates for new mortgages, the reference interest rate reacts only very slowly to an increase in yields because a considerable part of the mortgages included in the calculation is based on long-term contracts. The latter had been concluded at very low interest rates in the past years. Meanwhile, banks' average interest rate on sight deposits – which make up the bulk of deposits – remained unchanged in 2022. By contrast, average interest rates on new time deposits increased in line with the longer-term overnight index swap rates. This increase resulted in only very few deposits still being subject to negative interest at the end of 2022.

Nominal appreciation of Swiss franc

The nominal trade-weighted external value of the Swiss franc rose by 5% during 2022, largely reflecting the much lower inflation outlook in Switzerland compared to abroad. The Swiss franc appreciated by 5% against the euro. The backdrop was broad euro weakness, which also led to a 6% depreciation of the euro against the US dollar. By contrast, the Swiss franc depreciated by around 1% against the US dollar due to stronger monetary policy tightening in the US. The exchange rate of the US dollar in Swiss francs fluctuated strongly over the course of the year, in parallel with changing market expectations about the development of inflation and the necessary monetary policy tightening in the US. On a real trade-weighted basis, the Swiss franc remained relatively stable as nominal appreciation was offset by higher inflation abroad.

EXCHANGE RATES

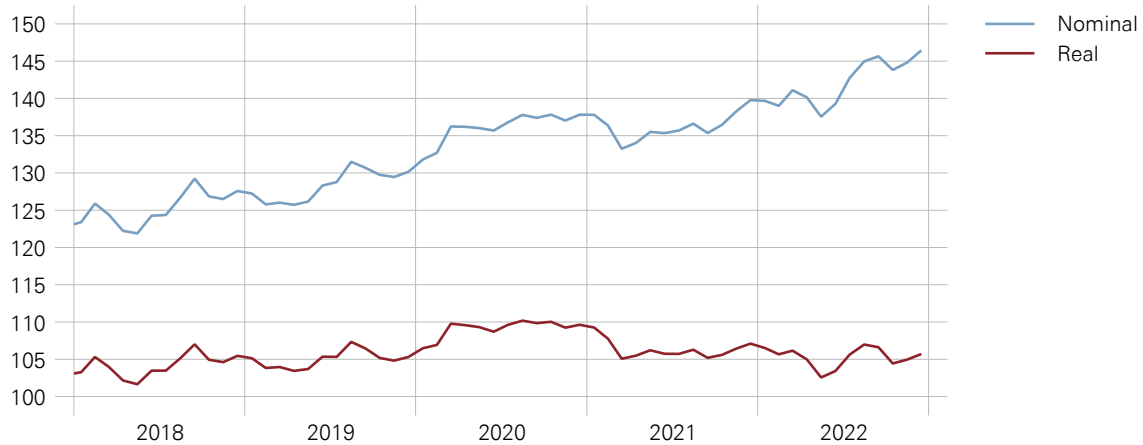
Monthly averages



Source(s): SNB

TRADE-WEIGHTED SWISS FRANC EXCHANGE RATES

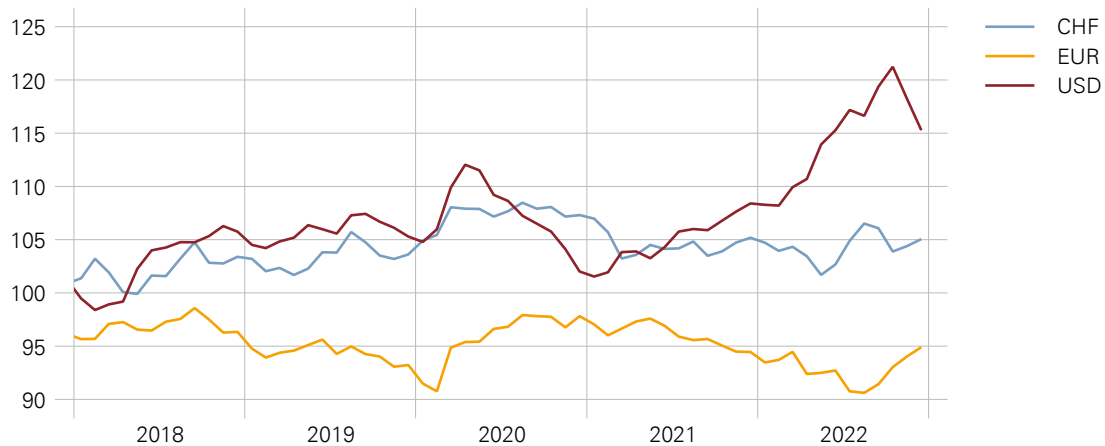
Index: average since 1990 = 100



Source(s): SNB

TRADE-WEIGHTED EXCHANGE RATES IN INTERNATIONAL COMPARISON

Real, 61 countries, index: average since 1990 = 100



Source(s): BIS, SNB

Foreign exchange market interventions

At its quarterly monetary policy assessments, the SNB regularly confirmed its willingness to intervene in the foreign exchange market in order to ensure appropriate monetary conditions. The SNB had already allowed the Swiss franc to appreciate to a certain extent in the fourth quarter of 2021, which counteracted a rise in the price of imported goods and services and thus reduced inflationary pressure. From the monetary policy assessment in June 2022 onwards, it also signalled its willingness to sell foreign exchange if the Swiss franc were to weaken. Over the course of 2022, the SNB sold foreign exchange worth CHF 22.3 billion (compared with purchases worth CHF 21.1 billion in 2021).

Decline in monetary base

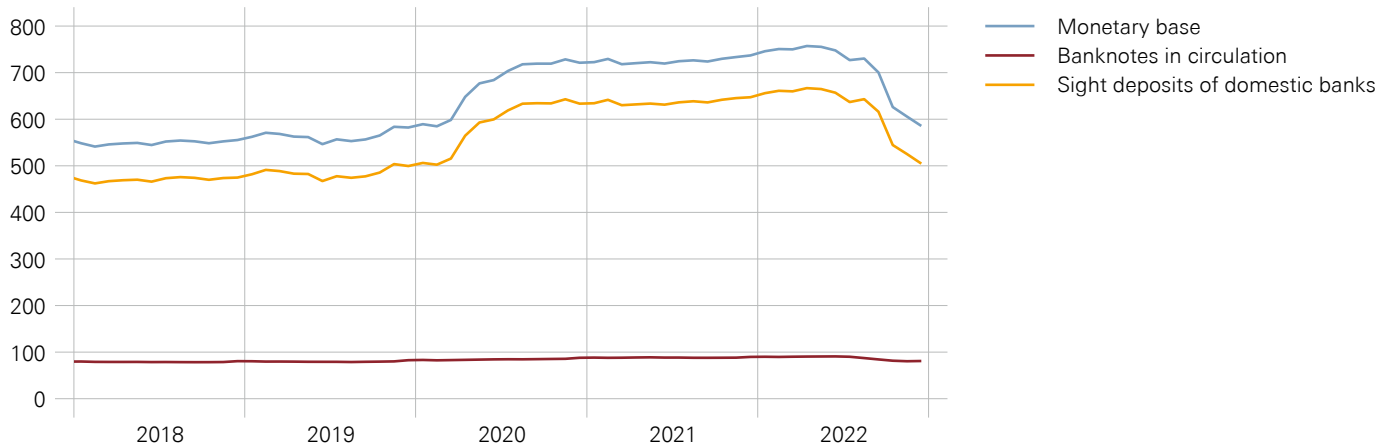
The monetary base, which is made up of banknotes in circulation and domestic banks' sight deposits with the SNB, declined by 26% over the course of 2022. Excess liquidity, which is calculated as the difference between the liquidity held by banks (banknotes, coins and sight deposits at the SNB) and the level of liquidity stipulated under the minimum reserve requirements (cf. chapter 2.4), subsequently decreased somewhat. This decrease was due to the tightening of monetary policy and especially the related liquidity-absorbing operations. Specifically, the SNB withdrew liquidity in the amount of CHF 165 billion from the market by the end of the year by means of liquidity-absorbing money market transactions and the issue of SNB Bills. Together with the remuneration of banks' sight deposits at the SNB, this ensured that the secured short-term Swiss franc money market rates were close to the SNB policy rate.

Monetary aggregates and bank lending

There was no further growth in the broad monetary aggregates in 2022. This was due to the increase in long-term interest rates. At the end of 2022, the monetary aggregate M2 (currency in circulation, sight deposits, transaction accounts and savings deposits) was 3.2% lower year-on-year. The monetary aggregate M3 (M2 plus time deposits) remained at the previous year's level. By contrast, the increase in bank loans to domestic customers continued in 2022. The volume of mortgage lending, which accounts for 85% of bank lending, was 3.5% higher year-on-year at the end of 2022, thus growing slightly more than in 2021 (3.3%). Other bank loans are considerably more volatile than mortgage loans. After increasing by 6.7% in 2020 due to COVID-19 bridging loans, they grew by 2.9% in 2021. In 2022, other bank loans decreased by 2.3%, this being above all attributable to a decline in other loans in foreign currencies. However, other loans in Swiss francs increased slightly (0.1%), this despite repayments of COVID-19 bridging loans. By the end of 2022, 24.5% of all COVID-19 loans, amounting to 39.1% of the total loan volume, had been repaid in full. In addition, amortisation payments on the outstanding COVID-19 loans began during 2022.

MONETARY BASE AND COMPONENTS

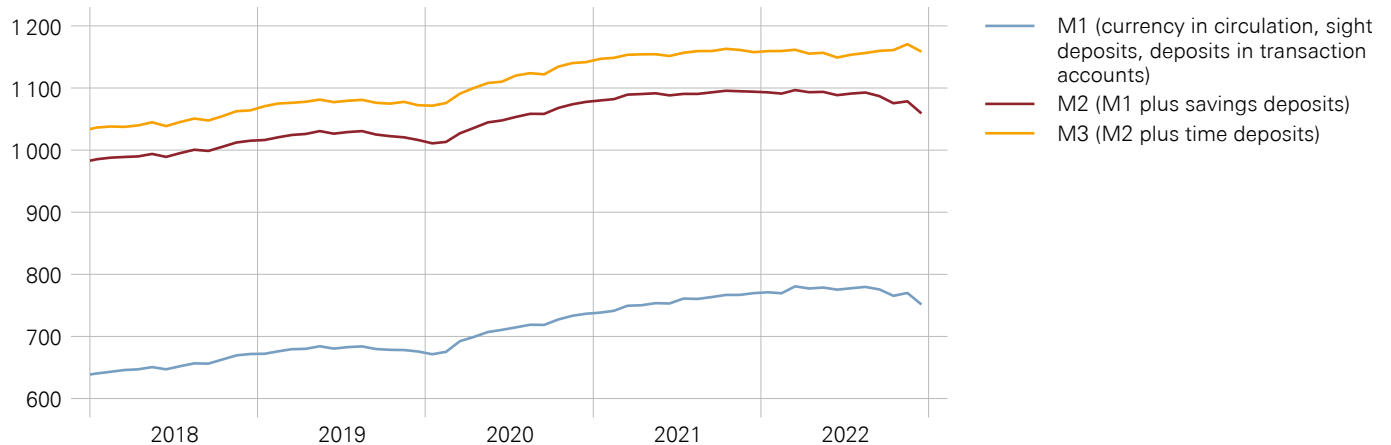
Monthly averages in CHF billions



Source(s): SNB

LEVEL OF MONETARY AGGREGATES

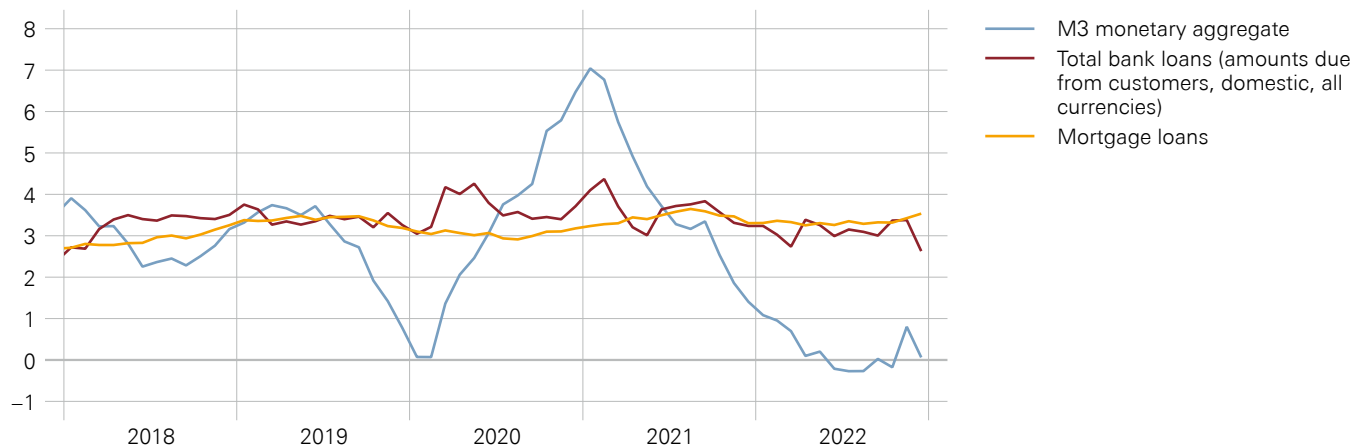
Month-end values in CHF billions



Source(s): SNB

GROWTH OF MONETARY AND CREDIT AGGREGATES

Year-on-year change in percent



Source(s): SNB

**International scenario
for forecasts**

The conditional inflation forecasts published by the SNB as part of its quarterly monetary policy assessments of March, June, September and December are based on scenarios for the global economy. An oil price assumption is also taken into account, which corresponds approximately to the market price per barrel of North Sea Brent at the time of the forecast. In December 2021, the SNB had expected that the global economic recovery would continue in 2022, albeit less strongly than in the previous year.

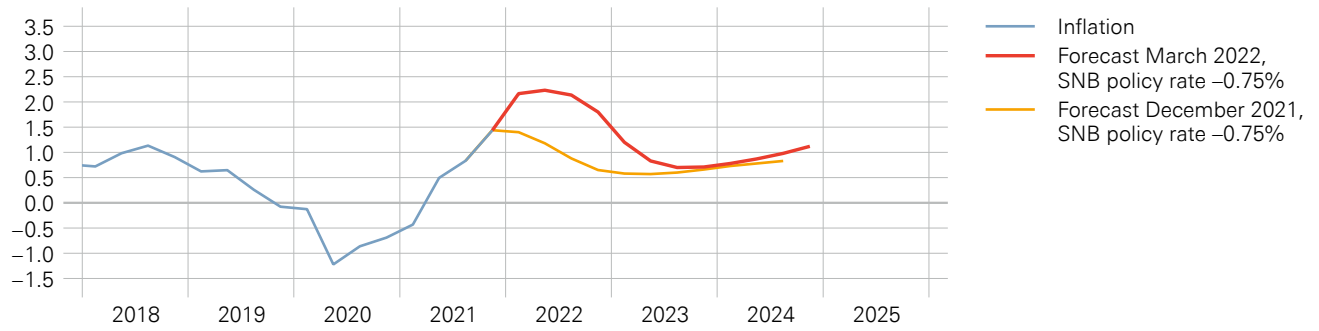
However, various developments contributed to the SNB steadily lowering its growth expectations for the global economy over the course of 2022. These included the disruptions of global supply chains due to the coronavirus pandemic, as well as the war in Ukraine and the resultant tense energy situation in Europe. On the one hand, these factors had a dampening effect on the economy, and on the other, they strengthened inflationary pressure in many places. The central banks of many countries reacted by tightening monetary policy. In December 2022, the SNB's growth forecast for the global economy was 1.8%, compared to 4.1% a year earlier, and it expected growth to remain weak in 2023.

**Growth forecast
for Switzerland**

At the end of 2021, the SNB had forecast GDP growth for Switzerland of around 3.0% for 2022. This reflected the assumption that the recovery from the pandemic-related decline in output would continue. In March 2022, the SNB lowered the forecast to around 2.5% as a result of the war in Ukraine. In June, it confirmed this assessment. After GDP growth in the second quarter fell short of expectations and because many economic indicators were pointing to a further slowdown, in September the SNB reduced its growth forecast to around 2.0%. It left this figure unchanged in December and announced that it expected growth of around 0.5% in 2023.

CONDITIONAL INFLATION FORECAST OF MARCH 2022

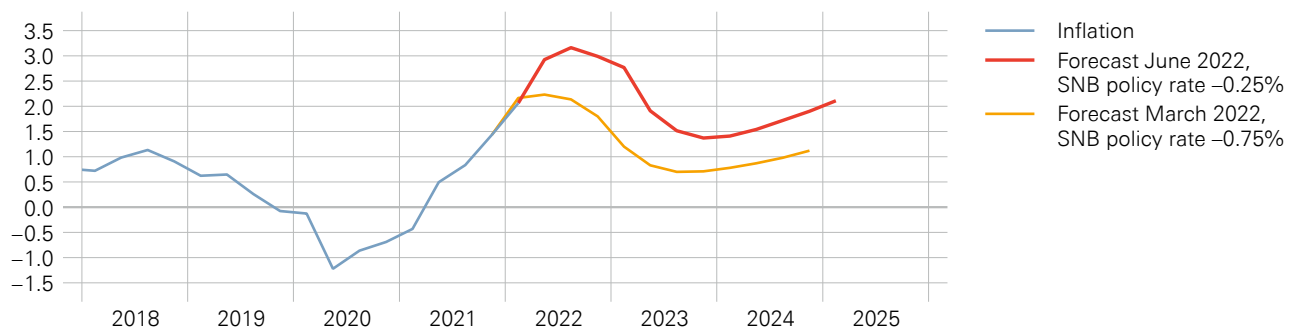
Year-on-year change in Swiss consumer price index in percent



Source(s): SFSO, SNB

CONDITIONAL INFLATION FORECAST OF JUNE 2022

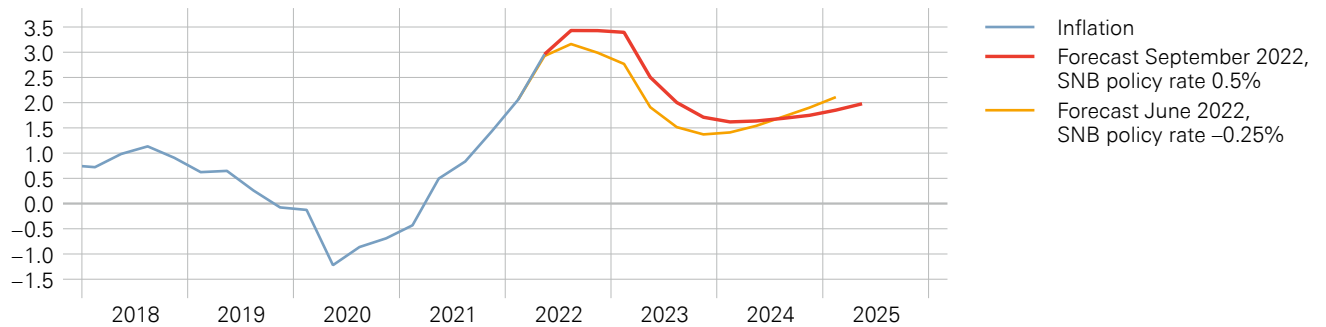
Year-on-year change in Swiss consumer price index in percent



Source(s): SFSO, SNB

CONDITIONAL INFLATION FORECAST OF SEPTEMBER 2022

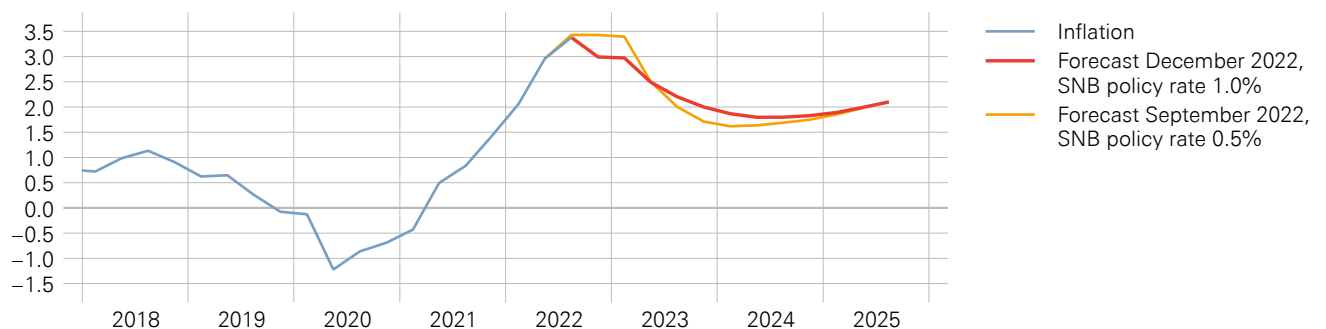
Year-on-year change in Swiss consumer price index in percent



Source(s): SFSO, SNB

CONDITIONAL INFLATION FORECAST OF DECEMBER 2022

Year-on-year change in Swiss consumer price index in percent



Source(s): SFSO, SNB

Conditional inflation forecast

The conditional inflation forecasts published as part of the quarterly monetary policy assessments are based on the assumption that the SNB policy rate remains constant over the three-year forecast horizon. In March 2022, an interest rate of -0.75% was assumed, as in the previous year. At the subsequent monetary policy assessments, the assumption was successively adjusted upwards following the increase in the SNB policy rate and stood at 1.0% in December 2022. Despite the tighter monetary policy, the inflation forecasts were revised upwards, especially for the shorter term. The main reason was significantly increased global price dynamics, especially for energy products. However, the upward revisions were also due to noticeable price increases for food as well as for goods affected by supply bottlenecks.

While the conditional inflation forecast for 2022 was still 1.0% in December 2021, it was already 2.1% in March 2022 and 2.9% at the end of the year. The conditional forecast for 2023 was 2.4% in December 2022, compared to just 0.6% a year earlier. Thus, at the end of the year, the conditional forecasts for both 2022 and 2023 were outside the range between 0% and 2% that the SNB equates with price stability. The conditional inflation forecasts for 2024, however, remained within the defined range for price stability throughout (March 2022: 0.9% ; December 2022: 1.8%).

Ongoing uncertainty

In its communications, the SNB regularly drew attention to risks that could lead to an adjustment in the forecasts and necessitate a reassessment of the situation. The greatest factors of uncertainty included the development of inflation abroad and corresponding monetary policy responses, the war in Ukraine, the energy situation in Europe and the further course of the pandemic.

End of negative interest phase

The increase in the SNB policy rate in September 2022 marked the end of an almost eight-year period of negative interest. The SNB introduced negative interest in January 2015 when it discontinued the minimum exchange rate against the euro (cf. Annual Report 2015, pp. 37–38). In addition to introducing negative interest, the SNB reiterated its willingness to intervene in the foreign exchange market as necessary. These two measures served to curb the appreciation of the Swiss franc and to set monetary conditions in a way that ensured price stability in the medium term and supported economic activity.

In an environment of very low interest rates abroad, negative interest created a certain interest rate differential between the Swiss franc and other currencies, which reduced the attractiveness of Swiss franc investments. In combination with foreign exchange market interventions, negative interest was an important instrument to counteract the deflationary pressure triggered by the at times strong appreciation of the Swiss franc.

That said, the low interest rate environment posed challenges for various economic agents, notably banks and pension funds. Overall, however, they managed these challenges well. The benefits of negative interest for the economy as a whole clearly outweighed the costs of the side-effects. Without negative interest, the SNB would not have been able to ensure price stability and economic developments would have been significantly less favourable.

The SNB was not the only central bank to lower its policy rate into negative territory in recent years. Other central banks, such as the ECB and the Bank of Japan, also introduced negative interest. This development should be seen in the context of the steady decline in the general interest rate level domestically and abroad over the past decades. As a result, the equilibrium or neutral interest rate, i.e. the interest rate level at which monetary policy has neither an expansionary nor contractionary effect, also declined. The consequence is that central banks may under certain circumstances have to lower their policy rates below zero in order to keep monetary policy sufficiently expansionary. Negative interest will retain its importance among the SNB's monetary policy instruments in the future.

Annual loss for 2022: Significance for monetary policy

Since the beginning of the global financial crisis in 2007, the SNB's holdings of foreign exchange reserves and therefore the size of its balance sheet have multiplied. This reflects the SNB's interventions in the foreign exchange market, which served to counteract an excessive appreciation of the Swiss franc and thus helped to stabilise the economy and price developments. The expansion of the balance sheet was thus a direct consequence of monetary policy.

With the strong expansion of the balance sheet, the potential for high returns has increased, but so too has the risk of large losses. Fluctuations in exchange rates and changes in bond and share prices can have a strong influence on the SNB's investment performance, because with a large balance sheet, even a small percentage gain or loss corresponds to a significant amount of Swiss francs in absolute terms.

In 2022, the SNB recorded a loss of CHF 132.5 billion. Both the unfavourable price development on the equity and bond markets as well as the appreciation of the Swiss franc against various investment currencies contributed to this result. Due to the loss, the equity capital that the SNB had built up in recent years fell from around CHF 204 billion to CHF 66 billion.

High losses that weaken the equity base or even make it negative do not affect the SNB's ability to take monetary policy action. Central banks remain fully capable of acting and fulfilling their monetary policy mandate even in such situations. Furthermore, they can rebuild their equity capital in the long term due their monopoly on issuing legal tender.

That said, negative equity capital over an extended period of time can pose a threat to the credibility and independence of a central bank. The large annual loss makes it clear how important it is for the SNB to have sufficient loss-absorbing equity capital. Against the backdrop of its large balance sheet, it is therefore all the more important that the SNB continues to build up sufficiently high reserves from its earnings.

However, the decisive factor in assessing the SNB's success is not its financial result for the year, but rather whether it fulfils its mandate of ensuring price stability while taking due account of economic developments.

Climate change – a challenge for monetary policy, financial stability and investment policy

The SNB takes into account the possible consequences of climate change for monetary policy, financial stability and the management of currency reserves within the framework of its statutory mandate. In order for the SNB to fulfil this mandate, it is important to be able to correctly assess the consequences of climate change. To this end, it works closely with other central banks and authorities such as FINMA. It also actively participates in the international exchange of experience on climate issues as a member of the Central Banks and Supervisors Network for Greening the Financial System (NGFS) (cf. chapter 7.2.6). Finally, as a member of the Basel Committee on Banking Supervision (BCBS), the SNB is involved in the work on integrating climate risks into banking supervision (cf. chapter 7.2.2).

Climate change can affect monetary policy in several ways. The acute consequences of extreme weather events can directly influence economic development and price levels. Moreover, global warming can also lead to structural changes in the economy. These will be reflected in the SNB's forecasting models over time. In addition, political and regulatory measures aimed at a transition to a low-carbon economy can trigger price changes for certain goods, known as transition risks. The SNB analyses and takes into account the potential impact of these changes on economic growth as well as inflation, and assesses the implications that may arise for monetary policy.

Climate change can also have an influence on the financial system, as adjustments to climate policy and physical climate risks can affect banks' traditional core business. For example, the transition to a low-carbon economy can make the business model of companies or entire industries unviable. Acute weather events such as storms and floods can cause damage to production facilities and disrupt supply chains. This can lead to banks having to accept write-downs on their loans to these companies or valuation losses on their shares or bonds.

The SNB analyses climate-related risks to financial stability. For the globally active Swiss banks, it conducted a pilot project together with FINMA and the University of Zurich to identify and measure transition risks (cf. chapter 6.2.1). Mortgages are by far the most important asset position for domestically focused banks. Alongside the usual risks for mortgages, such as rising interest rates, climate risks can represent an additional risk. For the analysis of these risks, the SNB is in dialogue with several federal authorities, e.g. to close data gaps on the energy efficiency of properties (cf. chapter 6.2.2).

Finally, climate change also affects the SNB's investment policy. Climate risks and adjustments to climate policy can trigger or amplify market fluctuations and influence the attractiveness of investments. From an investment perspective, such risks are essentially no different from other financial risks and are accordingly taken into account by the SNB. To manage risks, the SNB diversifies its investments very broadly. Its equity portfolios, for example, contain shares in the various economic sectors based fundamentally on their market capitalisation. This ensures that risk concentrations are avoided as far as possible and that structural changes in the global economy are also reflected in the SNB's portfolio.

In October 2022, the Federal Council published a report on the Swiss National Bank and Switzerland's sustainability goals in response to a postulate from the National Council Economic Affairs and Taxation Committee. The report explains that demands on the SNB to gear its monetary policy to the pursuit of climate and environmental policy goals are not compatible with its mandate. The SNB shares this assessment.

Comprehensive preparation for possible power shortages

In view of a possible power shortage in the winter of 2022/23, the SNB made far-reaching preparations. In August 2022, it set up an internal committee aimed at crisis management. Its mandate is to ensure the fulfilment of the SNB's tasks as well as possible under all relevant electricity saving or electricity rationing scenarios. The crisis management committee identifies, coordinates and monitors the preparatory measures and their implementation.

A power shortage would affect the whole of Switzerland. Prolonged periods of instability, restrictions or power outages cannot be ruled out and would have a major impact on the economy and society. Financial services could also be affected.

The SNB is well equipped to handle short-term interruptions in the power supply autonomously. For a nationwide power shortage lasting several days or even weeks, additional precautions are needed. In particular, the numerous dependencies on third parties (financial market infrastructure, counterparties, service providers, suppliers) must be taken into account. In the area of its mandate to supply and distribute cash and facilitate cashless payments, the SNB assumed a coordination function. In addition, the SNB increased the resilience of its own operations with numerous measures.

2.1 BACKGROUND AND OVERVIEW

Mandate

It is the task of the Swiss National Bank to provide the Swiss franc money market with liquidity (art. 5 para. 2 (a) National Bank Act (NBA)). It implements its monetary policy by steering the interest rate level on the money market. In so doing, it seeks to keep the secured short-term Swiss franc money market rates close to the SNB policy rate. The SNB can influence money market rates by means of its open market operations or adjust the interest rate on sight deposits held by banks and other financial market participants at the SNB. If necessary, the SNB may also use additional monetary policy measures to influence the exchange rate or the interest rate level.

Transition to positive SNB policy rate

The Swiss National Bank implements its monetary policy by setting the SNB policy rate. In so doing, it seeks to keep the short-term Swiss franc money market rates close to the SNB policy rate. The focus in this regard is the interest rate for secured overnight money, SARON (Swiss Average Rate Overnight). The SNB raised its policy rate three times over the course of 2022. The first rate hike came in June, with an increase of 0.5 percentage points to -0.25% . The second hike, 0.75 percentage points in September, took the rate to 0.5% and ended the period of a negative SNB policy rate. The SNB raised its policy rate a third time in December, by 0.5 percentage points to 1.0% .

Adjusted implementation of monetary policy in money market

Until September 2022, the SNB implemented its monetary policy by charging negative interest on the sight deposits held by banks and other financial market participants at the SNB which exceeded a given exemption threshold. The negative interest rate corresponded to the SNB policy rate, which was -0.75% until June, and then -0.25% until September.

With its decision to raise the SNB policy rate into positive territory at its monetary policy assessment in September, the SNB adjusted the implementation of its monetary policy. Sight deposits up to a certain threshold are remunerated at the SNB policy rate. Sight deposits above the applicable threshold are remunerated at the SNB policy rate minus a discount. The interest rate on sight deposits above the threshold was initially 0% . This rate was raised to 0.5% at the monetary policy assessment in December. Sight deposits above the threshold will thus continue to be remunerated at a discount of 0.5 percentage points relative to the SNB policy rate. In addition to tiered remuneration, sight deposits are absorbed by way of open market operations (cf. chapter 2.3, box ‘Monetary policy implementation when SNB policy rate is positive’). In 2022, in order to contribute to appropriate monetary conditions, the SNB engaged in foreign currency purchases and sales.

Sight deposits at the SNB

The SNB maintains sight deposit accounts for banks and other financial market participants. The balances on these accounts (sight deposits) at the SNB are a financial market participant's most liquid assets since they can be used immediately to effect payments and are considered legal tender. Domestic banks' sight deposits at the SNB count towards satisfying minimum reserve requirements. Furthermore, banks require sight deposits as liquidity reserves. The SNB influences the level of sight deposits by deploying its monetary policy instruments. In addition to sight deposits held by domestic banks, total sight deposits include sight liabilities towards the Confederation, sight deposits of foreign banks and institutions, as well as other sight liabilities.

The level of sight deposits influences activity on the money market, where liquidity is redistributed between the individual financial market participants. Banks seeking to place funds on a short-term basis provide liquidity in the form of a loan to other banks that require short-term refinancing. These loans can be granted on a secured or unsecured basis. If there is ample liquidity in the financial system, the need for banks to adjust their liquidity positions declines and so too does trading activity on the money market. Tiered remuneration of sight deposits stimulates trading when institutions with sight deposits above their threshold conclude money market transactions with institutions which have not exceeded their threshold. Such trading was already occurring between January 2015 and September 2022, when sight deposits were subject to negative interest.

2.2 DEVELOPMENTS IN THE MONEY AND FOREIGN EXCHANGE MARKETS

Substantial decline in sight deposits

Sight deposits held at the SNB totalled CHF 526 billion at the end of 2022 and were thus significantly lower year-on-year (2021: CHF 726 billion). The decline in sight deposits is mainly due to their absorption for the purposes of steering money market interest rates.

Money market rates close to SNB policy rate

The relevant money market rates were close to the SNB policy rate in 2022. From January to September, the SNB provided liquidity via repo transactions in order to counter the upward pressure on short-term interest rates on the secured money market (cf. chapter 2.3). The threshold factor was reduced from 30 to 28 on 1 July for the same reason (cf. Annual Report 2021, pp. 64–65, on how negative interest works and how exemption thresholds are calculated). The upward pressure was due to exemption thresholds continuing to increase over the course of 2022 because of their dynamic calculation. Until June, because of the liquidity-providing repo transactions and the adjustment of the threshold factor, SARON remained largely around -0.71% , and thus close to the SNB policy rate of -0.75% . Following the increase of the SNB policy rate by 0.5 percentage points in June and after a brief transitional phase, SARON mainly hovered around -0.21% .

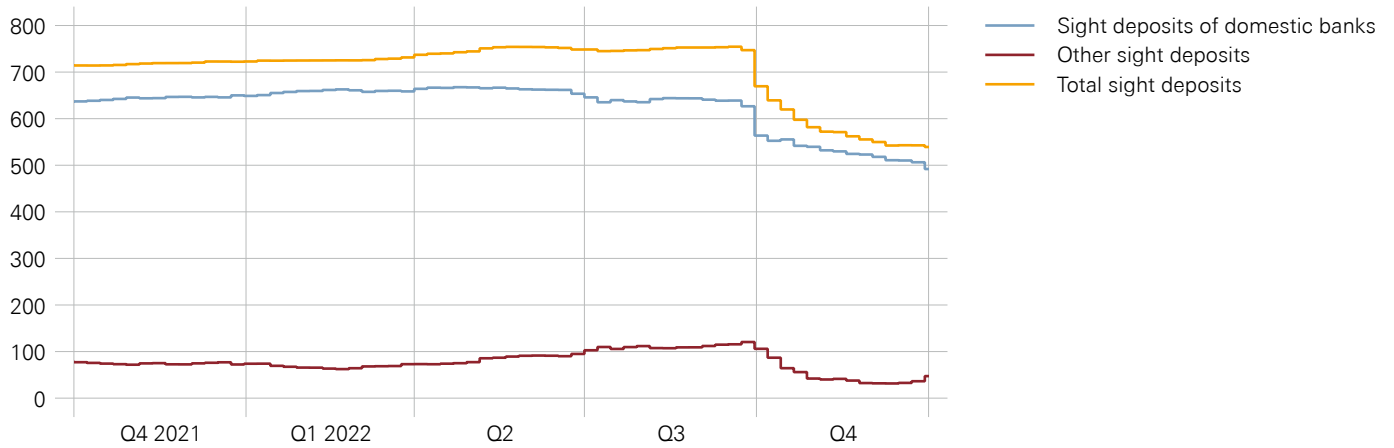
In September, the SNB policy rate was raised into positive territory to 0.5% and the implementation of monetary policy in the money market was adjusted. Together, the tiered remuneration and absorption of sight deposits ensured that the secured short-term Swiss franc money market rates remained close to the SNB policy rate. Liquidity-absorbing repo transactions and the issuance of short-term SNB debt certificates (SNB Bills) were used to absorb sight deposits. Just a few days after the monetary policy assessment in September, SARON was already at 0.44%. It remained at 0.45% on average until the monetary policy assessment in December, and then, following the 0.5 percentage point increase in the SNB policy rate, at 0.94% until the end of the year.

Higher trading activity on repo market

Until September, activity on the repo market (interbank market) was shaped, as in previous years, by trade in sight deposits between account holders with balances above or below their respective exemption thresholds. Institutions with balances below the exemption threshold increased their sight deposits (e.g. via repo transactions). On the other side of these trades were banks whose sight deposits were above the respective threshold. Such trading activities also continued after the monetary policy assessment in September when the SNB policy rate moved into positive territory. The tiered remuneration of sight deposits has created an incentive for account holders with balances above or below the threshold to trade their reserves with one another.

SIGHT DEPOSITS AT THE SNB

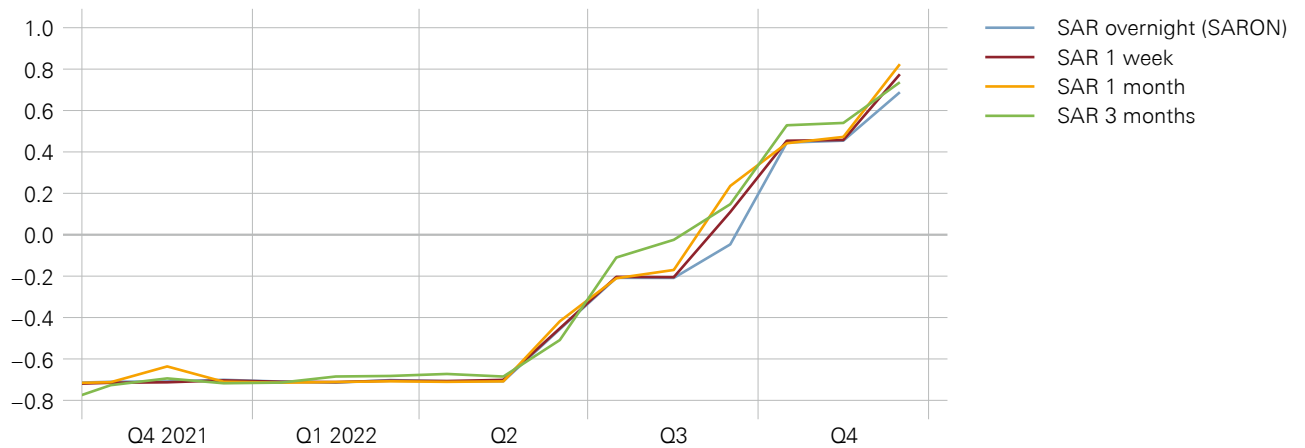
Weekly averages in CHF billions



Source(s): SNB

SWISS FRANC REFERENCE RATES (SWISS AVERAGE RATES, SAR)

Monthly averages of end-of-day values in percent



Source(s): SIX Swiss Exchange Ltd

Activity in the money market continued to increase in the year under review. The daily turnover on the repo market was CHF 16.6 billion on average (2021: CHF 14.7 billion). The funds were traded at rates close to the SNB policy rate. The number of financial market participants active on the repo market rose by some 10% compared to the previous year.

SARON as reference interest rate

At the end of 2021, the Swiss franc Libor (London Interbank Offered Rate) was discontinued and the changeover of Libor-based contracts to SARON successfully completed. SARON fully replaced the Swiss franc Libor as the Swiss franc reference rate. Accordingly, the National Working Group on Swiss Franc Reference Rates, which had managed the transition from the Swiss franc Libor to SARON, with the SNB as co-chair, dissolved itself at the end of the first quarter of 2022.

Principles of collateral policy

The SNB requires that the banks and other financial market participants with whom it conducts credit transactions provide sufficient collateral (art. 9 NBA). In so doing, the SNB protects itself against losses and ensures equal treatment of its counterparties.

The ‘Guidelines of the Swiss National Bank on monetary policy instruments’ outline the types of securities that are eligible as collateral for SNB transactions. The ‘Instruction sheet on collateral eligible for SNB repos’ details the criteria which securities must meet in order to be eligible as collateral in repo transactions with the SNB. Only securities included in the ‘List of collateral eligible for SNB repos’ are accepted. Since the SNB also admits foreign banks to its monetary policy operations and since the portfolio of Swiss franc securities is limited, it also accepts securities in foreign currencies.

The SNB sets high minimum requirements with regard to the marketability and credit rating of securities. This prompts banks to hold recoverable and liquid assets. In turn, this is essential if banks are to be able to refinance their operations on the money market even under difficult conditions.

Higher volume of collateral eligible for SNB repos

Translated into Swiss francs, the volume of collateral eligible for SNB repos at the end of 2022 totalled CHF 11,387 billion, up around CHF 157 billion year-on-year.

The SNB is a member of the Swiss Foreign Exchange Committee (Swiss FXC), which was set up in 2018 and serves as a discussion forum for banks and other foreign exchange market participants in Switzerland and the Principality of Liechtenstein. It co-chairs the Swiss FXC along with a representative from the private sector. The committee is in turn a member of the Global Foreign Exchange Committee (GFXC), which promotes, maintains and updates the principles of the FX Global Code. The FX Global Code was introduced in 2017 to establish a common set of guidelines to promote the integrity and efficiency of foreign exchange trading. In December 2021, the SNB assumed the chairmanship of the GFXC for a two-year term.

Swiss Foreign
Exchange Committee
and FX Global Code

In 2022, the Swiss FXC addressed the matters to be discussed in the GFXC. The GFXC's priority was further fostering adoption of the Code by foreign exchange market participants, in particular by buy-side firms.

In the year under review, the SNB renewed its commitment to adhere to the FX Global Code. The SNB also expects its counterparties to comply with the agreed rules of conduct.

2.3 USE OF MONETARY POLICY INSTRUMENTS

The SNB applies interest to, or 'remunerates', sight deposits held by banks and other financial market participants at the SNB. By setting the interest rate and defining other conditions, the SNB influences the interest rate level on the money market.

Remuneration of sight
deposits at SNB

Until the monetary policy assessment in September, negative interest, at a rate corresponding to the SNB policy rate, was charged on sight deposits above an exemption threshold. The income from negative interest from the beginning of the year until September amounted to CHF 0.6 billion, a decrease of CHF 0.4 billion compared with the same period in the previous year.

The positive remuneration of sight deposits at the SNB policy rate (or at the SNB policy rate minus the discount) for the period from September to December 2022 constituted an expense of CHF 0.8 billion.

In order to steer money market rates, the SNB absorbed sight deposits, giving a total of CHF 526 billion at the end of December 2022. Of these total sight deposits at the end of December, CHF 438 billion, or 83%, were remunerated at the SNB policy rate.

Monetary policy implementation when SNB policy rate is positive

With the transition from a negative to a positive SNB policy rate following the monetary policy assessment in September 2022, the SNB adopted a new approach to implementing its monetary policy. The new approach uses two levers, which together ensure that the secured short-term Swiss franc money market rates are close to the SNB policy rate against the current backdrop of high excess liquidity.

The first lever is a remuneration of the sight deposits that banks and other financial market participants hold at the SNB. This remuneration enables effective steering of money market rates when the SNB policy rate is positive and there is high excess liquidity. A system of tiered remuneration is used. Sight deposits up to an institution-specific threshold are remunerated at the SNB policy rate. Sight deposits above this threshold are remunerated at the SNB policy rate minus a discount. The tiered remuneration of sight deposits creates an incentive to trade sight deposits in the Swiss franc money market, and thus contributes to the robustness of SARON, the new reference interest rate in Swiss francs. Account holders with sight deposits below their threshold have an incentive to borrow reserves, while account holders with sight deposits above their threshold have an incentive to lend reserves.

The calculation of the institution-specific thresholds is based on the minimum reserve requirements and is derived from the calculation method used for exemption thresholds with a negative SNB policy rate. For banks subject to minimum reserve requirements, the threshold is calculated based on the moving average of the minimum reserve requirements over the preceding 36 reference periods, multiplied by the threshold factor. With the transition to the new implementation approach in September, the value of the threshold factor applicable at that time was adopted as the factor for calculating the thresholds, and has remained since at 28. For account holders not subject to any minimum reserve requirements, for example foreign banks and other domestic or foreign financial market participants, the threshold is in principle set at CHF 0. The SNB regularly reviews the calculation of the threshold.

The second lever deployed in the new implementation approach is the absorption of reserves by way of open market operations. These operations reduce sight deposits and thereby the liquidity supply in the money market. A reduction in the liquidity supply is necessary to keep the secured short-term Swiss franc money market rates close to the SNB policy rate. Without this reduction in liquidity, money market interest rates would be close to the rate for sight deposits above the threshold, and not to the SNB policy rate.

Monetary policy instruments

The framework within which the SNB may conduct transactions on the financial market is defined in art. 9 NBA. The 'Guidelines of the Swiss National Bank on monetary policy instruments' describe the instruments and procedures which the SNB uses to implement its monetary policy. These guidelines are supplemented by instruction sheets for the SNB's counterparties. As lender of last resort, the SNB also provides emergency liquidity assistance under certain conditions.

The SNB's instruments comprise open market operations, standing facilities, and interest on sight deposits at the SNB. In the case of open market operations, the SNB takes the initiative in the transaction. Open market operations include repo transactions, the issuance, purchase and sale of its own debt certificates (SNB Bills), as well as foreign exchange transactions. The SNB can carry out open market operations in the form of auctions or bilateral transactions. Transactions on the money market are conducted via an electronic trading platform. Where standing facilities (i.e. the liquidity-shortage financing facility, the intraday facility and the SNB COVID-19 refinancing facility (CRF)) are concerned, the counterparties take the initiative in the transaction. The SNB merely sets the conditions under which counterparties can obtain liquidity.

In principle, all banks domiciled in Switzerland and the Principality of Liechtenstein are admissible as counterparties in monetary policy operations. Other domestic financial market participants, as well as foreign banks, may be admitted, provided there is a monetary policy interest in doing so and they contribute to liquidity on the secured Swiss franc money market.

With regard to the remuneration of sight deposits, art. 9 NBA authorises the SNB to maintain interest-bearing and non-interest-bearing accounts for banks and other financial market participants. Until January 2015, when the SNB charged negative interest for the first time, sight deposits were not remunerated. Since 23 September 2022, sight deposit accounts have been subject to positive interest. Sight deposits up to an institution-specific threshold are remunerated at the SNB policy rate and sight deposits above this threshold are remunerated at the SNB policy rate minus a discount.

Repo transactions

In the case of liquidity-providing repo transactions, the SNB purchases securities from a bank (or other financial institution admitted to the repo market) and credits the corresponding sum in Swiss francs to the counterparty's sight deposit account with the SNB. At the same time, it is agreed that the SNB will resell securities of the same type and quantity at a later date. In the case of a liquidity-absorbing repo, the transactions are conducted in the opposite direction. For the term of the repo agreement, the cash taker generally pays interest (the repo rate) to the cash provider. Repo transactions can be conducted by way of auction or on a bilateral basis with a wide range of counterparties.

From March until the September monetary policy assessment, the SNB supplied liquidity via repo auctions in order to counter upward pressure on secured short-term Swiss franc money market rates. Until September, it also concluded liquidity-providing repo transactions on a bilateral basis at the end of some months. From the beginning of the year until that point, an average of CHF 11.4 billion in liquidity-providing repo transactions was outstanding daily.

Following the monetary policy assessment in September, the liquidity-providing repo transactions were not extended and liquidity-absorbing money market transactions were conducted instead. This was done with the aim of keeping the secured short-term Swiss franc money market rates close to the SNB policy rate. In this regard, the SNB conducted daily liquidity-absorbing repo auctions and concluded occasional repo transactions on a bilateral basis. From the monetary policy assessment in September until the end of the year, the average daily outstanding volume of liquidity-absorbing repo transactions was CHF 59.4 billion.

Indexed repo transactions

In a circular dated 29 March 2022, the SNB introduced the possibility of having the repo rate on its repo transactions indexed to the SNB policy rate (indexed repo transactions). This enhances the SNB's flexibility in steering liquidity, since expectations of an interest rate change are irrelevant to the participation of market players in auctions for indexed repo transactions.

In contrast to a repo transaction with a fixed repo rate, in the case of an indexed repo transaction the repo rate is calculated as the simple average of the index values over the term minus any discount. The discount remains constant over the term of the repo transaction, but the average of the index values – and thus the repo rate – is not known until the transaction matures.

To ensure operational readiness, the SNB conducted tests of indexed repo transactions with market participants over the course of 2022. Since 28 November, the SNB has been using indexed repo transactions in its monetary policy transactions.

The issuance of its own debt certificates in Swiss francs (SNB Bills) allows the SNB to absorb liquidity. It can repurchase SNB Bills via the secondary market in order to increase the supply of liquidity to the financial system where necessary.

SNB debt certificates

Since the September 2022 monetary policy assessment, SNB Bills with various terms were auctioned on a weekly basis to absorb sight deposits. No SNB Bills were repurchased. At the end of the year, the total volume of outstanding SNB Bills was CHF 98.2 billion.

The SNB Bills were well received in the market and swiftly established themselves. As in the preceding years, the SNB tested the use of monetary policy operations with the aim of fostering the operational readiness of the market participants, the financial market infrastructure and the SNB. The market participants were thus well acquainted with SNB Bills when the SNB decided in September to absorb sight deposits.

In its circular dated 22 September 2022, the SNB announced that it would use SNB Bills as collateral as part of its liquidity-absorbing repo transactions. For this purpose, the SNB may participate in auctions of SNB Bills and take the securities into its own portfolio. Such participation by the SNB has no influence on the allotments to the participants or the issue price.

Foreign exchange transactions

In order to fulfil its monetary policy mandate, the SNB may purchase and sell foreign currency against Swiss francs on the financial markets. Foreign exchange transactions conducted by the SNB are usually spot or swap transactions. In a foreign exchange swap, the purchase (sale) of foreign currency at the current spot rate and the sale (purchase) of the foreign currency at a later date are simultaneously agreed. The SNB concludes foreign exchange transactions with a wide range of domestic and foreign counterparties.

In 2022, in order to contribute to appropriate monetary conditions, the SNB purchased and sold foreign currency. Over the course of the year, the SNB made net sales of foreign currency equivalent to a total of CHF 22.3 billion (2021: net purchases equivalent to CHF 21.1 billion). As in 2021, the SNB did not conclude any foreign exchange swaps for the purposes of influencing conditions on the Swiss franc money market.

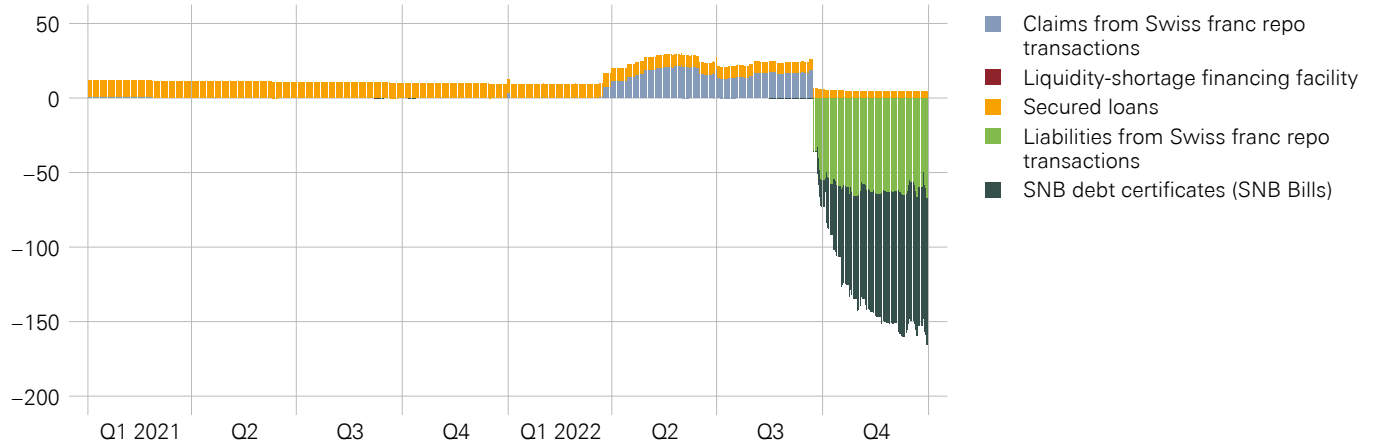
SNB COVID-19 refinancing facility

Since March 2020, banks have been able to obtain liquidity against collateral and at the SNB policy rate via the SNB COVID-19 refinancing facility (CRF). As collateral the SNB accepts credit claims in respect of loans guaranteed by the federal government under the COVID-19 ordinance on joint and several guarantees. It also accepts claims secured by loan guarantees or credit default guarantees offered by cantons, provided these have been granted in order to cushion the economic impact of the pandemic. Claims in respect of loans secured by joint and several guarantees provided for startups by the federal government in cooperation with the cantons are also deemed by the SNB to be eligible collateral, as are other claims in respect of loans guaranteed by the federal government.

The decline in use of the CRF continued in 2022. As at the end of December, drawdown of the CRF amounted to CHF 4.4 billion (2021: CHF 9.2 billion).

MONETARY POLICY INSTRUMENTS

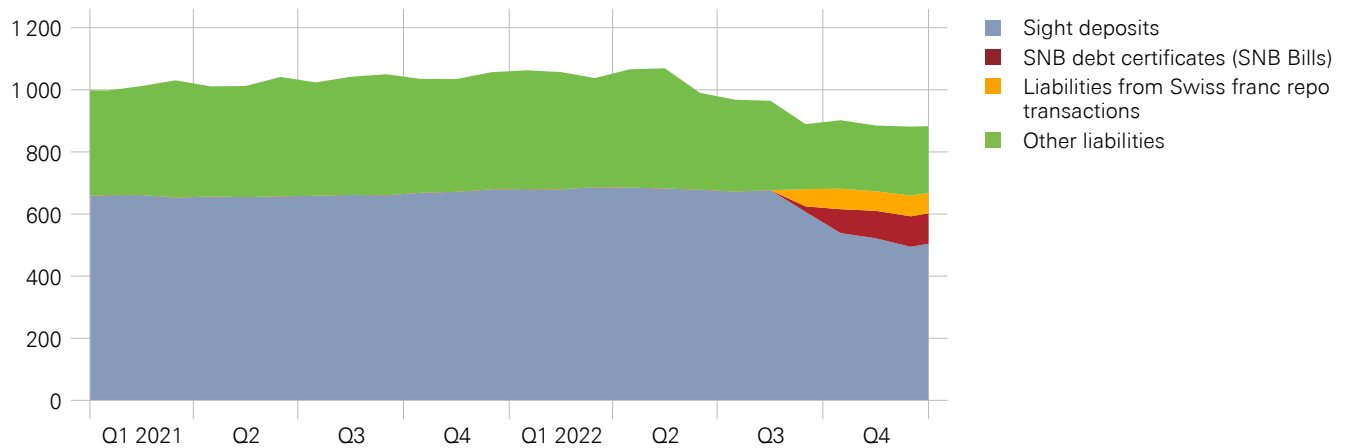
Outstanding volume, in CHF billions



Source(s): SNB

SNB LIABILITIES

Month-end values, in CHF billions



Source(s): SNB

Intraday facility

During the day, the SNB provides its counterparties with interest-free liquidity (intraday facility) through repo transactions so as to facilitate the settlement of payment transactions via the Swiss Interbank Clearing (SIC) system and the settlement of foreign exchange transactions via Continuous Linked Settlement, the multilateral foreign exchange settlement system. The funds received must be repaid by the end of the same bank working day at the latest.

Average utilisation of the intraday facility amounted to CHF 0.6 billion in 2022 (2021: CHF 0.1 billion).

Liquidity-shortage financing facility

To bridge unexpected liquidity bottlenecks, the SNB offers a liquidity-shortage financing facility. For this purpose, it grants its counterparties a limit which must be covered at all times by at least 110% collateral eligible for SNB repos. Counterparties can obtain liquidity up to the limit granted until the following bank working day. The liquidity-shortage financing facility is granted in the form of a special-rate repo transaction. The special rate corresponds to the SNB policy rate plus a surcharge of 0.5 percentage points, but is always at least 0%. Since 2020, an adapted form of the liquidity-shortage financing facility has been available for systemically important financial market infrastructures.

The liquidity-shortage financing facility was hardly used; averaged over the year, volume was close to zero, as in 2021. The limits for the liquidity-shortage financing facility amounted to CHF 36.2 billion. At the end of the year, 73 financial market participants held corresponding limits.

2.4 MINIMUM RESERVES

Main features of regulation

The duty to hold minimum reserves (arts. 17, 18 and 22 NBA) ensures that banks have a minimum demand for base money and thus fulfils a monetary policy objective. Eligible assets in Swiss francs comprise coins in circulation, banknotes and sight deposits held at the SNB. The minimum reserve requirement amounts to 2.5% of the relevant short-term liabilities, which are calculated as the sum of short-term liabilities in Swiss francs (up to 90 days) plus 20% of liabilities towards customers in the form of savings and investments. The National Bank Ordinance (NBO) sets out in detail which balance sheet positions are subject to minimum reserve requirements. The relevant figure for the minimum reserve requirement is taken to be the average for the respective reporting period, which lasts from the 20th day of one month to the 19th day of the following month. It is calculated as the average of the last three month-end values of the relevant liabilities.

The minimum reserves have formed the basis for calculating the exemption thresholds for domestic banks since the negative interest rate was introduced in January 2015. The calculation of the threshold for domestic banks under the tiered remuneration of sight deposits in effect since September 2022 is derived from that used for the exemption thresholds and is thus also based on the minimum reserves.

If a bank fails to fulfil the minimum reserve requirement, it is obliged to pay the SNB interest on the shortfall for the number of days of the reporting period during which the minimum reserve requirement was not observed. The interest rate is 4 percentage points higher than SARON over the reporting period in question.

MINIMUM RESERVES

In CHF millions

| | 2022 Outstanding Average | 2021 Outstanding Average |
|-------------------------------------|--------------------------------|--------------------------------|
| Sight deposits at the SNB | 624 640 | 636 739 |
| Banknotes | 5 686 | 5 867 |
| Coins in circulation | 95 | 98 |
| Eligible assets | 630 422 | 642 703 |
| Requirement | 22 969 | 21 804 |
| Compliance in excess of requirement | 607 453 | 620 899 |
| Compliance in percent | 2 745 | 2 948 |

In 2022 (between 20 December 2021 and 19 December 2022), statutory minimum reserves averaged CHF 23.0 billion. This is a 5% increase year-on-year. Eligible assets fell to CHF 630.4 billion on average, compared with CHF 642.7 billion the previous year. Banks thus exceeded the requirement by an annual average of CHF 607.5 billion. The statutory minimum reserve requirement was met by all 220 banks.

2.5 LIQUIDITY IN FOREIGN CURRENCIES

Swap agreements

Since 2013, standing bilateral liquidity swap arrangements have been in place between the SNB and the Bank of Canada, the Bank of England, the Bank of Japan, the European Central Bank and the US Federal Reserve. This permanent network of swap arrangements allows the participating central banks, where necessary, to provide banks in their jurisdiction with liquidity in any of the relevant currencies, thus serving as a liquidity backstop.

The SNB has further bilateral and temporary swap arrangements with the National Bank of Poland, the People's Bank of China and the Bank of Korea in place since 2012, 2014 and 2018, respectively.

Temporary demand for US dollar liquidity

In 2022, the SNB offered repo transactions in US dollars with maturities of seven days on a weekly basis. From January to mid-September, with the exception of two test purchases, there was no demand for them. Following the monetary policy assessment in September and until mid-October, there was demand for US dollars, with the highest weekly amount allocated USD 11.1 billion. Demand was driven by arbitrage opportunities arising from the fact that the adjustment of terms in the foreign exchange swap market following the transition to a positive interest environment took somewhat longer.

There was no requirement for liquidity in other foreign currencies or in Swiss francs within the framework of these swap arrangements.

2.6 EMERGENCY LIQUIDITY ASSISTANCE

SNB as lender of last resort

The SNB can act as lender of last resort. Within the context of this emergency liquidity assistance, the SNB can provide liquidity to domestic banks if they are no longer able to obtain sufficient liquidity on the market.

Conditions

Certain conditions apply in order for emergency liquidity assistance to be granted. The bank or group of banks requesting credit must be important for the stability of the financial system and solvent. Furthermore, the liquidity assistance must be fully covered by sufficient collateral at all times. The SNB determines which types of collateral it will accept in return for liquidity assistance. To assess the solvency of a bank or group of banks, the SNB obtains an opinion from the Swiss Financial Market Supervisory Authority (FINMA).

3

Ensuring the supply and distribution of cash

3.1 BACKGROUND

The Swiss National Bank is entrusted with the note-issuing privilege. Pursuant to art. 5 para. 2 (b) of the National Bank Act, it is responsible for ensuring the supply and distribution of cash (banknotes and coins) in Switzerland. It works to ensure an efficient and secure cash payment system. The SNB is also charged by the Confederation with the task of putting coins into circulation.

Mandate

Cash is supplied and distributed to the economy via the two cashier's offices at the Berne and Zurich head offices, as well as 13 agencies operated by cantonal banks on behalf of the SNB. The SNB issues banknotes and coins commensurate with demand for payment purposes, offsets seasonal fluctuations and withdraws banknotes and coins no longer fit for circulation. Local distribution and redemption of banknotes and coins are performed by commercial banks, Swiss Post and cash processing operators.

Role of SNB

3.2 CASHIER'S OFFICES, AGENCIES AND CASH DEPOSIT FACILITIES

In 2022, the turnover (incoming and outgoing) of the cashier's offices in Berne and Zurich amounted to CHF 66.8 billion (2021: CHF 71.0 billion). They received a total of 301.6 million banknotes (2021: 268.7 million) and 156.2 million coins (2021: 187.6 million). The SNB examined the quantity, quality and authenticity of the incoming notes and coins. The incoming banknotes and coins were offset by an outflow of 292.1 million banknotes (2021: 279.0 million) and 206.2 million coins (2021: 215.2 million).

Turnover at cashier's offices

The agencies assist the SNB's cashier's offices in the distribution and redemption of cash. They play an important role in ensuring the regional supply and distribution of cash by providing cash withdrawal services to third-party banks (local institutions or branches of larger banking groups), as well as to the branches of the cantonal banks operating each agency.

Turnover at agencies

The agencies' turnover (incoming and outgoing) amounted to CHF 8.7 billion (2021: CHF 10.1 billion). This constitutes 13.1% of the turnover at the SNB's cashier's offices (2021: 14.2%).

Cash logistics The SNB's main partners with respect to cash logistics are commercial banks, Swiss Post and cash processing operators. They conduct their business activities at separate locations around the country. To ensure the supply and distribution of cash in Switzerland, the SNB operates cash logistics centres at the head offices in Zurich and Berne and issues regulations on the manner, place and time for the delivery and withdrawal of banknotes and coins. Its activities in this field are based on the Federal Act on Currency and Payment Instruments (CPIA).

Cash deposit facilities Cash processing operators can apply for cash deposit facilities with the SNB. These storage facilities contain stocks of notes and coins. The SNB sets up the facilities with third parties, while retaining ownership. The cash processing operators deposit surplus cash and withdraw it as required. The corresponding bookings are made to their sight deposit accounts at the SNB. Cash deposit facilities reduce the amount of incoming and outgoing cash at the SNB, as well as the number of transports made by the operators of cash deposit facilities, which makes for a more efficient supply and distribution of cash.

3.3 BANKNOTES

Mandate Pursuant to art. 7 CPIA, the SNB issues banknotes commensurate with the demand for payment transactions and takes back any banknotes which are worn, damaged or surplus to requirements due to seasonal fluctuations. It also determines the denomination and design of the notes. Particular attention is paid to banknote security.

Banknotes in circulation With the coronavirus pandemic waning and social life and the economy largely back to normal, the demand for cash as a means of payment stabilised below its pre-crisis level. Following the SNB policy rate hike in June 2022, cash flows back to the SNB increased from July onwards. Cash does not earn interest, so when interest rates rise, demand for large-denomination banknotes, which are primarily used as a store of value, falls. The value of banknotes in circulation thus decreased. It averaged CHF 87.2 billion in 2022, a 1.3% decline year-on-year. By contrast, the total number of notes in circulation was 1.1% higher than in 2021, averaging 537.6 million. This slight increase suggests that, despite digitalisation, the Swiss population continues to use cash – especially the smaller denominations – for payment purposes.

In February 2022, the SNB published the results of its first representative survey on the use of payment methods by Swiss companies. The information provided by the surveyed companies is the counterpart to the payment methods survey of private individuals (cf. Annual Report 2021, pp. 74–75).

Surveys on payment methods of households and companies

In August, data collection commenced for the third survey on the payment methods of households. Some 2,000 Swiss residents were asked about their payment behaviour and the reasons behind their choices by means of a personal interview and a payment diary. The results will be published in the first half of 2023.

The surveys give the SNB an overview of changes taking place in the payment methods landscape and a basis for efficient planning in the cash domain in line with its mandate. The SNB intends to continue conducting regular surveys of households and companies.

In 2022, the SNB put 61.7 million freshly printed banknotes (2021: 64.5 million) with a nominal value of CHF 10.9 billion (2021: CHF 14.5 billion) into circulation. It destroyed 51.4 million damaged or recalled notes (2021: 79.5 million) with a nominal value of CHF 10.4 billion (2021: CHF 22.9 billion). The decrease in new banknotes put into circulation and banknotes destroyed shows that large proportions of the recalled eighth banknote series notes have already been replaced. This process is continuing.

Issuance and destruction

In 2022, a total of 8,200 counterfeit banknotes (2021: 2,493) were confiscated in Switzerland. Most of the counterfeits were of poor quality and could be easily and reliably detected by checking the standard security features, without the use of technical aids. The sharp increase in counterfeit banknotes was due to a small number of scams, including a major one involving 4,850 counterfeit 1000-franc notes.

Counterfeits

The sixth-series banknotes were recalled in May 2000 and have not been legal tender since. In accordance with a revision to the CPIA which came into effect on 1 January 2020, there is no limitation on the period during which these banknotes can be exchanged at the SNB and the SNB agencies at full nominal value. At the end of 2022, a total of 17.4 million notes (equivalent to CHF 1.0 billion) from the sixth series had still not been exchanged.

Recall and exchange of sixth-series banknotes

Recall and exchange of eighth-series banknotes

The SNB recalled the banknotes from the eighth series with effect from 30 April 2021. The banknotes thereby lost their status as legal tender. They can, however, be exchanged at the SNB and the SNB agencies for an unlimited period at their full nominal value. At the end of 2022, a total of 82.6 million notes (equivalent to CHF 12.6 billion) from the eighth series had still not been exchanged.

KEY FIGURES ON BANKNOTES AND COINS IN CIRCULATION (ANNUAL AVERAGE)

| | 2018 | 2019 | 2020 | 2021 | 2022 |
|-------------------------------------|---------|---------|---------|---------|---------|
| Banknotes in circulation | | | | | |
| In value terms (in CHF millions) | 78 997 | 79 809 | 84 450 | 88 281 | 87 174 |
| Year-on-year change (in percent) | 3.3 | 1.0 | 5.8 | 4.6 | -1.3 |
| Number of notes (in thousands) | 471 276 | 488 060 | 513 381 | 531 983 | 537 573 |
| Year-on-year change (in percent) | 4.9 | 3.6 | 5.2 | 3.6 | 1.1 |
| Coins in circulation | | | | | |
| In value terms (in CHF millions) | 3 144 | 3 180 | 3 189 | 3 182 | 3 210 |
| Year-on-year change (in percent) | 1.3 | 1.2 | 0.3 | -0.2 | 0.9 |
| Number of coins (in millions) | 5 617 | 5 693 | 5 737 | 5 745 | 5 795 |
| Year-on-year change (in percent) | 1.6 | 1.3 | 0.8 | 0.1 | 0.9 |

NUMBER OF BANKNOTES IN CIRCULATION

In millions



- 10s **81**
- 20s **100**
- 50s **73**
- 100s **148**
- 200s **88**
- 1000s **48**

Annual average for 2022

3.4 COINS

The SNB is entrusted by the Confederation with the task of coin circulation. Its role is defined in art. 5 CPIA. It takes over the coins minted by Swissmint and puts the required number into circulation. Coins that are surplus to requirements are taken back against reimbursement of their nominal value. The SNB's services with regard to coins are not remunerated, as they constitute part of its mandate to ensure the supply and distribution of cash in Switzerland. The SNB is supported in supplying and distributing coins by Swiss Post and Swiss Federal Railways (SBB) in accordance with the Coinage Ordinance.

Mandate

On 1 March 2021, the revision to the Coinage Ordinance adopted by the Federal Council came into force. The new provisions draw a distinction between coins worn as a result of normal use and coins that have been damaged by other processes or uses. This concerns coins seriously damaged at metal processing plants (recycling) in particular. Worn coins will continue to be accepted by the SNB without restriction and exchanged at their full nominal value. Damaged coins will only be accepted and reimbursed subject to certain conditions being met. The SNB, in collaboration with the relevant federal government bodies, has published provisions governing the details. The new provisions have proven their worth in practice and facilitate the efficient exchange of coins.

**Revision to
Coinage Ordinance**

In 2022, the value of coins in circulation averaged CHF 3.2 billion. This corresponds to 5.8 billion coins. The overall change compared to the previous year was small. Both the value of coins in circulation and their number grew by 0.9%.

Coin circulation

Significance and acceptance of cash in Switzerland

Cash as a payment method is becoming less significant internationally – a trend that is also evident in Switzerland according to a number of surveys and studies. This is mainly due to the increased attractiveness of non-cash payment methods in terms of ease of use and speed (e.g. contactless payment cards). The coronavirus pandemic accelerated the changes in payment method use.

Thanks to its unique properties, cash not only offers advantages for the individual (e.g. ease of use, independence from digital payment methods, preservation of privacy), but it also performs important functions for the economy and society which non-cash alternatives (debit and credit cards, mobile payment apps, etc.) have so far been unable to fully match. For example, cash currently makes it possible for the public to access central bank money; this is important for fostering trust in commercial bank book money and thus for the functioning of the monetary system. Cash also helps to foster competition in the payments field and has a dampening effect on the fees of non-cash payment methods. Furthermore, it strengthens resilience in the event of electronic payment system outages and enables the financial inclusion of demographic groups who, for various reasons, are not in a position to use non-cash electronic payment methods. The widespread disappearance of cash would have major disadvantages for the economy as a whole as well as for society.

Cash usage is closely linked to cash access and acceptance. Given the ongoing decline in the use of cash for payment purposes, some fear a downward spiral of reduced access to cash and decreasing cash acceptance. Lower cash usage results in reduced availability of cash withdrawal and deposit facilities (e.g. ATMs). Cash acceptance in the economy could therefore decrease, as fewer and fewer consumers use cash at the point of sale. Against this backdrop, the Federal Council, in its response of 9 December 2022 to the Birrer-Heimo postulate, requested that developments be closely monitored and a roundtable be set up, comprising all parties involved in cash payments (federal government, SNB, banks, retail trade, service providers, consumer associations, etc.).

The Swiss population greatly values having the freedom to choose between multiple payment options. Within the framework of its statutory mandate, the SNB helps to ensure that, as legal tender, cash remains available and a core part of the payments landscape.

4

Facilitating and securing cashless payments

4.1 BACKGROUND

In accordance with art. 5 para. 2 (c) of the National Bank Act (NBA), the Swiss National Bank facilitates and secures the operation of cashless payment systems. Art. 9 of the NBA empowers the SNB to maintain sight deposit accounts for banks and other financial market participants.

Mandate

The SNB fulfils its statutory mandate of facilitating and securing the operation of cashless payment systems in its role as commissioning party and system manager of the Swiss Interbank Clearing (SIC) payment system. The SIC system is the central payment system for payments in Swiss francs. The SNB determines the admission criteria, provides the system with liquidity and defines the functionalities and settlement rules, thus ensuring a sound and efficient core infrastructure for cashless payment transactions. As a systemically important financial market infrastructure (FMI), the SIC system is overseen by the SNB (cf. chapter 6.5).

Role in cashless payment transactions

The SIC system is a real-time gross settlement system for payments in Swiss francs. This means that payment orders are settled continuously, individually, irrevocably and with finality in central bank money. Via the SIC system, banks and other financial market participants settle both interbank payments (payments between financial institutions as well as third-party system payments) and retail payments in Swiss francs. Retail payments are mainly initiated by payment instruments such as bank transfers, direct debits or eBills. Additionally, some obligations arising from card payments are bundled and then settled among participants via the SIC system.

Main features of SIC system

At the beginning of each clearing day, the SNB transfers deposits from the SIC participants' sight deposit accounts to their settlement accounts in the SIC system. During the day, it ensures that there is sufficient liquidity in the SIC system by granting, when necessary, intraday loans to banks against collateral (cf. chapter 2.3). At the end of a clearing day, it calculates, on the basis of the turnover of the individual SIC participants, the balance to be transferred from the settlement accounts back to the sight deposit accounts at the SNB. Legally, the two accounts form one unit.

Operation of SIC system

The SNB has entrusted the operation of the SIC system to SIX Interbank Clearing Ltd, a subsidiary of SIX Group Ltd (SIX). The provision of services for the SIC system is governed by contract between the SNB and SIX Interbank Clearing Ltd. Furthermore, the SNB has a seat on the Board of Directors of SIX Interbank Clearing Ltd and participates in various payment system bodies, where it represents its interests based on its mandate. The business relationship between the SNB and the SIC participants is governed by the SIC participant agreement (cf. chapter 4.2, ‘New SIC contract documentation’).

Admission to SIC system

The SNB grants domestic financial market participants access to the SIC system. They include banks, securities firms, insurance companies and other institutions such as companies with a fintech licence, cash processing operators and FMIs. Third-party system operators which are able to effect debits and credits to the accounts of other participants also have access to the SIC system. The SNB may grant foreign financial market participants access to the SIC system too. The principle of admission is that participants must make a significant contribution to the fulfilment of the SNB’s tasks, and their admission must not pose any major risks.

SIC system as part of Swiss financial market infrastructure

The SIC system is a key element of the Swiss financial centre. The financial market infrastructure is operated by SIX, a company owned by around 120 financial institutions which are also the main users of the services provided by SIX. A well-functioning, secure and efficient financial market infrastructure is of vital importance to the SNB for the fulfilment of its statutory mandate, particularly with regard to facilitating and securing the operation of cashless payment systems. The SNB regularly exchanges information with SIX and the banking sector with the aim of continually developing Switzerland’s financial market infrastructure.

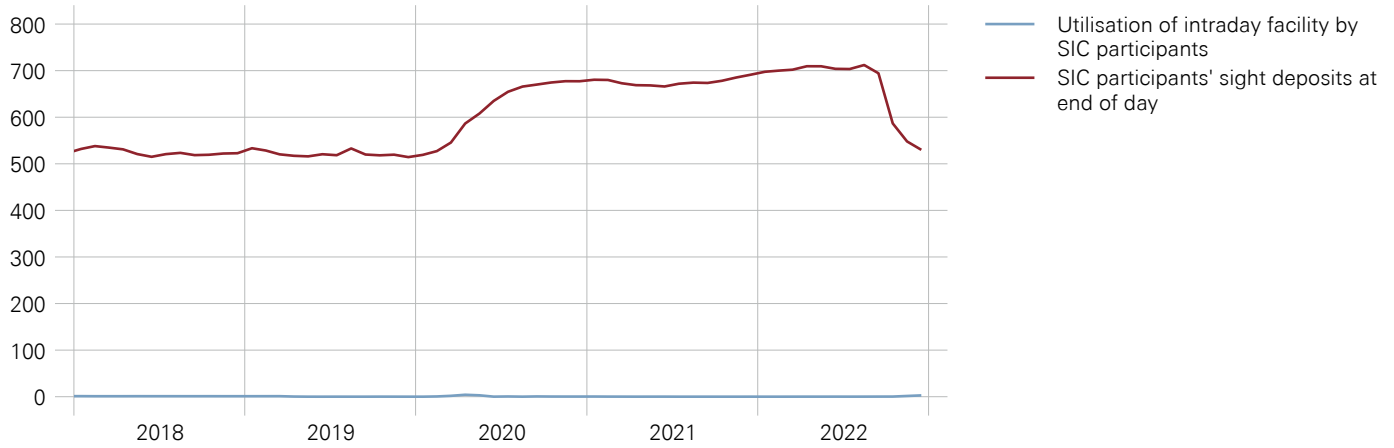
4.2 THE SIC SYSTEM IN 2022

Key figures

In 2022, a daily average of approximately 3.7 million transactions amounting to CHF 200 billion were settled via the SIC system. Compared to the previous year, the average number of transactions settled per day rose by 6.4% and turnover increased by 22.7%. The average value per transaction increased by 14.8% to around CHF 54,000. Peak days saw up to 12.4 million transactions, with turnover of up to CHF 403 billion. A special constellation of bank working days at the end of February explains the high number of transactions. Both the rise in daily turnover and the increase in average value per transaction are attributable to interbank payment transactions.

SIGHT DEPOSITS AND INTRADAY FACILITY IN SIC SYSTEM

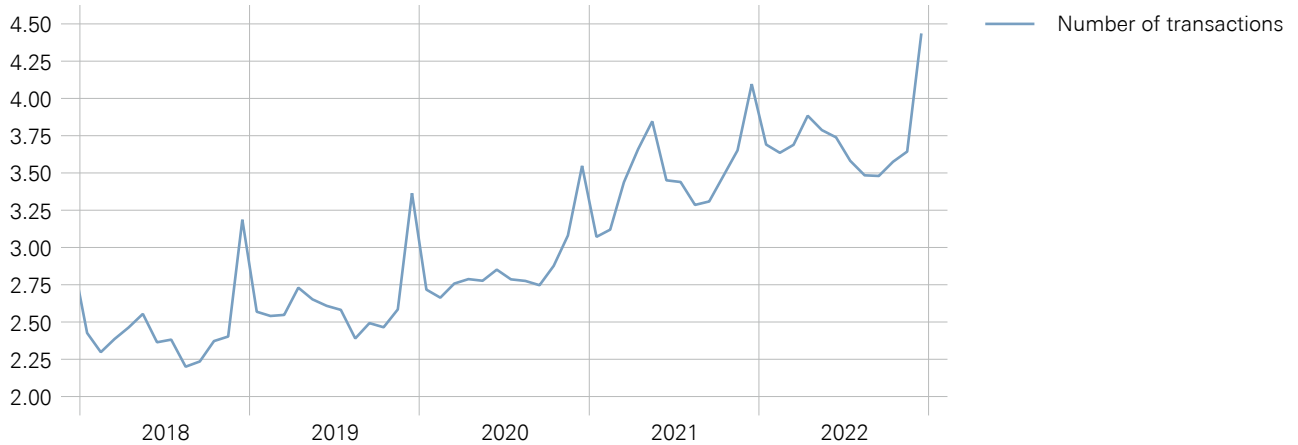
Monthly averages of daily values, in CHF billions



Source(s): SNB

TRANSACTIONS IN SIC SYSTEM

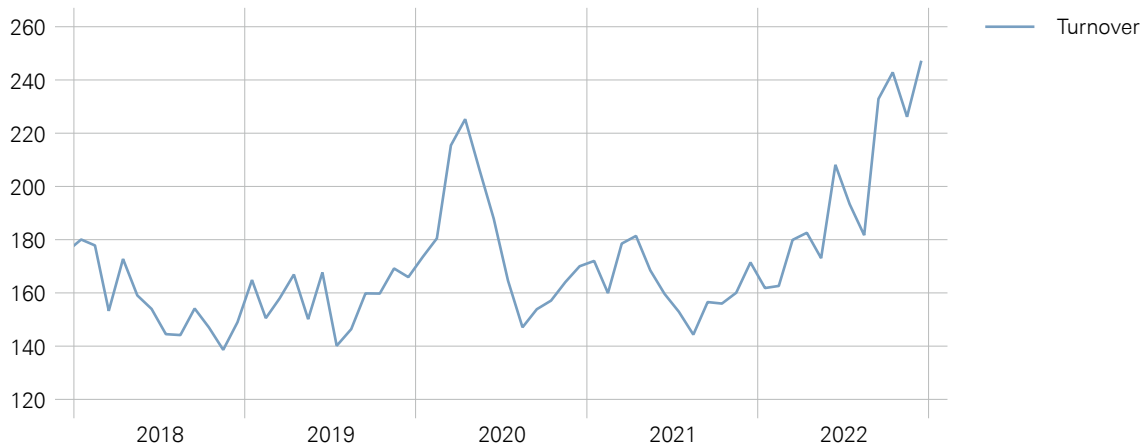
Monthly averages of daily values, transactions in millions



Source(s): SNB

TURNOVER IN SIC SYSTEM

Monthly averages of daily values, in CHF billions



Source(s): SNB

One of the main drivers of the higher turnover was the tightening of monetary policy in 2022. The cash side of the SNB's liquidity-absorbing operations, such as repo transactions and issuing SNB Bills, is settled in the SIC system and has therefore contributed significantly to the higher turnover (cf. chapter 2.3).

Retail payments accounted for 98.1% of the transactions in the SIC system (11.3% of turnover) and interbank payments 1.9% (88.7% of turnover).

KEY FIGURES ON SIC SYSTEM

| | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---------|---------|---------|---------|---------|
| Number of transactions | | | | | |
| Daily average (in thousands) | 2 432 | 2 623 | 2 867 | 3 490 | 3 715 |
| Peak daily value for year (in thousands) | 7 436 | 7 484 | 9 286 | 9 909 | 12 388 |
| Share of interbank payments (in %) | 2.6 | 2.4 | 2.5 | 1.9 | 1.9 |
| Share of retail payments (in %) | 97.4 | 97.6 | 97.5 | 98.1 | 98.1 |
| Turnover | | | | | |
| Daily average (in CHF billions) | 156 | 158 | 178 | 163 | 200 |
| Peak daily value for year (in CHF billions) | 249 | 240 | 276 | 247 | 403 |
| Average value per transaction (in CHF) | 64 081 | 60 256 | 62 160 | 46 797 | 53 735 |
| Share of interbank payments (in %) | 89.2 | 88.6 | 89.7 | 88.3 | 88.7 |
| Share of retail payments (in %) | 10.8 | 11.4 | 10.3 | 11.7 | 11.3 |
| Sight deposits of SIC participants and intraday facility | | | | | |
| Average sight deposits at end of day (in CHF millions) | 524 801 | 521 595 | 621 458 | 676 024 | 666 048 |
| Average intraday facility utilisation (in CHF millions) | 1 061 | 416 | 1 111 | 134 | 585 |

As at 31 December 2022, the SNB had 383 holders of sight deposit accounts (2021: 390). Of these, 311 participated in the SIC system (2021: 319). The majority of SIC participants (236) are domiciled in Switzerland (2021: 241). Six third-party system operators also have access to the SIC system.

SIC system participants

In 2022, the SNB and SIX Interbank Clearing Ltd continued work on the SIC5 project initiated in 2020 to further develop the SIC system. Among other things, SIC5 allows the settlement of instant payments, i.e. cashless retail payments that are processed around the clock with the amount being made available for use by the final recipient within seconds. The SIC5 platform is expected to be launched at the end of 2023, thus creating the technical framework required for instant payments. All SIC participants active in retail payment transactions must be able to process instant payments by the end of 2026. For the largest financial institutions in retail payments, this requirement will already apply from August 2024. The SIC5 project is being carried out in close collaboration with the SIC participants (cf. also box ‘Instant payments – SNB creates framework for future-proof cashless payments’).

SIC5 and instant payments

In 2022, the SNB continued work on the project jointly launched with SIX in 2019 to develop a secure network for the Swiss financial centre (Secure Swiss Finance Network, SSFN). The SSFN communication network was approved in June as a means of connecting to the SIC system in addition to the existing Finance IPNet network. The SNB has since been using the SSFN for its own connection. SIX will replace Finance IPNet with the SSFN for all of its services by September 2024. This means that all Finance IPNet users will have to change their network connection to SIX by then. SIC participants that use a service bureau to connect to the SIC system (rather than connecting directly) are also recommended to use the SSFN to communicate with their service bureau (cf. also box ‘The Secure Swiss Finance Network’).

Secure Swiss Finance Network

**Endpoint security
to reduce fraud risk**

To settle SIC payments, payment information needs to be exchanged between the parties involved in the payment transaction. All devices, applications and systems used for exchanging messages with the SIC system are collectively referred to as endpoints. A compromised endpoint can be used by unauthorised third parties to submit fraudulent payments. Besides the direct financial damage this would cause the SIC participants concerned, trust in the SIC system could also be affected. Such a scenario is thus assessed as a risk to the smooth functioning of the SIC system as a whole. The SNB therefore endeavours, as part of its statutory mandate, to prevent as far as possible the risk of payments with a fraudulent origin being submitted to the SIC system via compromised endpoints.

In October 2022, the SNB published a requirements catalogue ‘Endpoint security in SIC system’ which contains binding measures for the SIC participants. The goal of the catalogue is to increase endpoint security and thus also the protection against unauthorised third-party access. It comprises both operational and technical requirements for the SIC participants, and defines the process flows. The procedure for regular, independent assessment of compliance with the requirements is also explained. The SIC participants will have to submit the first attestation of their compliance with the requirements to the SNB at the end of 2024.

**New SIC contract
documentation**

The operation of the SIC system by SIX Interbank Clearing Ltd and participation in this system are governed by comprehensive contractual agreements between the various parties. Since the existing agreements entered into force in 2006, the SIC system, as well as the legal and regulatory framework associated with its operation, have undergone changes. In 2022, the SNB and SIX Interbank Clearing Ltd therefore revised the individual agreements to take due account of developments and current conditions, thus also ensuring the continuity and security of the SIC system going forward. The new regulations on endpoint security (cf. previous section) constitute a key part of this revision.

Instant payments – SNB creates framework for future-proof cashless payments

With the SIC5 project, the SNB is creating the framework at infrastructure level for cashless payments which are not only fast, but also continue to be secure and efficient.

The payment behaviour of private individuals and companies has changed considerably in recent years as a result of digitalisation and the spread of smartphones. It is now expected that payments can be made instantaneously and around the clock. In fact, cash is currently the only means of making an immediate transfer of value. This is not yet the case for cashless payments. Bank transfers are subject to a delay and are often only carried out on the next bank working day. For other cashless payment methods, such as credit or debit cards, the settlement merely appears immediate to the person making the payment. In reality, however, the recipient only receives a promise of payment. The actual transfer of funds happens later.

With instant payments, an immediate and final transfer of value throughout the entire settlement chain from the payer to the payee will in future be possible for cashless payments as well. This will make settlement easier than with current cashless methods, for example at the point of sale. Instant payments thus provide a basis for new payment methods and efficiency gains. Sellers also profit from immediate receipt of payment and are thus protected from default risk. In the case of e-commerce, goods can be dispatched more quickly as the payment is credited immediately.

Settling instant payments in the SIC system will have advantages for SIC participants compared to alternative solutions. SIC participants will carry out instant payments directly in central bank money, which is more secure. The integration of instant payments into the SIC system will also be efficient, since interbank and retail payments will be settled in a single system for a wide range of participants. Maximising the full potential of instant payments will hinge on private payment service providers developing new payment solutions.

The Secure Swiss Finance Network

To further strengthen the cybersecurity and resilience of Swiss FMIs, the SNB and SIX put the new communication network Secure Swiss Finance Network (SSFN) into operation in 2021. It was developed in collaboration with telecommunications providers and financial centre participants.

The SSFN increases the security and resilience of network connections to the SIC system and to other FMIs. The connections within the network are no longer dependent on only one telecommunications provider at any time, meaning that the SSFN offers very high reliability and a correspondingly high level of resilience. As a closed network, the SSFN protects the participants within the network against attacks from the internet, such as a distributed denial-of-service (DDoS) attack, i.e. a malicious overload of a system that puts it out of service.

These characteristics mean the SSFN ensures that the fast and permanent data transmission essential for instant payments is available securely and around the clock. The SSFN also provides the added advantage of being more flexible than the current communications service as participants can now also communicate securely with one another. The current solution, Finance IPNet, is limited to communication between the participants and the FMIs. Finance IPNet will be replaced with the SSFN for all SIX services by the end of September 2024.

The SSFN uses the routing architecture SCION (Scalability, Control and Isolation on Next-Generation Networks) developed at ETH Zurich. Based on this architecture, a new, self-contained network – an isolation domain (ISD) – was created. The SNB, SIX and the communication services provider SWITCH are responsible for the governance of the SSFN. Together they determine the rules, e.g. admission requirements, for the various parties involved, particularly for service providers within the network.

5.1 BACKGROUND

The assets of the Swiss National Bank fulfil important monetary policy functions. They consist largely of investments in foreign currencies, gold and, to a lesser extent, financial assets in Swiss francs. Their size and composition are determined by the established monetary order and the requirements of monetary policy. Under art. 5 para. 2 of the National Bank Act (NBA), the SNB is responsible for managing the currency reserves, part of which must be held in the form of gold (art. 99 para. 3 Federal Constitution).

Mandate

The SNB's currency reserves are held primarily in the form of foreign currency investments and gold. The currency reserves also include the reserve position in the International Monetary Fund (IMF) and international payment instruments.

Currency reserves

Currency reserves ensure that the SNB has room for manoeuvre in its monetary policy at all times. They also serve to build confidence, and to prevent and overcome potential crises. In the current environment, the level of the currency reserves is largely dictated by the implementation of monetary policy. The level of currency reserves has multiplied since the onset of the financial and debt crisis. While these reserves amounted to CHF 85 billion at the end of 2007, by the end of 2022 they had risen to CHF 853 billion. The increase during this period is mainly due to foreign currency purchases aimed at curbing the appreciation of the Swiss franc. In 2022, however, the level of currency reserves decreased. This reduction is due to valuation losses on investments and to foreign currency sales.

The financial assets in Swiss francs are made up of Swiss franc bonds, claims from repo transactions, and secured loans from the SNB COVID-19 refinancing facility (CRF) established in 2020.

**Financial assets
in Swiss francs**

Investment principles

Asset management is governed by the primacy of monetary policy. In applying its investment policy, the SNB has two main objectives. The first is to ensure that its balance sheet can be used for monetary policy purposes at any time. In particular, the SNB must be in a position to expand or shrink the balance sheet if necessary. The second objective of the SNB's investment policy is to preserve the value of currency reserves in the long term.

A high degree of market liquidity of the assets, in particular, is required to achieve the first main objective of ensuring sufficient room for manoeuvre in the implementation of monetary policy. The SNB therefore invests a substantial portion of its currency reserves in highly liquid foreign government bonds. The second main objective of preserving at least the real value of the assets over the long term is pursued through broad diversification of currencies. Additionally, to improve the long-term risk/return profile, government bond holdings in the major currencies are supplemented by other asset classes. Since all investments are valued in Swiss francs, the return must offset the Swiss franc's long-term upward trend. This necessitates sufficiently positive returns in the local currencies. By investing part of the currency reserves in a well-diversified range of shares and corporate bonds, the SNB is able to exploit the positive return contribution of these asset classes. At the same time, it retains the flexibility to adjust its monetary and investment policy to changing requirements.

The primacy of monetary policy means that there are restrictions on investment policy. With regard to its investments, the SNB does not hedge currency risks against the Swiss franc in order to avoid affecting demand for Swiss francs. In addition, the SNB does not want to influence markets with its investment policy and therefore aims for minimal market impact.

The investment process ensures that no privileged information from within the SNB can influence investment activity and that no unintentional signalling effects are created. For this reason, the SNB does not invest in the shares of any systemically important banks. Equally, it generally does not invest in Swiss shares or in bonds issued by Swiss companies, and the Swiss franc bond portfolio is managed passively.

5.2 INVESTMENT AND RISK CONTROL PROCESS

The NBA defines the SNB's responsibilities and describes in detail its mandate with regard to asset management. The Bank Council is charged with the general oversight of the investment and risk control process. Its role is to assess the underlying principles and monitor compliance with them. The Risk Committee – which is composed of three Bank Council members – supports the Bank Council in this task. It monitors risk management, in particular, and evaluates the governance of the investment process. Internal risk management reporting is addressed to the Governing Board and the Risk Committee.

Bank Council and Risk Committee responsibilities

The Governing Board defines the investment policy. Specifically, it sets the parameters for the balance sheet structure and investment targets, the investment universe, investment strategy and the associated risk tolerance, as well as the investment and risk control process. In particular, it sets out the requirements with regard to the security, liquidity and return of the investments, as well as the eligible currencies, asset classes, instruments, and borrower categories. The Governing Board decides on the composition of the currency reserves and other assets, and defines the foreign currency investment strategy. The investment strategy covers the allocation of foreign currency investments to different asset classes and currencies, and determines the scope for management at operational level.

Governing Board responsibilities

The Investment Committee, an internal body, decides on the tactical allocation of the foreign currency investments at operational level. Within the strategically prescribed ranges set by the Governing Board, it adjusts currency weightings, bond durations and allocations to the different asset classes, to take account of changed market conditions.

Investment Committee responsibilities

Portfolio Management manages the individual portfolios. The majority of the foreign currency investments (98%) are managed internally. External asset managers are used to benchmark internal portfolio management and obtain efficient access to new asset classes. At operational level, responsibilities for monetary policy and investment policy transactions are organised in such a way as to avoid conflicts of interest.

Portfolio Management responsibilities

Singapore office responsibilities

The Asia-Pacific portfolios are managed by SNB portfolio managers in the Singapore branch office, which opened in 2013. It is the SNB's only branch office outside Switzerland. Its primary task is to ensure the efficient management of the SNB's currency reserves in the Asia-Pacific region. Having a presence in Asia is also beneficial when it comes to implementing monetary policy on the foreign exchange market. The office's trading and portfolio management operations are fully integrated into the investment and risk control process in Switzerland.

Risk Management responsibilities

The most important element for managing absolute risk is broad diversification of investments. Risk is managed and mitigated by means of a system of reference portfolios (benchmarks), guidelines and limits. All relevant financial risks associated with investments are identified, assessed and monitored continuously. Risk measurement is based on standard procedures and risk indicators. In addition, sensitivity analyses and stress tests are carried out on a regular basis. The SNB's generally long-term investment horizon is taken into account in these risk analyses.

To assess and manage credit risk, information from major rating agencies, market indicators and in-house analyses are used. Credit limits are set on the basis of this information, and adjusted whenever the risk assessment changes. To mitigate counterparty risk, the replacement values of derivatives are usually netted for each counterparty and collateralised by securities. Concentration and reputational risks are also factored in when determining risk limits. Risk indicators are aggregated across all investments; compliance with the guidelines and limits is monitored daily. The risk analyses and results of risk monitoring activities are submitted to the Governing Board and the Bank Council's Risk Committee in quarterly risk reports. In addition, the Risk Management unit's annual report is submitted to the Bank Council.

5.3 CHANGES IN AND BREAKDOWN OF ASSETS

At the end of 2022, the SNB's assets amounted to CHF 881 billion, which was CHF 175 billion lower than a year earlier. They consisted of foreign currency investments (CHF 801 billion), gold (CHF 56 billion), Special Drawing Rights (CHF 14 billion) and Swiss franc bonds (just under CHF 4 billion). At year-end, there were no outstanding claims from Swiss franc repo transactions for monetary policy purposes or from US dollar repo transactions under the swap arrangement with the US Federal Reserve. Since 2020, the balance sheet has also included the item secured loans (CHF 4 billion). These are loans granted under the SNB COVID-19 refinancing facility (CRF) established in March 2020. Compared to the previous year, this item decreased by CHF 5 billion due to repayments. Other assets amounted to CHF 2 billion.

Changes in assets

The decline in the balance sheet total in 2022 was mainly attributable to lower foreign currency investments, which were down CHF 166 billion year-on-year. This reduction was principally due to valuation losses on investments, with foreign currency sales also a contributing factor.

At the end of 2022, outstanding foreign currency repo transactions on the balance sheet amounted to CHF 17 billion. Such repo transactions are performed as part of portfolio management; foreign-issued securities are transferred for a given term in exchange for foreign currency sight deposits, and then the process is reversed at maturity. Since there is a market demand for these securities, a corresponding premium can be achieved with such repo transactions. There is also a temporary expansion of the balance sheet because, first, the securities that are temporarily exchanged under the transaction continue to be on the SNB's books and, second, the sight deposits received and the commitment to repay them at maturity are also reported in the balance sheet. Since these instruments are not freely disposable, they are deducted from the foreign currency investments for the calculation of the foreign exchange reserves and currency reserves.

The gold holdings of 1,040 tonnes remained unchanged over the course of the year, and their value was largely stable. At the end of 2022, total currency reserves amounted to CHF 853 billion, a decline of CHF 163 billion compared to the previous year.

Currency reserves

COMPOSITION OF CURRENCY RESERVES

In CHF billions

| | 31.12.2022 | 31.12.2021 |
|---|------------|--------------|
| Gold reserves | 56 | 56 |
| Foreign currency investments | 801 | 966 |
| Less: associated liabilities ¹ | -17 | -21 |
| Derivatives (replacement values, net) | -1 | 0 |
| Total foreign exchange reserves | 784 | 945 |
| Reserve position in the IMF | 2 | 2 |
| International payment instruments | 11 | 12 |
| Total currency reserves | 853 | 1 015 |

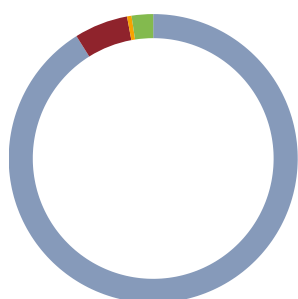
¹ Liabilities from foreign currency repo transactions.

Bond portfolios

The SNB's bond portfolios chiefly comprise government bonds (approximately 84% of total bond holdings). The selection of government bonds and the corresponding markets takes into account the SNB's specific requirements and, in particular, ensures a high degree of liquidity. Within a given market, investments are diversified broadly across maturities so that, if necessary, large volumes can be bought or sold with minimum impact on prices. In addition to government bonds, the bond portfolios in the foreign exchange reserves contain quasi-government bonds as well as bonds issued by supranational organisations, local authorities, financial institutions (mainly covered bonds and similar instruments) and other companies.

The average duration of the portfolio increased slightly in 2022, and stood at 4.4 years at year-end. In contrast to the previous year, only a negligible proportion of foreign currency bonds (1%) had a negative yield to maturity (2021: just under 40%).

BREAKDOWN OF SNB ASSETS



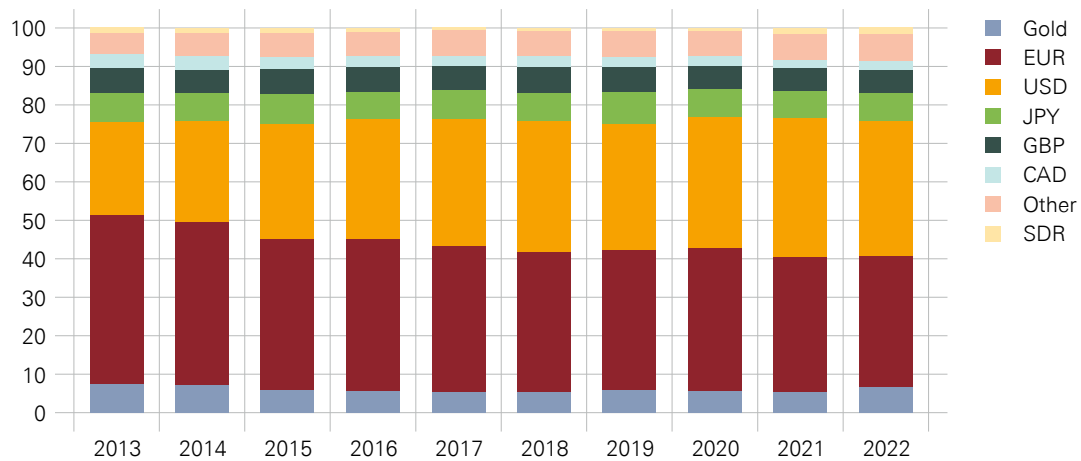
- Foreign currency investments **91%**
- Gold holdings **6%**
- Financial assets in CHF **1%**
- Sundry **2%**

Total: CHF 881 billion

At year-end 2022

BREAKDOWN OF CURRENCY RESERVES AT YEAR-END

In percent



Source(s): SNB

Equity portfolios

Equities are managed passively according to a set of rules based on a strategic benchmark comprising a combination of equity indices in various markets and currencies. The principle of broadly replicating markets ensures that the SNB operates as neutrally as possible in the individual stock markets. The SNB does not overweight or underweight particular companies and sectors, in order to avoid concentration risks exceeding those of the market.

At the end of 2022, the equity portfolios comprised mostly shares of mid-cap and large-cap companies in advanced economies. Shares of small-cap companies in advanced economies and shares of companies in emerging economies were also held. This resulted in a globally well-diversified equity portfolio of 7,000 individual shares (over 1,300 shares of mid-cap and large-cap companies and 4,500 shares of small-cap companies in advanced economies, as well as just under 1,200 shares of companies in emerging economies). With its broad market coverage based on market capitalisation, the SNB's ownership share of individual mid-cap and large-cap companies in all advanced economies is roughly the same. For reasons of liquidity and risk, the corresponding proportions of small-cap companies and companies in emerging economies are somewhat lower; with respect to the individual companies, the proportions held by the SNB are also roughly the same.

Swiss franc bonds

The passively managed Swiss franc bond portfolio primarily contains bonds issued by the Confederation, the cantons, municipalities and foreign borrowers, as well as Swiss Pfandbriefe. In 2022, the average duration of the portfolio decreased to 7.6 years (2021: 8.4 years). At year-end, the portfolio had a value of just under CHF 4 billion; it did not include any bonds with a negative yield to maturity. At the end of 2021, more than half of the bonds in the portfolio had been negative-yielding.

Non-financial aspects of managing securities of private sector issuers

The SNB holds part of its foreign currency investments in the form of shares and corporate bonds in order to take advantage of the positive return contribution of these asset classes and strengthen diversification, thus improving the long-term risk/return ratio. When managing such securities of private sector issuers, the SNB also takes non-financial aspects into consideration.

Owing to its special role vis-à-vis the banking sector, the SNB refrains from investing in shares of systemically important banks worldwide. The SNB also takes account of Switzerland's fundamental standards and values in its investment policy. It does not invest in shares and bonds of companies whose products or production processes grossly violate values that are broadly accepted at a societal level. It therefore does not purchase securities issued by companies that seriously violate fundamental human rights, systematically cause severe environmental damage, or are involved in the production of internationally condemned weapons.

Condemned weapons include biological and chemical weapons, cluster munitions and anti-personnel mines. Companies involved in the production of nuclear weapons for countries that are not among the five legitimate nuclear-weapon states defined under the United Nations Treaty on the Non-Proliferation of Nuclear Weapons (China, France, Russia, the United Kingdom and the United States) are also excluded. Individual companies are excluded under the criterion of systematically causing severe environmental damage if they, for example, systematically pollute waterways or the countryside, or seriously damage biodiversity through their production operations, or if their business model is primarily based on coal mining for energy production. Not excluded are companies mining coal for steel production and conglomerates.

The SNB reviews the whole investment universe on a regular basis in order to identify the companies concerned. A specialised external service provider reviews the SNB's investment universe to specifically identify companies involved in the manufacturing of condemned weapons. With regard to companies that focus on coal mining, the SNB bases its assessment on the corresponding classification of an index provider. Companies that fall under other exclusion criteria are identified in a two-phase process. The first phase consists of examining and processing public information in order to identify companies whose activities are very likely to fall under the exclusion criteria. During the second phase, a detailed assessment is performed on each identified company to ascertain whether it should be excluded or not. The SNB relies on the recommendations made by the specialised external service providers in deciding on the exclusion of companies, and reviews its decisions on a regular basis.

The SNB analyses the risks associated with climate change on an ongoing basis. It monitors the latest developments and findings and, for this purpose, engages in regular discussions with other central banks and institutions as well as the scientific community. Within the Central Banks and Supervisors Network for Greening the Financial System (NGFS), it actively participates in the various workstreams.

It should be noted that the constitutional and legislative authorities have deliberately not tasked the SNB with using its asset management activities to selectively influence the development of certain economic sectors. The SNB's investment policy therefore cannot be geared to pursuing structural policies, i.e. undertaking positive or negative selection with the aim of advantaging or disadvantaging specific economic sectors or of promoting or inhibiting economic, political or social change.

Against this backdrop, the SNB generally aims to replicate the individual stock markets in their entirety, taking into account the aforementioned exceptions. As a result, the SNB holds equities in the various economic sectors based on market capitalisation. This approach ensures that the portfolio's exposure to different risks is similar to that of the global universe of listed companies, and that structural changes in the global economy are also reflected in the SNB's portfolio.

The process of exercising voting rights relating to shares is another non-financial aspect of managing assets issued by private sector companies. Here, the SNB restricts itself to issues of corporate governance. In the long term, good corporate governance helps companies – and hence the SNB's investments in them – to perform favourably. In exercising its voting rights, the SNB focuses on mid-cap and large-cap companies in Europe and also works with external service providers to this end. The voting procedure is based on the SNB's internal guidelines for exercising voting rights. The external service providers are tasked with interpreting the guidelines for exercising voting rights and applying them to the proposals being put forward at the shareholders' meetings. The SNB is in regular contact with the external service providers and monitors the correct interpretation of the guidelines for voting rights.

BREAKDOWN OF FOREIGN EXCHANGE RESERVES AND SWISS FRANC BOND INVESTMENTS AT YEAR-END

| | 2022 | | 2021 | |
|--|---------------------------|-----------|---------------------------|-----------|
| | Foreign exchange reserves | CHF bonds | Foreign exchange reserves | CHF bonds |

Currency allocation (in percent, incl. derivatives positions)

| | 2022 | | 2021 | |
|--------------------|---------------------------|-----------|---------------------------|-----------|
| | Foreign exchange reserves | CHF bonds | Foreign exchange reserves | CHF bonds |
| CHF | | 100 | | 100 |
| EUR | 37 | | 38 | |
| USD | 38 | | 39 | |
| JPY | 8 | | 8 | |
| GBP | 6 | | 6 | |
| CAD | 3 | | 2 | |
| Other ¹ | 8 | | 7 | |

Asset classes (in percent)

| | 2022 | | 2021 | |
|-------------------------------|---------------------------|-----------|---------------------------|-----------|
| | Foreign exchange reserves | CHF bonds | Foreign exchange reserves | CHF bonds |
| Investments with banks | 0 | | 0 | |
| Government bonds ² | 64 | 32 | 66 | 35 |
| Other bonds ³ | 11 | 68 | 11 | 65 |
| Shares | 25 | | 23 | |

Breakdown of interest-bearing investments (in percent)

| | 2022 | | 2021 | |
|-----------------------------|---------------------------|-----------|---------------------------|-----------|
| | Foreign exchange reserves | CHF bonds | Foreign exchange reserves | CHF bonds |
| AAA-rated ⁴ | 61 | 80 | 60 | 79 |
| AA-rated ⁴ | 20 | 18 | 19 | 19 |
| A-rated ⁴ | 15 | 1 | 16 | 1 |
| Other | 4 | 1 | 5 | 1 |
| Investment duration (years) | 4.4 | 7.6 | 4.3 | 8.4 |

1 Mainly AUD, CNY, DKK, KRW, SEK, SGD plus small holdings of other currencies in the equity portfolios.

2 Government bonds in own currency, deposits with central banks and the BIS; in the case of Swiss franc investments, also bonds issued by Swiss cantons and municipalities.

3 Government bonds in foreign currency as well as bonds issued by foreign local authorities and supranational organisations, covered bonds, corporate bonds, etc.

4 Average rating, calculated from the ratings of major credit rating agencies.

There was little year-on-year change in the structure of the foreign exchange reserves and Swiss franc bonds. The euro and US dollar shares declined slightly in favour of the Canadian dollar and the other currencies. The proportions of AAA-rated and AA-rated investments increased slightly at the expense of other investments. The share of equities in the foreign exchange reserves stood at 25% at the end of 2022.

Changes in asset structure

5.4 BALANCE SHEET RISK

Risk profile of assets

The risk profile of the assets is determined by the currency reserves. The main risk to the currency reserves is market risk, in particular risks related to exchange rates, the gold price, share prices and interest rates. In addition, there is liquidity risk as well as credit and country risk, although these are not as significant as market risk. The contribution of Swiss franc bonds to total risk is negligible.

Market risk

Exchange rates are the most important risk factor for the currency reserves. Currency risk is not hedged against the Swiss franc, as this would restrict monetary policy. As a result, even minor changes in the Swiss franc exchange rates lead to substantial fluctuations in investment income, and thus in the SNB's equity. In addition to exchange rates, stock prices, interest rates and the gold price are important risk factors. Currency risk, share price risk and interest rate risk are limited through the specification of benchmarks and management guidelines. Various means, including the use of derivative financial instruments such as interest rate swaps, stock index futures and interest rate futures, are used to control these risks. Foreign exchange derivatives can be used to manage the currency mix.

Liquidity risk

The SNB's liquidity risk arises from the possibility that, should investments in foreign currencies need to be sold, such sales could be effected only partially or after considerable price concessions, or may not be possible at all. By holding a large volume of highly liquid government bonds in the major currencies – euros and US dollars – the SNB continued to ensure a correspondingly high level of liquidity in its foreign exchange reserves in 2022. Liquidity risk is reassessed periodically.

Credit risk stems from the possibility that counterparties or issuers of securities do not meet their obligations. Such risks are inherent in bilateral (over-the-counter) transactions with banks and in bonds issued by all borrower categories. The SNB holds bonds issued by public and supranational borrowers, covered bonds and similar instruments as well as corporate bonds as part of its currency reserves. For issuers of bonds, the SNB requires a minimum rating of 'investment grade'. Exposure to individual issuers is limited by means of concentration limits. Credit risk arising from non-tradable instruments with respect to banks was very low in 2022. Replacement values of derivatives were netted and collateralised, in accordance with the ISDA (International Swaps and Derivatives Association) agreements with counterparties. The SNB settles most of its interest rate swaps via a central counterparty. This facilitates netting of offsetting positions. Additionally, efficiency gains are made in the daily management of the securities used as collateral. Profits and losses from exchange-traded futures positions are netted daily; as a result, there is no default risk. Credit risk arising from futures transactions is limited to the extent of the collateral deposited at the exchanges.

Credit risk

In 2022, too, investments mainly took the form of government bonds; the bulk of these were in highly liquid bonds issued by European countries with very good credit ratings and by the US. At the end of 2022, outstanding balances at central banks and the Bank for International Settlements amounted to CHF 89 billion. Overall, 81% of interest-bearing investments were rated AA or higher.

Country risk arises, among other things, from the possibility that a country may block payments by borrowers domiciled in its sovereign territory or block the right to dispose of assets held there. The tradability of investments may also be restricted by sanctions. In order to avoid entering into any unbalanced country risk, the SNB endeavours to distribute assets across a number of different depositories and countries.

Country risk

Gold holdings are stored according to this principle as well. In choosing a location, attention is paid to both appropriate regional diversification and easy market access. As before, of the 1,040 tonnes of gold, approximately 70% is stored in Switzerland, some 20% at the Bank of England, and roughly 10% at the Bank of Canada. Decentralised storage of gold holdings in Switzerland and abroad ensures that the SNB has access to its gold reserves even in the event of a crisis.

Balance sheet growth

The increase in currency reserves largely stemming from monetary policy in recent years has led to corresponding growth in the SNB's balance sheet. With the expansion of the balance sheet from 2008 onwards, the ratio of equity capital to currency reserves, on the one hand, has decreased significantly. On the other, loss risk has risen in absolute terms. The SNB aims for a robust balance sheet with sufficient equity capital, to ensure that it can absorb even large losses. As of 2009, allocations to the provisions were thus gradually increased. The equity ratio (ratio of equity capital to currency reserves) subsequently stabilised at just under 20%. Owing to the high loss on investments in 2022, however, the equity ratio fell again and was substantially below 10% at year-end. The balance sheet total also contracted as a result of the loss and the foreign currency sales in 2022, by CHF 175.4 billion to CHF 881.4 billion.

Provisions and distribution reserve

The SNB is required by art. 99 para. 3 of the Federal Constitution to create sufficient currency reserves from its earnings. According to art. 30 para. 1 NBA, the SNB must set aside provisions that allow it to maintain the currency reserves at the necessary level, while taking into account the development of the Swiss economy. The provisions for currency reserves and the distribution reserve together form the SNB's equity capital.

The provisions for currency reserves correspond to the desired level of equity capital at the given point in time. Allocations are made to these provisions on an annual basis with the aim of ensuring that the SNB has a solid equity base to absorb even large losses. The annual allocation is determined on the basis of double the average nominal GDP growth rate over the previous five years. This requirement was supplemented in 2016 with the specification of a minimum annual allocation of 8% of the provisions for currency reserves. In view of the considerable increase in currency reserves in the subsequent years, the minimum allocation was raised to 10% as of 2020. This is aimed at ensuring that sufficient allocations are made to the provisions for currency reserves and the balance sheet is strengthened even in periods of low nominal GDP growth. The minimum allocation of 10% applied again in 2022 and amounted to CHF 9.6 billion. The allocation raises the provisions for currency reserves to CHF 105.2 billion.

The distribution reserve is a form of profit/loss carried forward and serves as a fluctuation reserve to enable the legally required medium-term smoothing of the annual distributions. The portion of the annual result remaining after the appropriation of profit is allocated to the distribution reserve, or the shortfall for the appropriation of profit is drawn from it. At the end of 2022, the distribution reserve amounted to CHF 102.5 billion. In 2022, a very high loss of CHF 132.5 billion was recorded, which exceeded the distribution reserve. After the allocation to the provisions and offsetting with the annual result, the distribution reserve became negative at CHF –39.5 billion.

In accordance with art. 31 para. 2 NBA, one-third of the SNB's net profit remaining after the dividend requirement is met accrues to the Confederation and two-thirds to the cantons. The amount of the annual profit distribution to the Confederation and the cantons is laid down in an agreement between the Federal Department of Finance (FDF) and the SNB, with the aim of smoothing the distributions in the medium term. The current agreement covering the period through to 2025 stipulates the amount of the annual distribution depending on the net profit. A distribution is made only in the event of a positive net profit. The portion of the annual result remaining after the allocation to the provisions for currency reserves is the distributable profit. Together with the distribution reserve, this makes up the net profit/net loss. For the 2022 financial year, a net loss of CHF 39.5 billion was recorded and, therefore, no profit distribution will be made to the Confederation and the cantons.

Profit distribution for 2022

After the increase in the provisions for currency reserves and the offsetting of the net loss, the SNB's equity amounted to CHF 65.8 billion (provisions of CHF 105.2 billion plus a distribution reserve of CHF –39.5 billion). In 2021, it had amounted to CHF 198.3 billion. It thus declined by CHF 132.5 billion year-on-year. The large loss incurred in 2022 highlights the importance of holding a sufficient level of provisions to ensure that equity capital can be preserved even in times of negative market developments.

Changes in equity

5.5 INVESTMENT PERFORMANCE

Investment return comprises the returns on foreign exchange reserves, gold and Swiss franc bonds.

In 2022, the return on currency reserves was –13.1%. Gold increased slightly in value (0.7%), whereas foreign exchange reserves yielded a significantly negative return (–13.9%). In local currency, the return on foreign exchange reserves was –10.8%. Owing to the appreciation of the Swiss franc, the exchange rate return was negative (–3.5%). In Swiss franc terms, the annual return on the currency reserves has averaged 0.7% over the last 15 years.

RETURN ON INVESTMENTS

Returns in percent

| | Total ³ | Gold ³ | Total ³ | Foreign exchange reserves Exchange rate return | Currency reserves ¹ Return in local currency | CHF bonds Total ³ |
|------------------------|--------------------|-------------------|--------------------|--|---|---------------------------------|
| 2008 | –6.0 | –2.2 | –8.7 | –8.9 | 0.3 | 5.4 |
| 2009 | 11.0 | 23.8 | 4.8 | 0.4 | 4.4 | 4.3 |
| 2010 | –5.4 | 15.3 | –10.1 | –13.4 | 3.8 | 3.7 |
| 2011 | 4.9 | 12.3 | 3.1 | –0.8 | 4.0 | 5.6 |
| 2012 | 2.3 | 2.8 | 2.2 | –2.3 | 4.7 | 3.7 |
| 2013 | –2.5 | –30.0 | 0.7 | –2.4 | 3.2 | –2.2 |
| 2014 | 8.0 | 11.4 | 7.8 | 2.6 | 5.1 | 7.9 |
| 2015 | –4.7 | –10.5 | –4.4 | –5.6 | 1.3 | 2.3 |
| 2016 | 3.8 | 11.1 | 3.3 | –0.4 | 3.7 | 1.3 |
| 2017 | 7.2 | 7.9 | 7.2 | 2.9 | 4.2 | –0.1 |
| 2018 | –2.1 | –0.6 | –2.2 | –1.5 | –0.7 | 0.2 |
| 2019 | 6.1 | 16.3 | 5.5 | –2.4 | 8.1 | 3.2 |
| 2020 | 1.9 | 13.5 | 1.2 | –4.5 | 6.0 | 1.2 |
| 2021 | 2.7 | –0.1 | 2.9 | –0.6 | 3.5 | –2.4 |
| 2022 | –13.1 | 0.7 | –13.9 | –3.5 | –10.8 | –12.8 |
| 2018–2022 ² | –1.1 | 5.7 | –1.5 | –2.5 | 1.0 | –2.3 |
| 2013–2022 ² | 0.5 | 1.0 | 0.6 | –1.6 | 2.2 | –0.3 |
| 2008–2022 ² | 0.7 | 3.9 | –0.2 | –2.8 | 2.6 | 1.3 |

1 In this table, they correspond to gold and foreign exchange reserves, excluding IMF Special Drawing Rights.

2 Average annual return over 5, 10 and 15 years.

3 In Swiss francs.

The currency reserves are mainly composed of gold, bonds and shares. The diversification effects achieved by adding shares to a portfolio, as well as their high liquidity, make them an attractive asset class for the SNB. Furthermore, given that expected return is higher on shares than on bonds, this asset class helps to preserve the real value of the currency reserves. Though long-term return expectations are higher for equities, they are also subject to greater fluctuations in value. Yet, while equities, viewed on their own, are indeed more prone to fluctuation, in the context of the portfolio as a whole – and with an equity exposure of the current magnitude – this disadvantage is offset by the asset class's favourable diversification effects relative to bonds and gold.

**Contributions of asset classes
to investment performance**

The share of equity holdings stood at 25% at the end of 2022. Equity exposure improves the risk/return profile of the foreign exchange reserves. Measured in Swiss francs, the average annual return on equities since their introduction as an asset class in 2005 has been 4.1%. Likewise measured in Swiss francs, the annual return on bonds over the same period has averaged –0.2%. The bond component of the foreign exchange reserves recorded a loss of CHF 96.6 billion between 2005 and 2022. The equity holdings generated earnings of CHF 107.7 billion over this period. In recent years, equities have thus enabled the SNB to make distributions and increase its equity capital.

RETURNS ON FOREIGN EXCHANGE RESERVES, IN SWISS FRANCS

Returns in percent

| | Total | Bonds | Shares |
|------------------------|-------|-------|--------|
| 2005 | 10.8 | 10.6 | 24.4 |
| 2006 | 1.9 | 1.3 | 11.1 |
| 2007 | 3.0 | 3.3 | 0.6 |
| 2008 | -8.7 | -3.1 | -44.9 |
| 2009 | 4.8 | 3.7 | 20.4 |
| 2010 | -10.1 | -11.0 | -2.6 |
| 2011 | 3.1 | 4.0 | -6.8 |
| 2012 | 2.2 | 0.8 | 12.7 |
| 2013 | 0.7 | -2.4 | 20.4 |
| 2014 | 7.8 | 6.9 | 12.7 |
| 2015 | -4.4 | -5.2 | 0.6 |
| 2016 | 3.3 | 1.5 | 9.2 |
| 2017 | 7.2 | 4.5 | 18.4 |
| 2018 | -2.2 | -1.1 | -7.1 |
| 2019 | 5.5 | 1.1 | 24.5 |
| 2020 | 1.2 | -0.7 | 5.1 |
| 2021 | 2.9 | -2.4 | 22.1 |
| 2022 | -13.9 | -13.1 | -16.5 |
| 2005-2022 ¹ | 0.6 | -0.2 | 4.1 |

1 Average annual return over 18 years.

6

Contribution to financial system stability

6.1 BACKGROUND

Art. 5 para. 2 (e) of the National Bank Act (NBA) confers upon the Swiss National Bank the task of contributing to the stability of the financial system. Financial stability means that financial system participants, i.e. financial intermediaries (especially banks) and financial market infrastructures (FMIs), can perform their functions and are resilient to potential shocks and disruptions. It is an important prerequisite for economic development and effective monetary policy implementation.

Mandate

In the field of financial stability, the SNB fulfils its mandate by analysing sources of risk to the financial system and identifying areas where action may be needed. In addition, it helps to create and implement a regulatory framework for the financial sector, and oversees systemically important FMIs.

For the prevention of crises that can threaten the stability of the financial system, the SNB has two macroprudential regulatory powers at its disposal, namely the authority to designate banks as systemically important and to submit a proposal to the Federal Council for the activation, adjustment or deactivation of the countercyclical capital buffer (CCyB). While the designation of systemically important banks is focused on structural risks, the CCyB addresses cyclical risks.

Crisis prevention and management

For the management of crises, the SNB can act as lender of last resort. In this role, it provides emergency liquidity assistance to domestic banks whose insolvency could have an impact on financial system stability if they are no longer able to refinance themselves on the market (cf. chapter 2.6).

At national level, the SNB works closely with the Swiss Financial Market Supervisory Authority (FINMA) and the Federal Department of Finance (FDF) to create a regulatory framework that promotes stability. The SNB takes a primarily systemic view, focusing on the macroprudential aspects of regulation. FINMA, on the other hand, is responsible for the supervision of individual financial institutions and for ensuring that the financial markets function effectively. The principles for this collaboration are set out in two Memoranda of Understanding: one bilateral with FINMA, and the other trilateral with FINMA and the FDF.

Collaboration with FINMA, FDF and foreign authorities

At international level, the SNB participates in the design of the regulatory framework through its membership of the Financial Stability Board, the Basel Committee on Banking Supervision, the Committee on Payments and Market Infrastructures and the Committee on the Global Financial System (cf. chapters 7.2.2 and 7.2.3). In the oversight of cross-border FMIs, the SNB liaises closely with FINMA and with foreign authorities.

6.2 MONITORING THE FINANCIAL SYSTEM

Within the context of monitoring the financial system, the SNB analyses developments and risks in the Swiss banking sector. Its assessment is published, in particular, in its annual Financial Stability Report.

6.2.1 GLOBALLY ACTIVE BANKS

In 2022, the SNB emphasised the different development of the two globally active banks, particularly in terms of profitability. While UBS Group AG (UBS) increased its profits, Credit Suisse Group AG (Credit Suisse) reported a heavy loss again for the 2022 financial year. Firstly, this loss was attributable to extraordinary items, such as provisions for litigation. Secondly, the bank experienced a significant decline in revenues while operating expenses remained stable. Losses directly related to the war in Ukraine were small at both globally active banks, reflecting their limited exposure to Russia and Ukraine.

The two globally active banks also developed differently with respect to market-based indicators such as credit default swap (CDS) premia, ratings and stock market prices. Since the losses sustained by Credit Suisse in 2021 in connection with its positions in the US hedge fund Archegos, the market had drawn a stronger distinction between the two banks, with a more positive assessment of UBS than Credit Suisse. This became even more pronounced in the second half of 2022.

In view of its ongoing losses, Credit Suisse announced a comprehensive restructuring of its investment bank at the end of October as part of its strategic reorientation. Going forward, Credit Suisse plans to focus on wealth management, Swiss business and asset management. The investment bank, by contrast, is to be streamlined considerably and focus primarily on wealth management. At the same time, the bank strengthened its capital base by CHF 4 billion. The SNB welcomed this announcement of measures to bring about the strategic transformation of Credit Suisse. The reorientation of the bank's business model is intended to reduce risks in the medium term.

Mixed development at globally active banks

The loss potential of Credit Suisse and UBS under the stress scenarios remained substantial. Taking on risk is an integral part of the banking business. From the financial stability perspective, it is crucial that these risks be backed by sufficient capital. This applies to credit and market risk in the books of both globally active banks. In addition, capital buffers must be sufficiently large to cover operational risk as well as business risk, i.e. the risk of reduced earnings due to a drop in business volume or client activity. Business risk is especially relevant for the two globally active banks given their large fee and commission income components.

Backing risks with sufficient capital

In line with its statutory mandate, the SNB analyses climate-related risks to financial stability. As part of this, it worked on a joint pilot project with FINMA and the University of Zurich to identify and measure transition risks – the risks associated with the transition to a low-carbon economy – at Switzerland’s two globally active banks. This involved an analysis of these banks’ portfolios of equities, corporate bonds and corporate loans. It showed that about a quarter of these portfolios were invested in sectors that are particularly vulnerable to transition risks. Compared with a hypothetical portfolio, which replicates the global market as a whole based on data from a leading index provider, the two banks’ exposure to these sectors was similar or lower. The SNB noted that further work is needed to obtain a more robust assessment of climate risks. FINMA and the SNB will, in close cooperation with the banks, enhance and refine their approach to measuring transition risks.

Analysis of climate-related transition risks

6.2.2 DOMESTICALLY FOCUSED BANKS

As regards the domestically focused banks – which concentrate on deposit and lending business – the SNB noted that their profitability had risen slightly, with a further decline in the interest rate margin offset by various factors including low value adjustments and improved cost efficiency. By historical comparison, the profitability of these banks remains low. However, it should now gradually improve since interest rate margins are benefiting from the rise in long-term interest rates during 2022.

Profitability increase at a low level

Given the current environment, the SNB drew attention to two particularly relevant risk factors for the domestically focused banks. First, although their direct exposure to Russia and Ukraine is not material, the war in Ukraine could have stronger and longer-lasting economic effects than expected. This could lead to a deterioration in the quality of domestically focused banks’ credit portfolios.

Exposure to mortgage and real estate markets once again higher

Second, domestically focused banks' exposure to the mortgage and real estate markets continued to increase. Both mortgage volume at these banks and affordability risks rose once again in 2022. At the same time, driven by continued strong demand and tight supply, transaction prices for single-family houses and apartments increased further despite the higher interest rates. Meanwhile, there were growing signs of a slowdown in prices for apartment buildings.

Adequate resilience

The SNB assessed the vulnerabilities on the Swiss mortgage and residential real estate markets as still elevated. Although the interest rate rises in the year under review could lead to some price correction and thus to a corresponding reduction in vulnerabilities, this would not eliminate the risk of an abrupt correction on the real estate market exposing the banks to substantial loss potential. Against this backdrop, the domestically focused banks' capital buffers play a crucial role. They enable the banks to absorb potential losses while, at the same time, supplying the economy with credit. The SNB's scenario analysis indicated that, thanks to the available capital buffers, most banks would be in a position to absorb the losses under relevant stress scenarios, e.g. an interest rate shock and a simultaneous correction in real estate prices.

Climate risk

Mortgages are the largest item on the assets side of domestically focused banks' balance sheets, as they constitute around 90% of credit volume. Alongside the traditional risks for mortgages in Switzerland, such as the effects of interest rate rises on affordability and loan-to-value ratios, climate risks can represent an additional risk. For the analysis of these risks, the SNB is in dialogue with FINMA, the State Secretariat for International Finance (SIF) and the Federal Office for the Environment (FOEN). A key part of this work is identifying any data gaps and closing them in a timely manner.

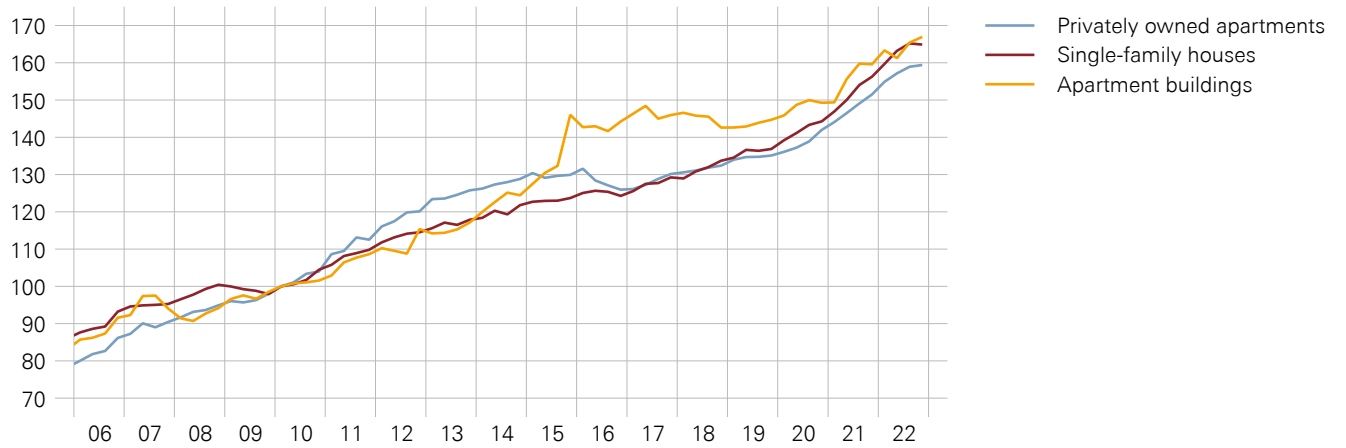
6.3 MEASURES RELATING TO MORTGAGE AND REAL ESTATE MARKETS

Measures up to end-2019

In the aftermath of the global financial crisis, vulnerabilities had increasingly built up due to the strong growth in mortgage volume and real estate prices. These vulnerabilities posed a threat to the stability of the banking system. In response to this, a sectoral CCyB of 1%, targeted at mortgage loans financing residential real estate in Switzerland, was activated in 2013; it was increased to 2% in 2014. Furthermore, the Swiss Bankers Association's self-regulation guidelines on mortgage financing were tightened several times.

REAL ESTATE PRICE INDICES

Transaction prices, nominal, index: Q1 2010 = 100



Source(s): Wüest Partner

CCyB during coronavirus crisis 2020–2022

Against the backdrop of the coronavirus pandemic, the sectoral CCyB was deactivated in March 2020 as part of a package of measures to safeguard lending. Given the continued build-up of vulnerabilities on the Swiss mortgage and real estate markets, it was reactivated in January 2022, following a proposal by the SNB. Since September, banks have been required to hold a sectoral capital buffer of 2.5%, which is the maximum level specified under the Capital Adequacy Ordinance. In light of the prevailing risks, the contribution made by the reactivated sectoral CCyB to banks' capital adequacy is of vital importance.

No proposal for sectoral CCyB adjustment in 2022

The SNB monitors the situation on the mortgage and real estate markets closely, and regularly reassesses the need for an adjustment of the CCyB. In 2022, following an in-depth analysis, the SNB decided not to submit a proposal to the Federal Council for an adjustment to the sectoral CCyB. Given the existing vulnerabilities on the Swiss mortgage and real estate markets, the level of 2.5% was still deemed appropriate.

6.4 DEVELOPMENTS IN RESOLUTION

Measures are in place to facilitate recovery or orderly wind-down (resolution) in a crisis where a bank can no longer continue to operate as a going concern (and is thus a 'gone concern'). FINMA is responsible for bank resolution planning and implementation.

Progress regarding funding in resolution

For a successful resolution, the globally active banks must have both sufficient gone-concern loss-absorbing capacity and sufficient liquidity (funding in resolution). Regarding funding in resolution, important regulatory progress was made in the year under review. First, amendments to the Liquidity Ordinance came into force on 1 July 2022. These amendments are intended to ensure that systemically important banks hold sufficient liquidity to cover their needs even in the event of a resolution. Second, on 11 March 2022 the Federal Council announced its intention to introduce a public liquidity backstop in Switzerland, by means of which the SNB could provide liquidity assistance to a systemically important bank in the form of a state-guaranteed loan. This backstop would thus act as an additional line of defence in a crisis. The Federal Council defined the key parameters and instructed the FDF to prepare a consultation draft by mid-2023. The SNB is involved in this work.

The domestically focused systemically important banks (DF-SIBs) – Zürcher Kantonalbank, the Raiffeisen Group and PostFinance – have to fulfil additional going-concern and gone-concern requirements under the ‘too big to fail’ (TBTF) regulations. The three banks are fully compliant with the TBTF going-concern risk-weighted capital ratio and leverage ratio requirements. The gone-concern requirements entered into force in 2019 and are to be phased in by 2026. Like the globally active banks, the DF-SIBs are also subject to the revised liquidity requirements for systemically important banks.

Domestically focused banks’ compliance with gone-concern capital requirements

In addition to the gone-concern requirements, emergency plans are necessary for the maintenance of systemically important functions in a crisis. FINMA is responsible for the assessment of emergency plans.

6.5 OVERSIGHT OF FMIs

6.5.1 BACKGROUND

The NBA (art. 5 and arts. 19–21) requires the SNB to oversee systemically important central counterparties, central securities depositories, payment systems and trading facilities for distributed ledger technology securities (DLT trading facilities) as specified in art. 22 of the Financial Market Infrastructure Act (FinMIA). To this end, the SNB cooperates with FINMA as well as with foreign supervisory and oversight authorities. The National Bank Ordinance (NBO) sets out the details of the oversight of systemically important FMIs.

Mandate

The domestic FMIs that could harbour risks for the stability of the financial system currently include the central counterparty SIX x-clear, the central securities depository SIX SIS and the payment system Swiss Interbank Clearing (SIC system). These are operated by SIX x-clear Ltd, SIX SIS Ltd and SIX Interbank Clearing Ltd respectively, which are subsidiaries of SIX Group Ltd (SIX).

Focus on systemically important FMIs

Other FMIs that are important for the stability of the Swiss financial system are the Continuous Linked Settlement (CLS) foreign exchange settlement system and the central counterparties London Clearing House (LCH) and Eurex Clearing. The operators of these FMIs are domiciled in the US, the UK and Germany respectively.

Cooperation with FINMA

The central counterparty SIX x-clear and the central securities depository SIX SIS are subject both to prudential supervision by FINMA and to oversight by the SNB. Although FINMA and the SNB exercise their supervisory and oversight powers separately, they coordinate their activities. Oversight of the SIC system is exclusively the SNB's responsibility.

... and with foreign authorities

For the oversight of Swiss FMIs with cross-border activities, the SNB cooperates with foreign authorities, in particular the European Securities and Markets Authority, the European Central Bank, authorities in the Netherlands, and the Bank of England. For the oversight of FMIs domiciled abroad, namely CLS, Eurex Clearing and LCH, the SNB cooperates with the relevant foreign authorities. It also participates in the oversight of the Belgium-based Society for Worldwide Interbank Financial Telecommunication (SWIFT), which operates a global network for the transmission of financial messages.

Assessing compliance with special requirements

6.5.2 ONGOING OVERSIGHT

Based on their ongoing supervision and oversight activities, FINMA and the SNB issue annual statements regarding systemically important FMIs' compliance with regulatory requirements. While FINMA addresses compliance with the general requirements of the FinMIA, the SNB addresses compliance with the special requirements of the NBO.

In its statements for 2022, the SNB noted that the systemically important FMIs were complying with all but one of the special requirements. As in 2021, the exception related to requirements for business continuity management, which needs to be enhanced. FMIs must deal even more systematically and comprehensively with extreme but plausible scenarios as well as with the management of associated risks. In particular, greater consideration should be given to the rapidly changing threat situation with regard to cyber risks – for example, the risk of total data loss due to a ransomware attack. The development and implementation of appropriate measures will take several years.

In its statements, the SNB can set out expectations to be taken into consideration by FMIs in the ongoing development of their services and risk management tools in order to ensure continued compliance with the special requirements. In the year under review, the FMIs implemented a number of measures, as an appropriate response to the expectations set out by the SNB in 2021. In particular, they analysed the potential short, medium and long-term impact of climate-related physical risks on their operational business, identified areas where action is needed, and institutionalised regular reassessment of the risk situation.

Systemically important FMIs are required to prepare recovery plans showing how they intend to ensure their stability on a sustainable basis in a financial crisis, thus allowing the continuation of their systemically important business processes. FINMA is responsible for approving the recovery plans of SIX SIS Ltd and SIX x-clear Ltd, following prior consultation with the SNB. In the course of this consultation process, the SNB issued a statement to FINMA on both recovery plans and suggested various improvements. The two plans were approved by FINMA.

FMI recovery plans

The SNB is responsible for assessing the recovery plan of SIX Interbank Clearing Ltd. It set out a number of expectations for improving the plan. In particular, it called for additional instruments to increase loss-absorbing capacity and bridge liquidity shortfalls. SIX Interbank Clearing Ltd met these expectations in an appropriate manner in the year under review.

| | |
|---|---|
| Operational incident | <p>An operational incident occurred at a systemically important FMI at the end of June, in which a software malfunction led to previously settled transactions being restructured, some of which were subsequently resettled. The SNB initiated an investigation into the cause and handling of this incident by an external audit firm. The audit findings will be available in the first half of 2023.</p> |
| Monitoring major projects | <p>The SNB maintains a regular dialogue with the operators of the FMIs subject to oversight in which it discusses projects and initiatives that could impact the FMIs' business activities or risk profile – and hence their ability to meet the special requirements.</p> <p>In 2022, the SNB once again addressed various SIX projects designed to enhance the latter's information security and resilience to cyber risks. For example, the SNB monitored a SIX project aimed at strengthening resilience in the event of a partial or total loss of data at its data centres. The SNB also addressed the SIC5 project (cf. chapter 4.2) as well as SIX x-clear Ltd's planned introduction of a new clearing platform.</p> |
| Authorisation procedure for new Swiss FMIs | <p>6.5.3 ASSESSMENT OF SYSTEMIC IMPORTANCE OF FMIs</p> <p>Central counterparties, central securities depositories, payment systems and DLT trading facilities which apply for a licence from FINMA are assessed by the SNB for their systemic importance pursuant to art. 22 para. 1 FinMIA. To conduct such an assessment, the SNB considers the impact of an FMI on the stability of the Swiss financial system.</p> <p>The SNB continued to examine the systemic importance of the euroSIC payment system operated by SIX Interbank Clearing Ltd. Initiated in 2021, this assessment was still ongoing at the end of 2022.</p> |

6.6 FINANCIAL SECTOR CYBERSECURITY

IT system outages and disruptions, particularly those resulting from cyberincidents, can severely jeopardise the availability, integrity and confidentiality of data as well as critical services and functions within the financial system. It is first and foremost the responsibility of the individual financial institutions to adequately protect themselves against cyber risks. However, due to the highly interconnected nature of the financial system and the various cross-institutional processes, sector-wide precautions and measures are also necessary. This calls for close cooperation between the private stakeholders. In addition, the federal government, FINMA and the SNB contribute to the cybersecurity of the financial sector within the scope of their respective mandates.

Importance of cybersecurity for financial sector

In Switzerland, the National Cyber Security Centre (NCSC), which is attached to the FDF, is responsible for the coordinated implementation of the national strategy for the protection of Switzerland against cyber risks. Since 2020, the authorities (FDF, FINMA and SNB), working together with the private sector (banks, insurance companies, FMIs and industry associations) and under the direction of the NCSC, have been developing the basis for the Swiss Financial Sector Cyber Security Centre (Swiss FS-CSC) association. This was founded in April 2022. The Swiss FS-CSC association facilitates a better exchange of information on the threat situation and specific incidents. Furthermore, it supports the identification as well as the implementation of sector-wide prevention and protection measures. In addition, it supports financial sector participants in managing systemic cyberincidents and conducts strategic and operational crisis simulation exercises on a regular basis.

Foundation of Swiss FS-CSC association

The SNB is a founding member of the Swiss FS-CSC association and participates in its committees. In the year under review, it took part, for example, in a strategic crisis simulation exercise.

The SNB conducts or takes part in projects aimed at enhancing cybersecurity on a sector-wide basis, particularly in the area of cashless payments. In 2022, two undertakings were at the forefront: the Secure Swiss Finance Network (SSFN) and the Endpoint Security project. The SNB pursued these projects in its role as commissioning party and system manager of the SIC payment system (cf. chapter 4.2).

Sector-wide measures to enhance cybersecurity

7

Participation in international monetary cooperation

7.1 BACKGROUND

Mandate

The Swiss National Bank participates in international monetary cooperation and, for this purpose, works with the Federal Council (art. 5 para. 3 National Bank Act). The objective of international monetary cooperation is to promote the functioning and stability of the international monetary and financial system and help overcome crises. As a globally integrated economy with a major financial centre and its own currency, Switzerland derives particular benefit from a stable international monetary and financial system.

Forms of international monetary cooperation

As part of its international monetary cooperation, the SNB is involved in multilateral institutions and forums, namely the International Monetary Fund (IMF), the Bank for International Settlements (BIS), the Financial Stability Board (FSB), the Organisation for Economic Co-operation and Development (OECD), the Central Banks and Supervisors Network for Greening the Financial System (NGFS), and the G20 Finance Track, the latter at the invitation of the G20 presidency. Participation in the IMF, FSB, OECD and the Finance Track is in cooperation with the federal government and, in the case of the FSB, also with the Swiss Financial Market Supervisory Authority (FINMA). Furthermore, the SNB cooperates with the federal government in providing international monetary assistance. It also cooperates on a bilateral level with other central banks and authorities. As part of this bilateral cooperation, the SNB provides technical assistance to central banks – mainly those from the group of countries with which Switzerland forms a constituency at the IMF and the World Bank.

7.2 MULTILATERAL COOPERATION

7.2.1 INTERNATIONAL MONETARY FUND

Participation in IMF

The IMF is the central institution for international monetary cooperation. It promotes the stability of the global monetary and financial system as well as the economic stability of its 190 member countries. Its main fields of activity are economic policy surveillance, the provision of financial support for countries facing balance of payments difficulties, and technical assistance.

Switzerland in the IMF

Switzerland is jointly represented in the IMF by the Federal Department of Finance (FDF) and the SNB. The Chairman of the SNB's Governing Board represents Switzerland on the Board of Governors, the IMF's highest decision-making body. The Head of the FDF is one of the 24 members of the International Monetary and Financial Committee (IMFC), the IMF's steering committee. Switzerland is part of a voting group (constituency) whose other members are Azerbaijan, Kazakhstan, the Kyrgyz Republic, Poland, Serbia, Tajikistan, Turkmenistan and Uzbekistan. Switzerland and Poland alternate in appointing the constituency's executive director, for two years each time, the latter representing the group as one of the 24 members on the Executive Board, the IMF's most important operational body. The post of Swiss executive director is held alternately by a representative of the FDF and the SNB. The FDF and the SNB determine Switzerland's policy in the IMF and support the constituency's executive director in his or her activities.

In 2022, the IMF primarily focused on helping its members manage the global economic challenges. The war in Ukraine led to problems in energy supply as well as food security in developing countries and reinforced the global rise in inflation. The still lingering pandemic and international supply problems also had a negative impact on the global economy. And finally, many poorer countries, as well as some emerging economies, continued to face high levels of debt.

Challenges for global economic policy

The IMF also focused its attention on longer-term structural challenges. In this context, the Executive Board approved the creation of a Resilience and Sustainability Trust (RST) in April. The IMF can use this vehicle to finance concessional, longer-term loans to help members overcome structural challenges, especially relating to climate change. Low-income and vulnerable middle-income countries are eligible to apply for loans from the RST. The RST is funded by voluntary contributions from IMF members with strong external positions. The new trust became operational in October 2022 after six countries had contributed a total of SDR 15.3 billion in financing. At the same time, the IMF called on other countries to pay into the trust with a view to reaching the total goal of SDR 33 billion. Switzerland welcomed the RST's focus on climate-related issues and held out the prospect of a contribution.

Establishment of new trust

Strong demand for regular IMF lending

Given the challenging global economic situation, the IMF continued to support its member countries with regular loans, i.e. loans financed via the General Resources Account. Total regular commitments at the end of 2022 amounted to SDR 183 billion, compared with SDR 171 billion at the end of 2021. It was possible to support Ukraine, among other countries, with emergency loans.

IMF Special Drawing Rights

Special Drawing Rights (SDRs) are considered an international reserve asset. They were introduced by the IMF in 1969. The IMF uses them as a means of payment and unit of account for its financial transactions with member countries. The value of SDRs is based on a basket of currencies, which the IMF regularly reviews. The currencies in the basket are the US dollar, the euro, the renminbi, the yen and the pound sterling. At the end of 2022, one SDR was equivalent to CHF 1.24 or USD 1.33.

Increase in concessional PRGT lending

In low-income countries, the IMF also provided concessional lending arrangements, which are financed via the Poverty Reduction and Growth Trust (PRGT). The IMF's total commitments via the PRGT increased from SDR 18.2 billion at the end of 2021 to SDR 19.9 billion at the end of 2022. One of the factors that contributed to this increase was a rise in emergency financing for countries that were hit particularly hard by high food prices.

PRGT financing

In July 2021, the IMF had launched a new financing round to support the sustainability of the PRGT. The goal was to mobilise SDR 12.6 billion for loans and SDR 2.3 billion for interest subsidies from potential donor countries. By the end of 2022, however, significantly fewer contributions had been pledged than envisaged.

Switzerland's contribution to PRGT

Switzerland's loans to the PRGT are granted by the SNB and guaranteed by the federal government, which finances interest subsidies with non-repayable grants. Switzerland had already granted the PRGT a new loan in the amount of SDR 500 million at the beginning of 2021. During the July 2021 financing round, Switzerland decided to contribute CHF 50 million to PRGT interest subsidies – a decision that was approved by parliament in December 2022.

The IMF's main source of financing is its member countries' quotas. The quotas determine the participation of each member in the regular financing of the IMF (cf. box 'IMF quotas'). As a second line of defence, the New Arrangements to Borrow (NAB) form a permanent safety net in the event that the IMF's regular means are not sufficient to manage a crisis. Temporary bilateral borrowing agreements serve as a third line of defence for the IMF.

At the end of 2022, the IMF had SDR 156 billion of resources available for new loan commitments under the quota. Under the NAB, a further SDR 361 billion could have been activated. Under the temporary bilateral borrowing agreements, a total of SDR 139 billion was available.

The IMF regularly reviews the appropriateness of quotas. The 16th General Review of Quotas is to conclude by the end of 2023. As with previous such reviews, the core issues are the overall size of the quota increase, and the distribution of the quotas and voting rights among the member countries.

IMF quotas

Each IMF member has a quota, the amount of which is determined upon that member's admission to the IMF. GDP, economic and financial openness, the variability of trade and capital flows, and the level of reserves are all used in the formula to calculate the quota. Quotas are thus intended to reflect a given country's relative position in the world economy. The allocation of quotas is reviewed at regular intervals and adjusted as required, in particular during general quota increases. The quota fulfils three important functions. First, a member's quota determines the maximum amount of financial resources which the member is obliged to provide to the IMF if required. Second, the quota is used in determining a member's voting power in IMF decisions. Third, the amount of financing a member can obtain from the IMF is based on its quota.

Swiss contribution to IMF financing

At the end of 2022, Switzerland's commitment to financing the IMF's regular lending, under the framework of Switzerland's quota, under the NAB, and under the bilateral borrowing agreement, amounted to a maximum of CHF 24.5 billion. The SNB finances these amounts, with loans granted under the bilateral borrowing agreement being guaranteed by the federal government. The SNB's maximum commitments amounted to CHF 7.1 billion under the quota, CHF 13.7 billion under the NAB, and CHF 3.7 billion under the bilateral credit line. At the end of 2022, the IMF had drawn a total of CHF 2.1 billion under the quota and from previous activations of the NAB. Moreover, at the end of 2022, CHF 873 million in loans to the PRGT were outstanding under borrowing agreements between the SNB and the IMF. Under these agreements, the maximum amount still available to the IMF for drawdown was CHF 969 million.

THE SNB'S FINANCIAL COMMITMENT TO THE IMF

In CHF billions

| | Maximum | End-2022 Drawn down |
|--|---------|------------------------|
| Reserve position ¹ | | 2.128 |
| Quota | 7.145 | 2.062 |
| NAB | 13.720 | 0.066 |
| Bilateral borrowing agreement ² | 3.662 | 0.000 |
| PRGT ² | 1.842 | 0.873 |
| SDR ³ | 5.460 | 0.462 |

1 The used portion of the Swiss quota and the amount drawn by the IMF under the NAB and the bilateral borrowing agreement together equal Switzerland's reserve position in the IMF. This reserve position represents a liquid asset of the SNB vis-à-vis the IMF and thus forms part of the currency reserves.

2 With federal guarantee.

3 As part of the voluntary trading arrangement (VTA) with the IMF, the SNB has committed itself to purchasing or selling SDRs against foreign currencies (USD, EUR) up to the agreed maximum of SDR 4.4 billion (CHF 5.5 billion).

As part of its Article IV consultations, the IMF regularly reviews the economic policies of its member countries. In June, the IMF Executive Board endorsed the report on the March Article IV consultation with Switzerland. The IMF acknowledged the effectiveness of the SNB's monetary policy during the coronavirus crisis. At the same time, it emphasised that there is a risk that inflation could rise further and be more persistent, and advised the SNB to prepare for monetary policy normalisation. Moreover, the IMF welcomed the financial sector's continued resilience and the steps taken to further strengthen financial stability, including the reactivation of the sectoral countercyclical capital buffer.

Article IV consultation

In May 2022, the SNB and the IMF organised a conference on the international monetary system for the tenth time. The event brought together high-level representatives of central banks, finance experts and leading economists. The conference addressed digital money and its impact on the international monetary system.

Conference on international monetary system

7.2.2 BANK FOR INTERNATIONAL SETTLEMENTS

The Bank for International Settlements (BIS) is an international organisation headquartered in Basel. It fosters international monetary and financial cooperation and serves as a bank and forum for central banks. The SNB has held one of the seats on the Board of Directors since the BIS was founded in 1930.

BIS as bank and forum for central banks

The governors of member central banks convene every two months to discuss developments in the global economy and the international financial system, and also to guide and oversee the work of the standing committees. The SNB participates in the four standing committees of the BIS: the Basel Committee on Banking Supervision, the Committee on Payments and Market Infrastructures, the Committee on the Global Financial System, and the Markets Committee. The SNB is also involved in the BIS Innovation Hub Swiss Centre (cf. box 'BIS Innovation Hub and projects at its Swiss Centre') and takes part in a working group on central bank digital currency (CBDC).

BIS Innovation Hub and projects at its Swiss Centre

The BIS Innovation Hub Swiss Centre has been in existence since late 2019. The BIS operates five centres in various locations around the globe. The hub's goal is to analyse – and potentially harness – technological trends for central banks.

In 2022, an average of eight people (four of them seconded from the SNB) worked on four different projects. After the completion of Project Helvetia and Project Jura, the Swiss Centre devoted itself to the newly launched Project Mariana and Project Tourbillon, in addition to its ongoing work on Project Rio and Project Titus.

The platform built in Project Rio to monitor fast-paced markets, such as foreign exchange markets, was developed further ahead of a potential launch. The platform analyses market data in real time and uses it to compute market quality indicators. This allows conclusions to be drawn about a range of variables, including market liquidity.

In Project Titus, a decentralised payment system was simulated in order to test multiple use cases. Specifically, the project studied the feasibility of using various decentralised methods to reduce liquidity needs in the payment system. The methods were tested with data from different countries. This work showed that liquidity management in Switzerland's SIC payment system is already relatively efficient.

Project Mariana explores how a decentralised foreign exchange market for wholesale central bank digital currencies (wCBDCs) might look. In this system, foreign exchange transactions are settled via automated market makers (AMMs). These AMM protocols combine liquidity pools using innovative algorithms in order to determine market prices. The project is being conducted in cooperation with the Banque de France and the Monetary Authority of Singapore.

Project Tourbillon is developing a prototype CBDC payment system that can process large transaction volumes, protects the privacy of payers, and is also secure in a world of quantum computers. For example, systems that verify the authenticity of money without disclosing a payer's identity are being tested.

The SNB considers it important to participate in international work on CBDCs in light of ongoing digitalisation and innovation in the field of currencies and money. In particular with regard to wCBDC, some experiments have already been successfully carried out in cooperation with the BIS Innovation Hub Swiss Centre. However, the SNB currently sees no additional utility in a retail CBDC, available to the general public (cf. Annual Report 2021, p. 53).

The Basel Committee on Banking Supervision (BCBS) brings together high-ranking representatives of banking supervisory authorities and central banks. It issues recommendations and sets international standards in the area of banking supervision.

**Basel Committee
on Banking Supervision**

In 2022, the BCBS focused on monitoring vulnerabilities in the banking sector, analysing ongoing digitalisation, and reviewing measures for addressing climate-related financial risks. The monitoring of vulnerabilities required special care due to geopolitical tensions and heightened inflation risks. Furthermore, a decision was taken to conduct global stress tests in 2023 in cooperation with the FSB. Cryptoassets are becoming increasingly important given the growing trend towards digitalisation. Following two public consultations, the Committee endorsed a standard for the prudential treatment of banks' cryptoassets, to be implemented by 2025. The work on climate-related financial risks in the banking sector included a broad-based assessment of the need for adjustments to disclosure, supervisory and regulatory requirements. The Committee finalised principles for the supervision and effective management of climate-related financial risks and resolved to draft specific disclosure requirements.

The Committee on Payments and Market Infrastructures (CPMI) promotes the safety and efficiency of cashless payment arrangements and market infrastructures via which financial market transactions are cleared or settled.

**Committee on Payments
and Market Infrastructures**

In the year under review, the CPMI continued its conceptual and analytical work on cross-border payments and, in the context of the FSB's action plan on this matter, published several reports on potential improvement measures. Among other things, the Committee also addressed digital innovations (e.g. CBDC, stablecoins) as well as potential measures for improving the operational and financial resilience of financial market infrastructures.

The Committee on the Global Financial System (CGFS) monitors developments in international financial markets and analyses their impact on financial stability.

**Committee on Global
Financial System**

In 2022, the CGFS was mainly concerned with the effects of monetary tightening due to the sharp rise in inflation rates around the world. In particular, the discussion focused on how to assess the risk of adverse effects on financial stability. The Committee also looked at dislocations in the commodity markets and examined how the growing role of non-bank financial intermediaries (NBFIs) has altered the channels through which shocks can be transmitted across borders. Moreover, it published a report on the implications for financial stability of currently high levels of private debt.

Markets Committee

The Markets Committee (MC) examines current developments in the money, foreign exchange, capital and commodity markets, as well as the functioning of these markets.

In 2022, the MC focused on financial market developments, market functioning and the implementation of monetary policy in a tighter environment. Against this backdrop, the SNB was involved in collecting data for the 2022 BIS Triennial Survey, which showed that daily average turnover on the global foreign exchange market had increased by 14% compared to 2019, to USD 7.5 trillion. In October, together with the BIS, the SNB also held the 4th Market Intelligence Workshop. This event confirmed that direct exchange with market participants continues to be very valuable for central banks. Moreover, the MC published the key findings of a working group on market dysfunction and central bank tools. The report recommends that, in the event of market dysfunction, central bank interventions aimed at restoring market stability should only act as backstops.

Working group on central bank digital currency

Since 2020, the SNB has been participating in a working group on CBDC together with the Bank of Canada, the Bank of Japan, the Bank of England, the European Central Bank, the Sveriges Riksbank, the US Federal Reserve and the BIS. The aim of this working group is to discuss experiences in evaluating potential applications of CBDC. Legal issues and questions surrounding technical design options were of particular interest to the SNB.

7.2.3 FINANCIAL STABILITY BOARD

The FSB brings together national authorities responsible for financial stability (central banks, supervisory authorities and finance ministries), international organisations, and standard-setting bodies. Switzerland's representation on the FSB is shared between the FDF, the SNB and FINMA. The SNB is a member of the Steering Committee, the Plenary, and the Standing Committee on Assessment of Vulnerabilities. Since November 2020, the SNB has chaired the Standing Committee on Budget and Resources.

Swiss representation on FSB

The FSB addresses the risks in the financial system and coordinates the precautions taken to counter such risks. In the year under review, its work focused on the impact of tighter financial conditions and the war in Ukraine on the global financial system, with a special focus on commodity markets.

Risks in financial system

Since 2020 and on behalf of the G20, the FSB has been coordinating work to improve cross-border payments. The goal is to make cross-border payments faster, cheaper, more transparent and more accessible. Quantitative targets were worked out in close cooperation with the CPMI at the BIS in 2021. In 2022, the FSB realigned its work in order to implement these targets and began a close exchange with the public and private sector.

Improvement of cross-border payments

The FSB also considered risks for the financial system attributable to the effects of climate change. In addition to analysing climate-related risks to financial stability, the FSB focused on firm-level disclosure of climate risks as well as regulatory and supervisory options. A progress report on the FSB's work was presented to the July meeting of the G20.

Coordination of climate issues

The FSB also continued to monitor the development of cryptoassets and stablecoins. In particular, it pressed ahead with work to close regulatory and data gaps. In this context, the FSB launched a public consultation on recommendations for the regulation of cryptoassets, including stablecoins. These recommendations are based on the 'same activity, same risk, same regulation' principle but also take into account the novel characteristics of cryptoassets and the potential benefits of their underlying technology. Finalising these recommendations and monitoring their implementation will remain a priority for the FSB.

Risks arising from cryptoassets and stablecoins

Participation in OECD

7.2.4 OECD

Switzerland is a founding member of the Organisation for Economic Co-operation and Development (OECD). It works in the organisation's intergovernmental committees to maintain and develop relations among the 38 member countries with regard to economic, social and development policies. Together with the federal government, the SNB represents Switzerland on the Economic Policy Committee (EPC), the Committee on Financial Markets (CMF), and the Committee on Statistics and Statistical Policy (CSSP).

The OECD publishes a biannual Economic Outlook report containing economic policy recommendations and macroeconomic assessments for every member country. In the autumn edition, the OECD recommended that the SNB continue pursuing its policy of monetary tightening to contain core inflation and prevent a de-anchoring of inflation expectations.

Switzerland's participation in Finance Track

7.2.5 G20

The G20 comprises the twenty leading advanced and emerging economies and is a key forum for international cooperation on financial and economic issues. The work and resolutions of the G20 are very important as they play a major role in shaping the activities of the multilateral institutions. In recent years, Switzerland has been invited to participate in the meetings of the G20 finance ministers and central bank governors, known as the Finance Track. These meetings focus on economic, monetary and financial issues. Swiss interests are represented jointly by the federal government and the SNB. For the SNB, the main focus is on issues relating to the global economic outlook, the international financial and monetary system, and global financial market regulation.

Switzerland was invited to participate in the 2022 Finance Track by the Indonesian G20 presidency. Indonesia's priorities included overcoming the pandemic-induced economic crisis, promoting digital payment systems, and sustainability in the financial system. However, during 2022, discussions in the Finance Track were heavily influenced by the war in Ukraine and its negative consequences for the global economy. India will take over the presidency in 2023 and has invited Switzerland to participate in the Finance Track.

7.2.6 NETWORK FOR GREENING THE FINANCIAL SYSTEM

The Central Banks and Supervisors Network for Greening the Financial System (NGFS) is a network of central banks and supervisory authorities. It serves as a forum in which participating institutions can discuss the risks climate change poses to the economy and the financial system. The SNB and FINMA are both represented in the NGFS Plenary. The SNB engages in dialogue in the NGFS so as to better gauge the potential impact of climate risks on macroeconomic developments and financial stability.

Climate and environment-related risks for financial system

In April, the NGFS established a new work programme for 2022–2024, to be undertaken by four workstreams. The SNB was involved in three of these workstreams in 2022 – ‘Scenario Design and Analysis’, ‘Monetary Policy’ and ‘Net Zero for Central Banks’. Discussions examined, among other things, the development of climate scenarios and the macroeconomic analysis of climate risks, including their impact on monetary policy. Other issues included transparency regarding climate-related financial risks as well as sustainable corporate governance and investment practices at central banks.

New work programme

7.3 BILATERAL COOPERATION

7.3.1 MONETARY ASSISTANCE

The division of responsibilities between the SNB and the federal government regarding the granting of monetary assistance loans is specified in the Monetary Assistance Act of 19 March 2004 (revised 2017). The Federal Council may instruct the SNB to grant loans or guarantees aimed at preventing or remedying serious disruptions in the international monetary system.

A credit line amounting to CHF 10 billion has been established for such an eventuality. The SNB can also contribute to special funds or other IMF facilities, or grant bilateral monetary assistance loans to individual countries. The federal government can request that the SNB grant a loan. In return, the federal government guarantees the SNB the interest payments on the loans in all of the above cases and their repayment.

Principles

Lending to National Bank of Ukraine

In April 2016, at the instruction of the federal government, the SNB concluded a loan agreement with the National Bank of Ukraine (NBU) for a maximum amount of USD 200 million. The federal government guaranteed the SNB timely reimbursement and interest payments on the loan. Under the terms of the agreement, the loan was to be disbursed in tranches, in line with the IMF Extended Fund Facility of 2015. An initial tranche was disbursed in March 2017. Due to a programme change at the IMF at the end of 2018, no further tranches were disbursed. The loan was repaid on time by the NBU.

7.3.2 COOPERATION WITH OTHER CENTRAL BANKS AND FOREIGN AUTHORITIES

Regular exchange with central banks and partner countries

The SNB cultivates regular bilateral contacts with other central banks. This includes the SNB's exchanges with other central banks on matters relating to international monetary cooperation. In addition, the SNB occasionally participates in financial dialogue with other countries, such as the United Kingdom, Hong Kong and Singapore. These encounters are led by the State Secretariat for International Finance (SIF) in liaison with various federal institutions and associated enterprises. They serve to strengthen the contacts with key partner countries and provide a platform for sharing views on financial topics.

Constituency celebrates 30th anniversary

The Swiss constituency in the IMF and World Bank met in Bad Ragaz in July to celebrate its 30th anniversary. High-level representatives from governments and central banks of the member countries as well as management from the IMF and World Bank took part in the event. Current economic and geopolitical challenges in the Swiss constituency countries were discussed, along with digitalisation and sustainability in the financial sector.

Ukrainian refugees' cash exchange

Between 27 June and 25 November 2022, adults with protection status 'S' were able, in a one-off transaction, to exchange Ukrainian banknotes worth up to UAH 10,000 (approximately CHF 300) for Swiss francs at selected bank branches in Switzerland. The SNB was responsible for handling the operational implementation of the exchange on behalf of the federal government and worked closely with the participating Swiss commercial banks. The SNB concluded an agreement with the NBU to ensure the exchange and repatriation of the notes. At the NBU's request, the cash exchange programme was discontinued as of 25 November 2022 due to low demand latterly. A total of approximately CHF 330,000 worth of Ukrainian notes was exchanged.

In the US Treasury's regularly published report on the foreign exchange policies of major trading partners of the United States, Switzerland once again met the criteria defined by the US Treasury for enhanced analysis of its monetary practices. The Swiss authorities therefore held discussions with the US Treasury to explain Switzerland's special situation. The FDF, the SNB and the US Treasury initiated a regular exchange (Standing Macroeconomic and Financial Dialogue) starting in April.

US Treasury report

Negotiations, initiated in 2021, between Switzerland and the UK regarding an agreement on the mutual recognition of the legal and supervisory framework for certain financial services (Mutual Recognition Agreement, MRA) continued in 2022. The SNB is involved in the negotiations in its role as overseer of the systemically important financial market infrastructures.

Negotiations on mutual recognition agreement with UK

7.3.3 PRINCIPALITY OF LIECHTENSTEIN

Switzerland and the Principality of Liechtenstein concluded a Currency Treaty in 1980. Under the Currency Treaty, the Swiss franc became legal tender in Liechtenstein, and the SNB became the country's central bank. As a result, certain Swiss legal and administrative regulations relating to monetary policy are applicable in Liechtenstein, in particular the National Bank Act and the National Bank Ordinance. The SNB has the same powers in respect of banks and other persons and entities in the Principality of Liechtenstein as it does in respect of banks, persons and entities domiciled in Switzerland. It cooperates closely with the relevant authorities in Liechtenstein.

Currency treaty and cooperation

7.3.4 TECHNICAL ASSISTANCE

The SNB provides technical assistance to other central banks upon request. This assistance comprises the transfer of central bank know-how. The SNB's technical assistance is primarily oriented towards the countries of Central Asia and the Caucasus that are members of Switzerland's constituency at the IMF and the World Bank.

Principles

Activities in 2022

In 2022, thanks to the removal of pandemic-related restrictions, technical assistance projects could increasingly be delivered onsite again. They focused mainly on risk management, financial stability, monetary policy analysis, payment systems and the management of currency reserves. Projects were carried out with the central banks of Azerbaijan, Kazakhstan, the Kyrgyz Republic, Poland, Serbia, Tajikistan and Uzbekistan.

Central Bankers Courses at Study Center Gerzensee

The SNB has been running the Study Center Gerzensee since 1984. It serves as a hub for both academic research and training for central bankers from around the world. In 2022, six courses were held at the Study Center for employees of foreign central banks. These courses were attended by 160 representatives of 71 central banks; 63 of those participants joined remotely. This was a significant increase in course attendance over the previous year (128).

8

Banking services for the Confederation

The Swiss National Bank provides banking services to the Swiss Confederation (art. 5 para. 4 and art. 11 National Bank Act).

Mandate

The SNB provides these banking services to the Confederation in return for adequate remuneration. However, they are offered free of charge if they facilitate the implementation of monetary policy. Services subject to remuneration comprise account management, payment transactions, liquidity management, the custody of securities, and the issuance of money market debt register claims (MMDRCs) and Confederation bonds on behalf of and for the account of the Confederation. Details of the services to be provided and the remuneration are laid down in an agreement concluded between the Confederation and the SNB.

**Remuneration for
banking services**

In 2022, the Confederation's short-term financing needs declined somewhat year-on-year. In particular, bids for MMDRCs amounted to CHF 131.2 billion (2021: CHF 159.7 billion), of which CHF 33.5 billion was allocated (2021: CHF 39.1 billion). The corresponding figures for Confederation bonds were CHF 10.6 billion (2021: CHF 10.5 billion) and CHF 6.8 billion (2021: CHF 7.2 billion) respectively. The SNB issued the MMDRCs and Confederation bonds by auction.

Issuing activities

In line with the other money market rates, yields for MMDRCs rose from negative into positive territory in 2022. Taken over the whole year, yields on three-month issues ranged from -0.83% to 0.87%.

Higher MMDRC yields

The SNB keeps sight deposit accounts in Swiss francs and foreign currencies for the Confederation. At year-end, liabilities towards the Confederation (including term liabilities) amounted to CHF 16.7 billion, compared to CHF 12.6 billion at the end of 2021.

**Account management
and payment transactions**

9

Statistics

9.1 BACKGROUND

Purpose of activities in field of statistics

On the basis of art. 14 of the National Bank Act (NBA), the Swiss National Bank collects the statistical data it requires to perform its statutory tasks. It collects data for the conduct of monetary policy and the oversight of financial market infrastructures (FMIs), for safeguarding the stability of the financial system and for preparing both the balance of payments and the statistics on the international investment position. Statistical data compiled for purposes relating to international monetary cooperation are transmitted to international organisations. The National Bank Ordinance (NBO) lays down the details of the SNB's activities in the field of statistics.

Reporting institutions

Banks, FMIs, securities firms and authorised parties in accordance with art. 13 para. 2 of the Collective Investment Schemes Act are required to provide the SNB with figures on their activities (art. 15 NBA). The SNB may also collect statistical data from other private individuals or legal entities where this is necessary to analyse developments in the financial markets, obtain an overview of payment transactions, or prepare the balance of payments or the statistics on Switzerland's international investment position. This applies in particular to entities for the issuing of payment instruments or for the processing, clearing and settlement of payment transactions, insurance companies, occupational pension institutions, and investment and holding companies.

Survey activity kept to minimum

The SNB limits the number and type of surveys to what is strictly necessary. It seeks to minimise the demands placed on reporting institutions.

Confidentiality and exchange of data

Pursuant to art. 16 NBA, the SNB ensures the confidentiality of the data it collects and only publishes them in aggregated form. However, the data may be supplied to the relevant Swiss financial market supervisory authorities.

9.2 PRODUCTS

The SNB conducts statistical surveys in the areas of banking statistics, collective investment statistics, the balance of payments and the international investment position, and payment transactions. An overview is contained in the annex to the NBO and on the SNB website. The SNB publishes the results of its surveys in the form of statistics. It also maintains a data bank with just under 20 million time series in the fields of banking, financial markets and economics.

Surveys and statistics

The SNB publishes its statistics on its online data portal (data.snb.ch) and its website (www.snb.ch) and, in some cases, also in the form of printed publications.

Statistical publications

The SNB's data portal was further expanded in 2022. Since March, more detailed data have been available on the balance of payments, the international investment position, and direct investment. Additional data on payment transactions have been published since May, and banking statistics data have been expanded to include data on the 'domestic office' perspective.

Expansion of SNB data portal

9.3 PROJECTS

In 2022, the SNB, together with the Swiss Financial Market Supervisory Authority (FINMA), launched a project to introduce an individual-loan survey. Within the framework of this survey, the major lending banks are to regularly report their total loan portfolios on an individual-loan basis. In pursuing this project, the SNB and FINMA have several objectives. First, the survey will provide more detailed data on bank lending, which will support the two institutions in the performance of their respective statutory tasks. Second, such 'granular' surveys have an advantage over traditional aggregated surveys in that, even in the case of fresh queries, they often already include sufficient information for analysis, thereby rendering additional surveys unnecessary. This improves the SNB's and FINMA's response time in crisis situations and reduces the costs for reporting institutions associated with additional surveys. The project to introduce an individual-loan survey will run over several years. The first survey findings are not expected until 2026 at the earliest.

Individual-loan survey

Global production processes

Since 2017, work has been underway on the ‘global production processes’ project, which aims to improve the recording of global production in Switzerland’s balance of payments statistics. The focus of the SNB’s internal project team is on the activities of multinational enterprises whose production and trade processes are distributed across various countries. This distribution leads to a separation of the financial and goods flows, which poses problems with regard to measurement, definition and data collection. Work on the revised current account survey was completed in the year under review. Reporting institutions have been informed that they will have to submit their data to the SNB in line with the new requirements as of the reference date 31 March 2023. The goal is to publish data based on the revised survey from 2025. Work is also underway on capturing both digital trade – trade in goods and services that are digitally ordered, digitally delivered or made available on a platform – and trade in intellectual property more comprehensively in the balance of payments statistics.

Implementation of art. 22 NBA

In accordance with art. 22 of the NBA, the SNB instructs statutory auditors to review compliance with the duties to provide information and to hold minimum reserves, and to report their findings to the SNB. The guidelines for audit firms on the form these audits should take were revised and refined during the year under review. In particular, the SNB tightened the stipulations regarding minimum reserve requirements due to the significance of the minimum reserves in calculating the thresholds for sight deposit remuneration. Audit firms will have to apply the revised guidelines for the first time in their audit of the 2022 financial year.

eSurvey

For several years now, reporting institutions have been able to submit data to the SNB in a secure environment via an internet-based platform called eSurvey. A new eSurvey functionality allows reporting institutions to enter data directly in web tables, to have these data checked for consistency, and then to submit them to the SNB. The revised current account survey is the first survey to make use of these enhanced options. The SNB plans to gradually switch all its surveys over to this new technology.

9.4 COLLABORATION

The SNB gives reporting institutions and their associations the opportunity to comment on organisational and procedural issues, as well as on the introduction of new surveys or the modification of existing ones.

The SNB is advised on the content of its banking surveys by the banking statistics committee. This committee is made up of representatives of the Swiss commercial banks, the Swiss Bankers Association and FINMA. A group of experts under the direction of the SNB participates in the compilation of the balance of payments. It comprises representatives from manufacturing, banking and insurance, as well as from various federal agencies and academic bodies.

Groups of experts

In compiling statistical data, the SNB collaborates with the relevant federal government bodies, particularly the Swiss Federal Statistical Office (SFSO), with FINMA, and also with the authorities of other countries and international organisations.

Public institutions

The SNB has a close working relationship with the SFSO. Reciprocal data access is governed by a data exchange agreement; this agreement also covers the collaboration between the two authorities in drawing up the Swiss financial accounts. Moreover, the SNB is a member of various bodies that work with Swiss federal statistics. These include the Federal Statistical Committee and the SFSO expert group on the economy.

Swiss Federal Statistical Office

The SNB collects quarterly data on mortgage rates from about 80 banks on behalf of the Federal Office for Housing (FOH). Based on these data, the FOH calculates the mortgage reference interest rate for tenancies. Responsibility for the content of this survey lies with the FOH, which also publishes the reference rate.

Federal Office for Housing

Under the terms of a Memorandum of Understanding between FINMA and the SNB on the collection and exchange of data, the SNB carries out surveys in areas such as capital adequacy, liquidity and interest rate risk of banks and securities firms. In 2022, the survey on special liquidity requirements for systemically important institutions was introduced.

FINMA

Principality of Liechtenstein

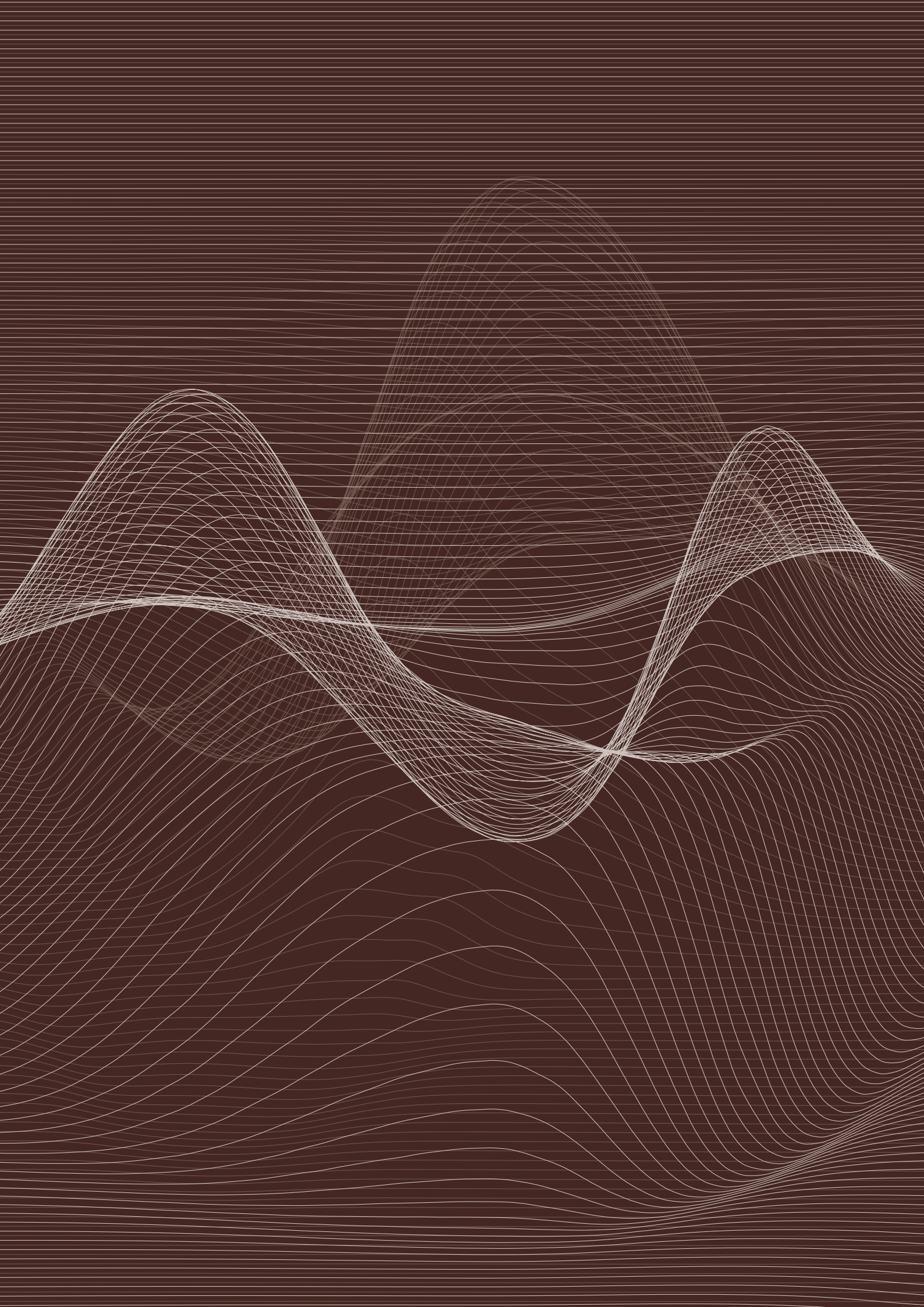
The SNB also surveys Liechtenstein companies when preparing its balance of payments figures and its statistics on Switzerland's international investment position. It works with the relevant authorities in Liechtenstein (the Office of Economic Affairs and the Financial Market Authority).

European Union

The SNB's collaboration with the EU is based on the bilateral agreement on statistics. It covers the financial accounts, parts of the banking statistics, the balance of payments and the international investment position, as well as the direct investment statistics. The SNB participates in various bodies of the EU statistical office (Eurostat).

Other international organisations

In the area of statistics, the SNB works closely with the Bank for International Settlements (BIS), the Organisation for Economic Co-operation and Development (OECD) and the International Monetary Fund (IMF). This collaboration is aimed at harmonising statistical survey methods and analyses.



Financial report

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Key financial figures for 2022

SELECTED BALANCE SHEET FIGURES

In CHF billions

| | 31.12.2021 | 31.03.2022 | 30.06.2022 | 30.09.2022 | 31.12.2022 |
|--|------------|------------|------------|------------|------------|
| Banknotes in circulation | 90.7 | 90.4 | 90.6 | 82.6 | 81.7 |
| Sight deposits of domestic banks | 651.1 | 664.7 | 641.8 | 540.6 | 466.9 |
| Sight deposits of foreign banks and institutions | 28.2 | 21.2 | 36.5 | 66.3 | 27.6 |
| Other sight liabilities | 35.3 | 40.2 | 41.2 | 33.0 | 27.8 |
| Claims from Swiss franc repo transactions | 3.2 | 11.4 | 19.4 | – | – |
| Liabilities from Swiss franc repo transactions | – | – | – | 55.3 | 67.1 |
| SNB debt certificates in Swiss francs | – | – | – | 17.8 | 98.2 |
| Gold holdings | 55.7 | 59.9 | 58.1 | 54.6 | 56.1 |
| Foreign currency investments | 966.2 | 937.3 | 884.4 | 808.4 | 800.6 |
| Of which, in euros | 368.9 | 353.7 | 343.0 | 302.7 | 303.4 |
| Of which, in US dollars | 362.6 | 358.0 | 330.7 | 314.6 | 298.2 |
| Of which, in other currencies | 234.7 | 225.6 | 210.7 | 191.0 | 199.0 |
| Provisions for currency reserves ¹ | 87.0 | 87.0 | 95.7 | 95.7 | 95.7 |
| Distribution reserve ² | 90.9 | 90.9 | 102.5 | 102.5 | 102.5 |

1 The allocation to the provisions for currency reserves forms part of the profit appropriation. After the allocation for the 2022 financial year, which will amount to CHF 9.6 billion, the provisions for currency reserves will increase to CHF 105.2 billion (cf. p. 177).

2 The distribution reserve changes as part of the profit appropriation. After the profit appropriation for 2022, it will amount to CHF –39.5 billion (cf. p. 177).

SELECTED INCOME STATEMENT FIGURES

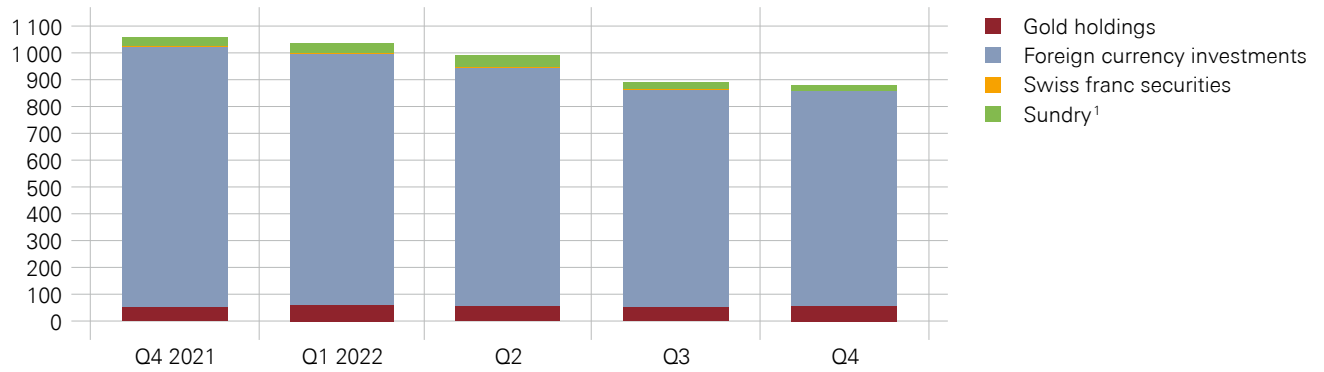
In CHF billions

| | Q1 2022 | Q2 2022 | Q3 2022 | Q4 2022 | Year 2022 |
|--|---------|---------|---------|---------|-----------|
| Result for period ¹ | –32.8 | –62.4 | –47.2 | 9.9 | –132.5 |
| Of which, net result from gold | 4.2 | –1.8 | –3.4 | 1.5 | 0.4 |
| Of which, net result from foreign currency positions | –36.8 | –60.5 | –43.6 | 9.5 | –131.5 |
| Of which, net result from Swiss franc positions | 0.0 | 0.0 | –0.1 | –1.0 | –1.0 |

1 For appropriation of profit, cf. p. 176.

ASSETS AT END OF QUARTER

In CHF billions

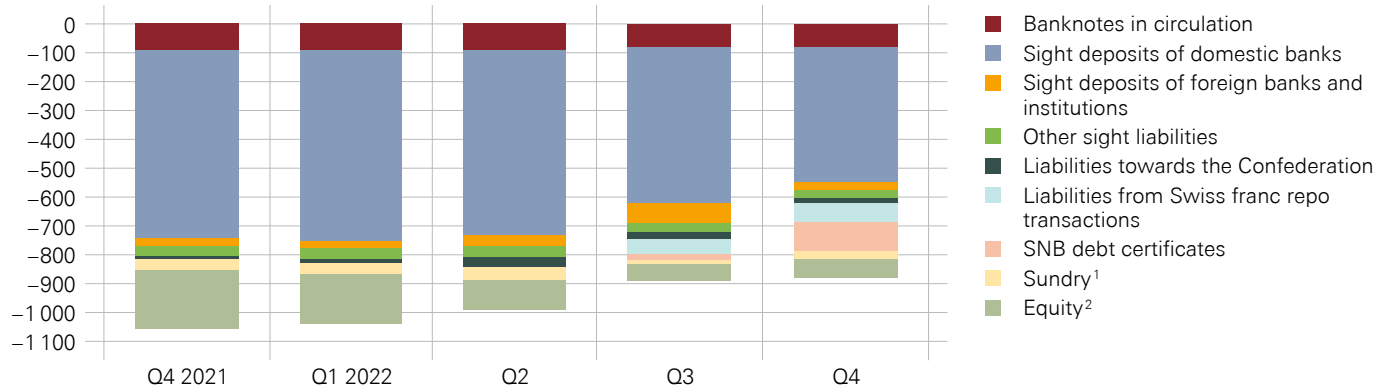


1 Reserve position in the IMF, international payment instruments, monetary assistance loans, claims from US dollar repo transactions, claims from Swiss franc repo transactions, secured loans, tangible assets, participations, other assets.

Source(s): SNB

LIABILITIES AT END OF QUARTER

In CHF billions



1 Other term liabilities, foreign currency liabilities, counterpart of SDRs allocated by the IMF, other liabilities.

2 Provisions for currency reserves, share capital, distribution reserve (before appropriation of profit), annual result.

Source(s): SNB

EXCHANGE RATES AND GOLD PRICE IN SWISS FRANCS

Index: 1 January 2022 = 100



Source(s): SNB

Business report

The business report provides information on the organisational and operational development as well as the financial result of the Swiss National Bank. Since the SNB is a listed company, the report also contains information on corporate governance in accordance with the SIX Swiss Exchange Ltd corporate governance directive.

The business report and the annual financial statements together constitute the financial report of the SNB, as stipulated under Swiss company law (art. 958 of the Swiss Code of Obligations (CO)). At the SNB, the business report fulfils the function of a management report (art. 961c CO).

The fulfilment of the SNB's statutory mandate is explained in the accountability report.

1

Corporate governance

1.1 BACKGROUND

The Swiss National Bank is a special-statute joint-stock company that is administered with the cooperation and under the supervision of the Confederation. Its organisational structure and responsibilities are governed by the National Bank Act of 3 October 2003 (NBA) and the ‘Regulations on the organisation of the Swiss National Bank’ of 14 May 2004 (Organisation Regulations). At the SNB, statutes and regulations fulfil the function of articles of association.

Mandate

The SNB’s mandate is derived directly from the Federal Constitution. Under the terms of art. 99 of the Constitution, the SNB is required to pursue a monetary policy that serves the overall interests of the country. In addition, the article enshrines the SNB’s independence and requires it to set aside sufficient currency reserves from its earnings, also specifying that a part of these reserves be held in gold. Finally, the Constitution stipulates that the SNB must allocate at least two-thirds of its net profits to the cantons.

NBA and implementation decrees

The main legislation governing the activities of the SNB is the NBA, which sets out in detail the various elements of the SNB’s constitutional mandate (art. 5) and independence (art. 6). To counterbalance the SNB’s independence, the NBA specifies a duty of accountability and a duty to provide information to the Federal Council, parliament and the public (art. 7). The SNB’s scope of business is outlined in arts. 9–13 NBA. The instruments used by the SNB to implement its monetary policy and for investing its currency reserves are set out in the ‘Guidelines on monetary policy instruments’ and the ‘Investment policy guidelines’.

The NBA also sets out the legal basis for the collection of statistical data on financial markets, the imposition of minimum reserve requirements on banks and the oversight of financial market infrastructures. Provisions governing the implementation of these statutory powers may be found in the National Bank Ordinance (NBO) issued by the SNB Governing Board.

Finally, the NBA lays down the foundations of the SNB’s organisational structure (arts. 3, 33–48).

The Ordinance against Excessive Remuneration in Listed Companies Limited by Shares (ERCO) does not apply to the SNB, since the SNB is not a company limited by shares within the meaning of arts. 620–763 CO. Where the NBA leaves room for manoeuvre, the SNB implements the ERCO requirements. This applies especially to the prohibition of voting rights for corporate bodies and deposited shares, as well as the requirements regarding independent proxy voting and the proxy's powers.

For a period starting three weeks before a scheduled monetary policy decision and ending one day after the publication of that decision, staff members taking part in the preparation and/or making of the monetary policy decision are prohibited from initiating or carrying out any private financial investment transactions. This provision does not apply to payments into pension funds.

Black-out periods

1.2 SHAREHOLDERS

The share capital of the SNB amounts to CHF 25 million and is fully paid up. It is divided into 100,000 registered shares with a nominal value of CHF 250 each. SNB registered shares are traded on the Swiss stock exchange (SIX Swiss Exchange) under the Swiss Reporting Standard.

Listed registered shares

In 2022, the cantons and cantonal banks increased their shareholdings by a total of 160 shares; at the end of 2022, they held 50.9% of the share capital, compared to 50.8% one year earlier. Of the remaining registered shares, which make up 27.0% of the share capital (2021: 26.1%), 26,652 shares are owned by private sector shareholders (2021: 25,784). Of these, 14,686 are voting shares (2021: 14,276). The proportion of shares not entered in the share register (shares pending registration of transfer) decreased from 23.1% to 22.0% year-on-year.

Total voting stock increased slightly compared to the previous year. At the end of 2022, 26 cantons (2021: 26) and 24 cantonal banks (2021: 24) held 77.2% of the voting shares (2021: 77.6%), while private sector shareholders accounted for 22.3% of voting rights (2021: 21.8%). The Confederation is not a shareholder.

The major shareholders were the Canton of Berne with 6.63% of the share capital (6,630 shares), the Canton of Zurich with 5.20% (5,200 shares), Theo Siegert (Düsseldorf) with 5.01% (5,010 shares), the Canton of Vaud with 3.40% (3,401 shares) and the Canton of St Gallen with 3.00% (3,002 shares).

In 2022, the members of the Bank Council did not hold any SNB shares. According to the ‘Code of Conduct for members of the Bank Council’, Bank Council members may not hold such shares. At 31 December 2022, a member of the Enlarged Governing Board and a party related to a member of the Governing Board held one share each.

Shareholder rights

Shareholder rights are governed by the NBA, with the provisions of company law only being complementary to those of the NBA. As the SNB fulfils a public mandate and is administered with the cooperation and under the supervision of the Confederation, these rights are restricted as compared with a joint-stock company under private law. For shareholders from outside the public sector, voting rights are limited to 100 shares. Dividends may not exceed 6% of the share capital. Of the remaining distributable net profit, one-third accrues to the Confederation, and two-thirds to the cantons.

The business report and the annual financial statements must be approved by the Federal Council before being submitted to the General Meeting of Shareholders for its approval. Other provisions on the General Meeting of Shareholders that deviate from company law concern its convocation, agenda and adoption of resolutions. Agenda items with motions must be signed by at least 20 shareholders and submitted to the President of the Bank Council in writing and in good time before invitations are sent out.

Notifications

Notifications to shareholders are generally communicated in writing to the address listed in the share register, and by one-off publication in the Swiss Official Gazette of Commerce. They relate exclusively to information which is also available to the public.

Independent proxy

Powers of attorney and instructions can be issued to the independent proxy, either in writing or electronically.

1.3 ORGANISATIONAL STRUCTURE

The SNB has two head offices, one in Berne and one in Zurich. It is divided into three departments. For the most part, the organisational units of Departments I and III are located in Zurich, while those of Department II are mainly in Berne. Each of the three departments is headed by a member of the Governing Board and is assigned up to two alternate members of the Governing Board.

Departments

The Singapore branch office enables the SNB to efficiently manage the Asia-Pacific part of its foreign exchange reserves and also serves in the implementation of monetary policy. Furthermore, this local presence allows in-depth monitoring and analysis of financial market developments and promotes understanding of market and economic conditions within the Asia-Pacific region.

Branch office

The delegates for regional economic relations are responsible for monitoring economic developments and explaining the SNB's monetary policy in the regions. In addition to the head offices in Berne and Zurich, the SNB therefore maintains representative offices in Basel, Geneva, Lausanne, Lucerne, Lugano and St Gallen. The delegates are supported by the Regional Economic Councils, which analyse the economic situation and the effect of monetary policy in their regions and report the results to the Governing Board. The Regional Economic Councils also regularly exchange information with the delegates.

Representative offices

The SNB maintains 13 agencies for the receipt and distribution of banknotes and coins. These agencies are run by cantonal banks.

Agencies

1.4 CORPORATE BODIES AND RESPONSIBILITIES

The corporate bodies of the SNB are the General Meeting of Shareholders, the Bank Council, the Governing Board and the External Auditor. The composition of these bodies is described on pp. 222–223.

The General Meeting of Shareholders elects five of the Bank Council's eleven members (via separate ballot per member) and appoints the External Auditor. It approves the business report and the annual financial statements, and grants discharge to the Bank Council. Furthermore, within the context of the profit appropriation, the General Meeting of Shareholders determines the dividend. This may not exceed 6% of the share capital.

General Meeting of Shareholders

The 2022 General Meeting of Shareholders was held at the Kursaal Bern Congress Centre in the usual manner, following two years in which it had to be held without shareholders attending in person due to the coronavirus pandemic.

Bank Council

The Bank Council is the SNB's supervisory and control body. Six of its members are elected by the Federal Council; five by the General Meeting of Shareholders. The Federal Council is also responsible for appointing the President and Vice President. The Bank Council oversees and controls the conduct of business by the SNB. The individual tasks of the Bank Council are described in art. 42 NBA and art. 10 of the Organisation Regulations. The Bank Council's responsibilities cover, in particular, the determination of the basic principles according to which the SNB should be organised (including the structure of its accounting and financial control systems and its financial planning) and the approval of the budget and the provisions for currency reserves (art. 30 NBA). The Bank Council also assesses risk management and the basic principles underlying the investment process, and is kept informed of the SNB's operational resource strategies. The Bank Council submits proposals to the Federal Council for the appointment of Governing Board members and their deputies. It determines, in a set of regulations, the remuneration of its own members, and the remuneration of Governing Board members and their deputies. Finally, the Bank Council approves the agreement with the Federal Department of Finance (FDF) on profit distribution, decides on the design of banknotes and appoints the members of the Regional Economic Councils. Monetary policy does not form part of its remit; this falls to the Governing Board.

Bank Council activities

In 2022, the Bank Council held six meetings (in March, April, May, June, September and December), all of which were attended by the members of the Governing Board.

The Bank Council took note of the accountability report for 2021 submitted to the Federal Assembly and approved the financial report for 2021 for submission to the Federal Council and the General Meeting of Shareholders. It discussed the reports submitted by the External Auditor to the Bank Council and the General Meeting of Shareholders, as well as the Internal Audit annual report, and took note of the annual reports on financial and operational risks, the annual report of the Compliance unit, and the 2021 annual report of the pension fund. It also prepared the 2022 General Meeting of Shareholders and approved the 2021 budget statement as well as the 2023 budget, taking note of the medium-term resource and performance management plan.

Furthermore, the Bank Council proposed to the 2022 General Meeting of Shareholders the election of a new member of the Bank Council for the remainder of the 2020–2024 term of office.

The Bank Council also decided to propose to the 2023 General Meeting of Shareholders that Angelo Ranaldo, Professor of Finance and Systemic Risk at the University of St. Gallen, be elected to the Bank Council for the remainder of the 2020–2024 term of office. With effect from 1 May 2023, Angelo Ranaldo will succeed Cédric Tille, who will be stepping down at the end of April 2023 due to the statutory limit on the maximum term of office.

The Bank Council also bid farewell to Vice Chairman of the Governing Board Fritz Zurbrügg in mid-2022. It proposed to the Federal Council that Martin Schlegel, then Alternate Member of the Governing Board, be appointed as Member of the Governing Board with effect from 1 August 2022 for the remainder of the 2021–2027 term of office.

In addition, the Bank Council approved a partial revision of the SNB's Organisation Regulations for submission to the Federal Council. The Federal Council approved this revision on 4 May 2022. The partial revision allows for an increase in the number of alternate members of the Governing Board to up to two deputies per department.

In line with the revised Organisation Regulations, the Bank Council decided to propose to the Federal Council that Petra Gerlach and Attilio Zanetti be appointed as Alternate Members of the Governing Board with effect from 1 August 2022 for the remainder of the 2021–2027 term of office. The Bank Council subsequently appointed Petra Gerlach and Attilio Zanetti as deputies to the Head of Department I.

The Bank Council was briefed on the completion of the 'HR processes and strategies' project, in which it had participated through an ad hoc committee. It was also informed about the updated IT strategy, and about the status of the 'SNB Berne visitor centre' project in 2021.

Furthermore, the Bank Council approved the revision to the 'Regulations on private financial investments and financial transactions by members of SNB management' as well as revisions to various regulations to reflect gender-neutral language.

The Bank Council determined the membership of its committees for the 2022–2023 term of office as well as the members of the Regional Economic Councils applicable from the 2022 General Meeting of Shareholders.

Moreover, the Bank Council conducted discussions on investment policy and was briefed on HR key figures and the SNB's preparations for a potential power shortage.

Finally, the Bank Council approved the level of provisions for currency reserves.

Bank Council committees

The Bank Council has an Audit Committee, a Risk Committee, a Compensation Committee and a Nomination Committee, each of which has three members.

The Audit Committee supports the Bank Council in monitoring financial reporting, and oversees the activities of the External Auditor and the Internal Audit unit. It also assesses the appropriateness and efficacy of the internal control system (ICS), in particular regarding the processes for managing operational risk and ensuring compliance with laws, regulations and directives.

The Risk Committee assists the Bank Council in monitoring risk management and in assessing the governance of the investment process. The Audit Committee and the Risk Committee coordinate their activities and collaborate in areas where their tasks overlap.

The Compensation Committee supports the Bank Council in determining the principles of the SNB's compensation and salary policy, and submits proposals to the Bank Council regarding the salaries of Governing Board members and their deputies.

The Nomination Committee submits proposals to the Bank Council for those Bank Council members who are elected by the General Meeting of Shareholders, and for members of the Governing Board and their deputies, who are appointed by the Federal Council.

The Audit Committee held five meetings in 2022, all of which were attended by the External Auditor. The Risk Committee met four times, the Compensation Committee once, and the Nomination Committee seven times.

The Governing Board is the SNB's highest management and executive body. Its three members are appointed for a six-year term by the Federal Council on the recommendation of the Bank Council. The Governing Board is responsible, in particular, for monetary policy, asset management strategy, contributing to the stability of the financial system, and international monetary cooperation.

Executive management

The Enlarged Governing Board is made up of the three Governing Board members and their deputies. It issues the strategic guidelines for the SNB's business operations.

The Board of Deputies is responsible for the planning and implementation of the strategic guidelines for the SNB's business operations. It ensures coordination in all operational matters of interdepartmental importance.

The External Auditor examines whether the accounting records, the annual financial statements and the proposal for the appropriation of the net profit are in accordance with statutory requirements. To this end, it is entitled to inspect the SNB's business activities at any time. It is appointed by the General Meeting of Shareholders for a term of one year. The auditors must meet special professional qualifications pursuant to art. 727b CO, and must be independent of the Bank Council, the Governing Board and the controlling shareholders.

External Auditor

KPMG Ltd has been the SNB's External Auditor since 2015 and was reappointed by the General Meeting of Shareholders for the 2022–2023 term of office. Erich Schärli has been the auditor in charge since the 2022 General Meeting of Shareholders. The role of auditor in charge was rotated in compliance with the regulations on terms of office; as stipulated in the Swiss Code of Obligations, this mandate can be exercised for seven years at the most. Auditing fees for the 2022 financial year amounted to CHF 0.3 million (2021: CHF 0.3 million). Once again, KPMG Ltd provided no consulting services for the SNB in 2022.

The Internal Audit unit is an independent instrument for overseeing and monitoring the SNB's business activities. It reports to the Audit Committee of the Bank Council.

Internal Audit

1.5 REMUNERATION REPORT

| | |
|---|---|
| Remuneration | <p>When remunerating the members of the Bank Council and the Enlarged Governing Board, the Bank Council is required to comply analogously with the Confederation's principles governing the remuneration and other contractual conditions for senior staff and management officers of federal enterprises and institutions, as outlined in art. 6a of the Federal Personnel Act. The Bank Council laid down the principles governing remuneration in the 'Regulations on the compensation of SNB supervisory and executive bodies' of 14 May 2004 (Compensation regulations).</p> <p>Remuneration and compensation remitted in 2022 are listed in the tables on pp. 203–204.</p> |
| Bank Council | <p>The compensation for members of the Bank Council is made up of a fixed annual remuneration plus per diem payments for special assignments and committee meetings. No compensation is due for committee meetings that are held on the same day as Bank Council meetings.</p> |
| Executive management | <p>The remuneration paid to members of the Enlarged Governing Board comprises a salary and a lump sum for representation expenses. It is based on the level of remuneration in other financial sector companies of a similar size and complexity, and in large federally run companies.</p> |
| Regional Economic Councils | <p>Information on the remuneration for members of the Regional Economic Councils can be found on p. 203.</p> |
| Severance payments and compensation for restrictions | <p>The SNB does not make severance payments to departing members of the Bank Council. In accordance with the SNB's Regulations on the Governing Board, members of the Governing Board and their deputies are understood to be employed for a further six months after their term of office has come to an end, although they will be released from their duties during these six months ('cooling-off period'). The continuation of salary payments during this period of release from duties compensates them for any restrictions imposed on them after the end of their term of office. If a member of the Enlarged Governing Board is not reappointed or is removed from office, the Bank Council may grant a severance payment amounting to a maximum of one year's salary. The same applies in the case of retirement or termination of employment of a member of the Enlarged Governing Board in the interest of the bank.</p> |

1.6 INTERNAL CONTROL SYSTEM

The ICS comprises all the control structures and processes which ensure orderly procedures for operational activities and contribute to the attainment of business goals.

Aim and purpose

The ICS makes a major contribution towards compliance with legal requirements and internal specifications, the prudential protection of corporate assets, the prevention, reduction and disclosure of errors and irregularities, as well as ensuring that accounts are reliable and complete, that reporting is timely and dependable, and that the bankwide management of risk is appropriate and efficient.

The ICS comprises the management of financial risk, operational risk, compliance risk and risk associated with financial reporting pursuant to art. 728a CO.

Elements

The ICS is divided into three levels. The three organisationally separate levels are line management, risk monitoring and internal audit.

Organisation

The first level is ensured through the line management's responsibility to provide verification of its duty of care and orderly business procedures. Organisational units define their structures and procedures so as to ensure that tasks are carried out efficiently and their objectives achieved. To this end, they specify operational goals and control measures to manage the risks they are exposed to in their business activities.

First level

The second level is risk monitoring. The units responsible (Operational Risk and Security, Compliance, and Risk Management) advise and support line managers in the management of risk in their units. They monitor and report on the appropriateness and efficacy of risk management. In addition, they make their own assessment of the risk situation. They draw up specifications and measures to identify and limit risk, and submit corresponding proposals to executive management.

Second level

Third level

Finally, at a third, independent level, Internal Audit examines the SNB's business activities by applying a systematic and targeted approach to assessing and helping to improve the effectiveness of risk management and processes for internal monitoring, control and governance. Internal Audit's approach is first and foremost risk-oriented.

Responsibilities of Bank Council and executive management

The Bank Council and, in particular, its Audit Committee and Risk Committee, assess the appropriateness and efficacy of the ICS and satisfy themselves with regard to the security and integrity of the business processes.

The Enlarged Governing Board approves strategies for the SNB's business operations.

The Board of Deputies approves the specifications with respect to the ICS and ensures compliance therewith. To this end, it issues directives and guidelines on operational management.

Reporting

Individual reports on the monitoring of financial, operational and compliance risks are submitted via the ICS to executive management and the Bank Council on an annual basis. In addition, Internal Audit communicates its audit findings to executive management and to the Bank Council's Audit Committee at least twice a year.

ICS for financial reporting

The SNB has extensive control mechanisms in place for the prevention or early identification of errors in financial reporting (accounting procedures and bookkeeping). This ensures that the SNB's financial position is correctly reported. Together, these controls make up the ICS for financial reporting, which is managed by the Accounting unit.

1.7 RISK MANAGEMENT

In fulfilling its statutory mandate, the SNB incurs various risks. These include financial risks in the form of market, credit, country and liquidity risks. It is also exposed to compliance and operational risks. These include personal injury, financial loss or reputational damage arising as a result of inadequate internal processes, incorrect reporting, a lack of – or disregard for – regulations or rules of conduct, insufficient oversight, technical failure and the impact of various external events.

Risks

The Bank Council oversees and monitors the conduct of business by the SNB. It is responsible for assessing risk management and monitors its implementation. The Risk Committee and the Audit Committee discuss the risk reports and support the Bank Council in overseeing risk management.

Assessment of risk management

The Governing Board issues the ‘Investment Policy Guidelines of the Swiss National Bank (SNB)’ and annually determines the strategy for the investment of assets. In so doing, it determines the framework for the financial risks associated with investments.

Risk strategy

The Enlarged Governing Board approves strategies for business operations and has strategic responsibility for the management of operational and compliance risks. It defines the corresponding guidelines.

Financial risk associated with investment is continuously monitored by the Risk Management unit. Each quarter, the Governing Board discusses the reports on investment activities and risk management. The Risk Management unit’s reports are discussed by the Risk Committee of the Bank Council, and the annual report on financial risk is also discussed by the Bank Council. Details of the investment and risk control process for financial investments can be found in chapter 5 of the accountability report. If necessary, the Head of Risk Management can also brief the Chair of the Governing Board and the Chair of the Risk Committee directly.

Monitoring of financial risks

Monitoring of operational risks

The department heads ensure implementation of the operational risk guidelines issued by the Enlarged Governing Board in their organisational units. Management of operational risk is the responsibility of line managers.

Operational risk, which specifically includes cybersecurity, information security, business continuity management and operational security, is monitored by the Operational Risk and Security unit. The Board of Deputies is responsible for the management and control of operational risk. It prepares the relevant guidelines, is responsible for their implementation throughout the SNB, and ensures reporting to the Enlarged Governing Board. The Audit Committee discusses the business report on the management of operational risk before it is submitted to the Bank Council. The Risk Committee and the Audit Committee are jointly responsible for monitoring operational risk arising from the SNB's investment activities.

Monitoring of compliance risks

The department heads ensure implementation of the compliance risk guidelines issued by the Bank Council, the Enlarged Governing Board and the Board of Deputies in their respective organisational units. Management of compliance risk is the responsibility of line managers.

Compliance risk is monitored by the Compliance unit and, where it overlaps with operational risk, by the Operational Risk and Security unit. The Compliance unit advises and supports the department heads, line managers and staff with regard to the handling of compliance risks. It monitors the appropriateness of, and adherence to, rules of conduct and specifications, and reports on the status of compliance risks arising from the disregard for rules of conduct and specifications. The Compliance unit operates the electronic reporting platform, where employees can submit reports on rule violations. In connection with its responsibilities, the Compliance unit may at any time approach the Chair of the Audit Committee or where appropriate the President of the Bank Council, should this prove necessary. The Compliance unit submits a report on its activities annually to executive management, the Audit Committee and the Bank Council.

The following table summarises the organisation of risk management.

ORGANISATION OF RISK MANAGEMENT

| | Specifications | Risk management (first level) | Independent oversight (second level) | Supervisory bodies of the Bank Council |
|------------------|--|-------------------------------|---|--|
| Financial risk | Governing Board | Line management | Risk Management unit | Risk Committee |
| Operational risk | Enlarged Governing Board, Board of Deputies | Line management | Operational Risk and Security unit | Audit Committee, Risk Committee |
| Compliance risk | Bank Council and Enlarged Governing Board, Board of Deputies | Line management | Compliance unit, Operational Risk and Security unit | Audit Committee |

1.8 CROSS REFERENCE TABLES

Further information on corporate governance may be found in other sections of the Annual Report, on the SNB website, in the NBA, in the Organisation Regulations and in the following places:

| | |
|--|--|
| NBA (SR 951.11) | www.snb.ch, The SNB/Legal basis/ Constitution and laws |
| Organisation Regulations (SR 951.153) | www.snb.ch, The SNB/Legal basis/ Guidelines and regulations |
| Shareholders | www.snb.ch, Shareholders |
| Participation rights | www.snb.ch, Shareholders/General Meeting of Shareholders/Deadlines and participation |
| Listing in share register | www.snb.ch, Shareholders/General Meeting of Shareholders/Deadlines and participation |
| Decision-making quorums | Art. 38 NBA; art. 9 Organisation Regulations |
| General Meeting of Shareholders | Arts. 34–38 NBA; arts. 8–9 Organisation Regulations |
| Regulations on the recognition and representation of shareholders of the Swiss National Bank | www.snb.ch, The SNB/Legal basis/ Guidelines and regulations |

| | |
|---|---|
| Bank Council | www.snb.ch, The SNB/ Supervisory and executive bodies/Bank Council |
| Members | Annual Report, p. 222 |
| Nationality | Art. 40 NBA |
| Affiliations | www.snb.ch, The SNB/ Supervisory and executive bodies/Bank Council/ Members of the Bank Council |
| Election and term of office | Art. 39 NBA |
| Initial and current election | Annual Report, p. 222 |
| Internal organisation | Arts. 10 et seq. Organisation Regulations |
| Committees | www.snb.ch, The SNB/ Supervisory and executive bodies/Bank Council |
| Regulations on the Audit Committee Risk Committee Compensation Committee Nomination Committee | www.snb.ch, The SNB/Legal basis/ Guidelines and regulations |
| Regulations on the compensation of SNB supervisory and executive bodies (Compensation regulations) | www.snb.ch, The SNB/Legal basis/ Guidelines and regulations |
| Delimitation of powers | Art. 42 NBA; arts. 10 et seq. Organisation Regulations |
| Internal control system | Annual Report, pp. 153–154; arts. 10 et seq. Organisation Regulations |
| Information tools | www.snb.ch, The SNB/Legal basis/ Guidelines and regulations |
| Remuneration | Annual Report, p. 203 |
| Code of Conduct | www.snb.ch, The SNB/Legal basis/ Guidelines and regulations |
| Executive management | www.snb.ch, The SNB/Supervisory and executive bodies/Governing Board/Enlarged Governing Board |
| Members | Annual Report, p. 223 |
| Affiliations | www.snb.ch, The SNB/ Supervisory and executive bodies/Governing Board/ Enlarged Governing Board |
| Election and term of office | Art. 43 NBA |
| Internal organisation | Arts. 18–24 Organisation Regulations |
| Regulations on the office-holder relationship and employment relationship of members of the Governing Board of the Swiss National Bank and their deputies (Regulations on the Governing Board) | www.snb.ch, The SNB/Legal basis/ Guidelines and regulations |

| | |
|---|---|
| Regulations on the compensation of SNB supervisory and executive bodies (Compensation regulations) | www.snb.ch, The SNB/Legal basis/ Guidelines and regulations |
| Regulations on private financial investments and financial transactions by members of SNB management | www.snb.ch, The SNB/Legal basis/ Guidelines and regulations |
| Regulations on the acceptance by members of the Enlarged Governing Board of gifts, invitations and third-party considerations | www.snb.ch, The SNB/Legal basis/ Guidelines and regulations |
| Federal Personnel Act | www.admin.ch, Bundesrecht/Systematische Rechtssammlung/Landesrecht/1 Staat – Volk – Behörden/17 Bundesbehörden/172.220 Arbeitsverhältnis/172.220.1 Bundespersonalgesetz vom 24. März 2000 (BPG) Not available in English |
| Remuneration | Annual Report, p. 204 |
| Code of Conduct | www.snb.ch, The SNB/Legal basis/ Guidelines and regulations |
| Staff | |
| Charter | www.snb.ch, The SNB/Legal basis/ Guidelines and regulations |
| Code of Conduct | www.snb.ch, The SNB/Legal basis/ Guidelines and regulations |
| Private financial investments and financial transactions | www.snb.ch, The SNB/Legal basis/ Guidelines and regulations |
| Principles governing procurement | www.snb.ch, The SNB/Legal basis/ Guidelines and regulations |
| External Auditor | |
| Election and requirements | Art. 47 NBA |
| Tasks | Art. 48 NBA |
| Information policy | Annual Report, p. 146, pp. 228 et seq. as well as information for shareholders at www.snb.ch, Shareholders/ Ad hoc announcements – messaging service |
| Corporate structure and shareholders | |
| Head offices | Art. 3 para. 1 NBA |
| Ticker symbol/ISIN | SNBN/CH0001319265 |
| Breakdown of capital | Annual Report, p. 197 |
| Accounting principles | Annual Report, p. 178 |

2

Resources

Organisation

2.1 ORGANISATIONAL CHANGES

The departments are made up of divisions and organisational units that report directly to them. Divisions encompass large specialised areas that are covered by several organisational units.

The divisions making up Department I are the Secretariat General, Economic Affairs, International Monetary Cooperation and Statistics. It also includes the Legal Services, Compliance, Human Resources, and Premises and Technical Services units, which report directly to the department management. Internal Audit reports administratively to Department I.

In addition to the Financial Stability and Cash divisions, Department II includes the Accounting, Controlling, Risk Management, and Operational Risk and Security units, which report directly to the department management.

Department III comprises the Money Market and Foreign Exchange, Asset Management, Banking Operations, and Information Technology divisions, as well as the Financial Market Analysis unit and the Singapore branch office, which report directly to the department management.

The organisational structure is presented on pp. 226–227.

On 4 May 2022, the Federal Council approved a partial revision of the SNB's Organisation Regulations, allowing for an increase in the number of alternate members of the Governing Board to up to two deputies per department. This is aimed at helping the SNB to continue to manage well the monetary policy and operational challenges that have risen sharply in recent years. At the same time, the partial revision allows for an even broader integration of different skills in executive management.

Organisational development is steered by the strategic priorities set by executive management and is aimed at ensuring that the SNB is able to perform its tasks effectively and efficiently at all times in a changing environment. Executive management also ensures that the organisation remains adaptable with regard to performance, human resources and processes. The most important management tools are resource and performance management, project portfolio planning, and budgeting.

2.2 HUMAN RESOURCES

At the end of 2022, the SNB employed 979 people. In terms of full-time equivalents, the number of employees rose by 2.6% to 891.3. The SNB also employed 24 apprentices. Averaged over the year, the number of full-time equivalents was 877.8. The overall staff turnover rate was 0.6 percentage points higher at 6.0%. Net fluctuation (excluding retirements and deaths) increased by 0.1 percentage points to 3.4%.

Number of staff

The development of staff numbers falls within the parameters laid down in the medium-term resource and performance management plan approved by the Bank Council.

The SNB's HR strategy ensures that it always has the necessary number of employees with the required skills to best fulfil its mandate. In this respect, the SNB sees itself as a learning organisation. Its HR strategy is geared to the continuing professional development of its employees, and to the ongoing evolution of its processes and instruments.

More information and key figures on human resources and the SNB as an employer can be found in the 'Employment' chapter of the Sustainability Report for 2022.

In 2021, the SNB conducted the equal pay analysis prescribed by law. The results showed no unexplained pay gaps between men and women in excess of the 5% tolerance threshold defined by the federal government, and that the SNB thus complies with the internal pay equality requirements. On this basis it received the 'We Pay Fair' label from the Competence Centre for Diversity and Inclusion (CCDI) at the University of St. Gallen (HSG) as well as industry certification from the Social Partnership Centre for Equal Pay in the Banking Industry (SoPaCEB). More detailed information on the results of the analysis can be found on page 159 of the Annual Report 2021.

Equal pay compliance

The SNB believes that a high level of diversity helps it fulfil its mandate while at the same time making it a more attractive employer. Accordingly, it creates conditions that enable all employees to be committed and successful in terms of the performance mandate, and to feel they are part of the institution.

Diversity strategy

In 2022, the Bank Council approved the refined diversity strategy. This covers three main areas of impact: ensuring equal opportunity and non-discrimination; reducing structural and cultural barriers; and taking further targeted and differentiated measures to promote under-represented groups.

SNB operations during and after the coronavirus pandemic

The coronavirus pandemic continued to exert a strong influence on the SNB's operations at the start of 2022. Thanks to the measures taken, the SNB was able to perform its mandate in full at all times. The internal set of precautionary measures was subject to regular review and adapted to the course of the pandemic. The corresponding rules of behaviour focused on protecting the health of employees. The entire approach was based on the principle of safety first, on the measures taken by the authorities (federal and cantonal), and on the operational situation. The core element was that employees who do not need to be on site worked from home, so as to reduce the risk of infection. For the same reason, teams performing critical activities that require on-site presence were temporarily split up and moved to alternative workplaces. In addition to the general hygiene and distancing rules, the precautionary measures also included COVID-19 tests and guidelines on what to do in the event of symptoms of the disease or contact with people who have tested positive.

The COVID-19 measures were lifted in spring, and the SNB's operations gradually returned to normal. At the same time, the SNB introduced new, flexible arrangements for working from home. Within a defined framework, line managers can agree with their staff how much they may work from home. As a result of the new regulations and positive experience overall during the COVID-19 crisis, the proportion of people working from home has increased significantly compared with the time before the pandemic. Only in the case of specific tasks that have to be performed on premises for operational or security reasons is working from home not permitted.

2.3 PREMISES

The SNB owns premises in Berne and Zurich for its own use. These are managed according to a long-term strategy. As part of this strategy, construction work has been ongoing at the Berne premises since the beginning of 2015. Full operations resumed in the main building at Bundesplatz 1 in 2019.

Renovation of the six buildings making up the Kaiserhaus (Marktgasse 37–41 and Amthausgasse 22–26) is expected to continue until spring 2025. In 2022, the preliminary building work was completed. The new building technology facilities went into operation in the second half of the year. Work on the interior of the premises to be used by the SNB continued. The areas open to the public will house an SNB visitor centre focusing on the topic of money, as well as food and drink facilities, businesses and apartments. The user requirements for these areas were defined, and execution planning commenced.

Kaiserhaus construction project

2.4 INFORMATION TECHNOLOGY

Internal IT systems and applications were reliable and stable. Any occasional disruptions were swiftly resolved.

IT operations

Communications infrastructure and services have been further expanded since the pandemic has abated, so as to improve usability and security in the collaboration between staff on site and those working from home.

As part of the regular strategy review, the SNB's IT strategy was revised and updated with a focus on the use of cloud services.

IT projects

Processes for the early detection of cyberattacks were automated to ensure a swift and efficient response. Moreover, an additional and dedicated IT infrastructure, including the corresponding processes, was built to make it possible to recover applications and data promptly following a cyberincident.

The technical settlement of interbank transactions in the payment systems of Swiss Interbank Clearing (SIC system) and euroSIC was switched over from the Finance IPNet communication network to the Secure Swiss Finance Network (SSFN). The SSFN enables participants to communicate securely in a self-contained network protected from cyberthreats (cf. accountability report, chapter 4.2).

An analysis platform supporting machine learning with state-of-the-art methods and tools was introduced to expand the possibilities for analysing economic data. The new platform makes it possible to process large volumes of data and to execute machine learning projects, ranging from data exploration to production.

3

Changes in bank bodies

On 29 April 2022, the General Meeting of Shareholders elected Rajna Gibson Brandon, from Carouge, as a member of the Bank Council for the remainder of the 2020–2024 term of office. She succeeded Monika Bütler, who stepped down at the end of April 2022 due to the statutory limit on the maximum term of office.

Bank Council

Cornelia Stamm Hurter, from Schaffhausen, took office as a member of the Bank Council on 1 May 2022, to serve for the remainder of the 2020–2024 term of office, after the Federal Council had elected her as the successor to Ernst Stocker on 8 September 2021. Ernst Stocker left the Bank Council at the end of April 2022, also having served the maximum tenure.

Cédric Pierre Tille will step down at the end of April 2023 due to the statutory limit on the maximum term of office.

Cédric Pierre Tille was elected to the Bank Council by the General Meeting of Shareholders in 2011. He showed strong commitment to his office and also served as a long-standing member of the Nomination Committee and the Risk Committee. The SNB thanks Cédric Pierre Tille for his valuable service.

Cédric Pierre Tille's successor will be elected by the General Meeting of Shareholders.

On 29 April 2022, the General Meeting of Shareholders appointed KPMG Ltd as External Auditor for the 2022–2023 term of office, with Erich Schärli as auditor in charge.

External Auditor

At its meeting of 4 May 2022, the Federal Council appointed Martin Schlegel, previously Alternate Member of the Governing Board, as Vice Chairman of the SNB's Governing Board with effect from 1 August 2022. Martin Schlegel succeeded Fritz Zurbrügg, who stepped down at the end of July, and heads Department II.

**Governing Board and
Enlarged Governing Board**

Furthermore, the Federal Council approved a partial revision of the SNB's Organisation Regulations, allowing for up to two alternate members of the Governing Board per department. In accordance with this partial revision, on 4 May 2022 the Federal Council also appointed Petra Gerlach and Attilio Zanetti as Alternate Members of the Governing Board as of 1 August 2022.

The Bank Council made three appointments to the position of Director with effect from 1 January 2023: Roman Baumann, Head of Asset Management; Nicolas Stoffels, Head of International Monetary Cooperation; and Benjamin Andereg, Head of Money Market and Foreign Exchange.

Bank management

4

Business performance

4.1 ANNUAL RESULT

Summary

The Swiss National Bank reported a loss of CHF 132.5 billion for 2022 (2021: profit of CHF 26.3 billion).

The loss on foreign currency positions amounted to CHF 131.5 billion and the loss on Swiss franc positions was CHF 1.0 billion. A valuation gain of CHF 0.4 billion was recorded on gold holdings. Operating expenses came to CHF 0.4 billion.

For the financial year just ended, the SNB has set the allocation to the provisions for currency reserves at CHF 9.6 billion. After taking into account the distribution reserve of CHF 102.5 billion, the net loss comes to CHF 39.5 billion. Pursuant to the provisions of the National Bank Act and the profit distribution agreement between the Federal Department of Finance and the SNB, this net loss precludes a distribution for the 2022 financial year. This affects both dividend payments to the SNB shareholders and the profit distribution to the Confederation and the cantons.

Valuation gain on gold holdings

At the end of 2022, the price of gold stood at CHF 53,941 per kilogram, 0.7% higher than at the end of 2021 (CHF 53,548). This gave rise to a valuation gain of CHF 0.4 billion on the unchanged holdings of 1,040 tonnes of gold (2021: valuation loss of CHF 0.1 billion).

Loss on foreign currency positions

The loss on foreign currency positions was CHF 131.5 billion (2021: profit of CHF 25.7 billion). Interest and dividend income totalled CHF 7.4 billion and CHF 4.4 billion respectively. Price losses of CHF 72.0 billion were recorded on interest-bearing paper and instruments, and CHF 41.3 billion in price losses were recorded on equity securities and instruments. Exchange rate-related losses totalled CHF 29.8 billion.

The loss on Swiss franc positions totalled CHF 1.0 billion (2021: profit of CHF 1.1 billion). It largely resulted from price losses on interest-bearing paper and instruments, and from interest on sight deposit accounts. The interest paid on sight deposit account balances exceeded the negative interest charged until 22 September 2022.

Loss on Swiss franc positions

Operating expenses are made up of banknote and personnel expenses, general overheads and depreciation on the SNB's tangible assets. They totalled CHF 397.8 million (2021: CHF 382.0 million).

Operating expenses

The SNB's financial result depends largely on developments in the gold, foreign exchange and capital markets. Consequently, very strong fluctuations in quarterly and annual results are to be expected. In view of the considerable volatility in its results, the SNB does not exclude the possibility that, in future years too, distributions will only be able to be carried out on a reduced scale or will have to be suspended completely.

Outlook

4.2 PROVISIONS FOR CURRENCY RESERVES

| | |
|------------------------------------|--|
| Purpose | <p>In accordance with art. 30 para. 1 of the NBA, the SNB sets up provisions to maintain the currency reserves at the level necessary for monetary policy. Independent of this financing function, the provisions for currency reserves have a general reserve function and thus serve as equity capital. They act as a buffer against all the different forms of loss risk at the SNB. The SNB aims for a robust balance sheet with sufficient equity capital, to ensure that it can also absorb potentially high losses.</p> |
| Level of provisions | <p>When setting aside provisions for currency reserves, the SNB must take into account the development of the Swiss economy (art. 30 para. 1 NBA).</p> |
| Allocation from 2022 annual result | <p>The allocation in a given year is determined on the basis of double the average nominal GDP growth rate over the previous five years. To ensure that sufficient allocations are made to the provisions for currency reserves even in periods of low nominal GDP growth, the minimum annual allocation is currently set at 10% of the provisions at the end of the previous year.</p> <p>Since nominal GDP growth over the last five years has averaged just 0.8%, the minimum allocation of 10% will be applied for the 2022 financial year. This corresponds to CHF 9.6 billion (2021: CHF 8.7 billion). As a result, the provisions for currency reserves will grow from CHF 95.7 billion to CHF 105.2 billion.</p> |

PROVISIONS

Multi-year comparison of provisions

| | Growth in nominal GDP In percent (average period) ¹ | Annual allocation In CHF millions | Provisions after allocation In CHF millions |
|---------------------|---|--------------------------------------|---|
| 2018 ² | 1.2 (2012–2016) | 5 423.4 | 73 216.3 |
| 2019 ² | 1.3 (2013–2017) | 5 857.3 | 79 073.6 |
| 2020 ³ | 1.7 (2014–2018) | 7 907.4 | 86 981.0 |
| 2021 ³ | 1.6 (2015–2019) | 8 698.1 | 95 679.1 |
| 2022 ^{3,4} | 0.8 (2016–2020) | 9 567.9 | 105 247.0 |

1 The average nominal GDP growth rate is based on the last five years for which definitive values are available. GDP figures are revised on a regular basis. This means that the latest available growth rates may deviate from reported figures. This does not affect the allocation.

2 Minimum allocation of 8% of the provisions at the end of the previous year.

3 Minimum allocation of 10% of the provisions at the end of the previous year.

4 For information on the allocation for 2022, cf. accountability report, chapter 5.4.

The portion of the annual result remaining after the allocation to the provisions for currency reserves corresponds to the distributable annual result as per art. 30 para. 2 NBA. Together with the distribution reserve, this makes up the net profit/net loss (art. 31 NBA). If a net profit is achieved, this is used for distributions. In the event of a net loss, no distribution is made.

Distributable annual result and net profit/net loss

For 2022, the distributable annual result amounts to CHF –142.0 billion. The net loss is CHF 39.5 billion.

4.3 DIVIDEND AND PROFIT DISTRIBUTION

| | |
|---|---|
| Dividend | Art. 31 para. 1 NBA specifies that a dividend not exceeding 6% of the share capital shall be paid from the net profit, with the decision on this matter being taken by the General Meeting of Shareholders on the basis of a Bank Council proposal. |
| Profit distribution to Confederation and cantons | In accordance with art. 31 para. 2 NBA, one-third of any net profit remaining after the payment of a dividend will accrue to the Confederation and two-thirds to the cantons. |
| Distribution agreement | <p>The amount of the annual profit distribution to the Confederation and the cantons is laid down in an agreement between the FDF and the SNB. Given the considerable fluctuations in the SNB's earnings, the NBA stipulates that profit distribution be maintained at a steady level in the medium term. Consequently, a smoothing of payments over several years is provided for in the agreement and a distribution reserve carried on the balance sheet. However, depending on the annual result, this distribution reserve can become negative, which precludes a profit distribution.</p> <p>The existing agreement covers the profit distributions for the financial years 2020–2025. A profit distribution will be made to the Confederation and the cantons in the event of a net profit. In the event of a net loss, no distribution will be made. If the net profit is less than CHF 10 billion, a maximum amount of CHF 2 billion will be distributed to the Confederation and the cantons, provided that – after deduction of the dividend to shareholders (max. CHF 1.5 million) – this does not result in a negative distribution reserve. Added to this are four possible supplementary distributions of CHF 1 billion each, which are made if the net profit reaches the thresholds of CHF 10 billion, CHF 20 billion, CHF 30 billion and CHF 40 billion respectively. This allows for an annual distribution of up to CHF 6 billion to the Confederation and the cantons.</p> |
| No distribution for 2022 | For 2022, owing to its net loss, the SNB is unable either to pay a dividend to the shareholders or to make a profit distribution to the Confederation and the cantons. |

The distribution reserve forms part of the loss-absorbing capital alongside the provisions for currency reserves. The non-distributed amount of the annual result is allocated to the distribution reserve, or the shortfall for the appropriation of profit is drawn from it. The distribution reserve is a form of profit/loss carried forward and serves as a fluctuation reserve to enable the legally required medium-term smoothing of the annual distributions.

Distribution reserve

Following last year's profit appropriation, the distribution reserve showed a value of CHF 102.5 billion. After offsetting against the distributable annual result, the distribution reserve will amount to CHF –39.5 billion.

PROFIT DISTRIBUTION AND DISTRIBUTION RESERVE

In CHF millions

| | 2018 | 2019 | 2020 | 2021 | 2022 ² |
|--|------------------|-----------------|-----------------|------------------|-------------------|
| Annual result | -14 934.0 | 48 851.7 | 20 869.6 | 26 300.0 | -132 479.5 |
| - Allocation to provisions for currency reserves | -5 423.4 | -5 857.3 | -7 907.4 | -8 698.1 | -9 567.9 |
| = Distributable annual result | -20 357.4 | 42 994.4 | 12 962.2 | 17 601.9 | -142 047.4 |
| + Distribution reserve before appropriation of profit ¹ | 67 348.4 | 44 989.5 | 83 982.4 | 90 943.1 | 102 543.5 |
| = Net profit/loss | 46 991.0 | 87 983.9 | 96 944.6 | 108 545.0 | -39 504.0 |
| - Payment of a dividend of 6% | -1.5 | -1.5 | -1.5 | -1.5 | - |
| - Profit distribution to Confederation and cantons | -2 000.0 | -4 000.0 | -6 000.0 | -6 000.0 | - |
| = Distribution reserve after appropriation of profit | 44 989.5 | 83 982.4 | 90 943.1 | 102 543.5 | -39 504.0 |

1 Year-end total as per balance sheet.

2 In accordance with appropriation of profit.

4.4 MULTI-YEAR COMPARISON OF ASSETS AND LIABILITIES

The following summary provides an overview of the movements in key balance sheet positions over the last five years.

Year-end values in CHF millions

| | 2018 | 2019 | 2020 | 2021 | 2022 |
|--|----------------|----------------|----------------|------------------|----------------|
| Gold holdings | 42 237 | 49 111 | 55 747 | 55 691 | 56 099 |
| Foreign currency investments | 763 728 | 794 015 | 910 001 | 966 202 | 800 566 |
| Reserve position in the IMF | 1 188 | 1 369 | 1 850 | 2 001 | 2 137 |
| International payment instruments | 4 441 | 4 381 | 4 364 | 11 912 | 11 381 |
| Monetary assistance loans | 260 | 276 | 908 | 908 | 877 |
| Claims from US dollar repo transactions | – | – | 8 842 | 2 147 | – |
| Claims from Swiss franc repo transactions | – | 6 529 | 550 | 3 216 | – |
| Swiss franc securities | 3 977 | 4 074 | 4 073 | 4 032 | 3 565 |
| Secured loans | – | – | 11 176 | 9 202 | 4 430 |
| Tangible assets | 435 | 450 | 438 | 437 | 440 |
| Participations | 151 | 135 | 134 | 136 | 132 |
| Other assets | 651 | 616 | 946 | 892 | 1 749 |
| Total assets | 817 069 | 860 956 | 999 028 | 1 056 776 | 881 377 |
| Banknotes in circulation | 82 239 | 84 450 | 89 014 | 90 685 | 81 697 |
| Sight deposits of domestic banks | 480 634 | 505 811 | 628 825 | 651 091 | 466 923 |
| Liabilities towards the Confederation | 15 613 | 23 481 | 13 755 | 12 617 | 16 668 |
| Sight deposits of foreign banks and institutions | 37 102 | 30 164 | 28 120 | 28 156 | 27 584 |
| Other sight liabilities | 41 479 | 31 997 | 32 161 | 35 298 | 27 804 |
| Liabilities from Swiss franc repo transactions | – | – | – | – | 67 145 |
| SNB debt certificates | – | – | – | – | 98 169 |
| Other term liabilities | – | – | 9 027 | 2 174 | – |
| Foreign currency liabilities | 34 812 | 13 315 | 9 573 | 20 889 | 16 740 |
| Counterpart of SDRs allocated by the IMF | 4 487 | 4 418 | 4 214 | 11 325 | 10 919 |
| Other liabilities | 472 | 238 | 388 | 292 | 1 961 |
| Equity | | | | | |
| Provisions for currency reserves ¹ | 67 793 | 73 216 | 79 074 | 86 981 | 95 679 |
| Share capital | 25 | 25 | 25 | 25 | 25 |
| Distribution reserve ¹ | 67 348 | 44 989 | 83 982 | 90 943 | 102 543 |
| Annual result | –14 934 | 48 852 | 20 870 | 26 300 | –132 480 |
| Total equity | 120 232 | 167 083 | 183 951 | 204 249 | 65 768 |
| Total liabilities | 817 069 | 860 956 | 999 028 | 1 056 776 | 881 377 |

¹ Before appropriation of profit, cf. p. 176.

Annual financial statements

1

Balance sheet as at 31 December 2022

ASSETS

In CHF millions

| | Item in Notes | 31.12.2022 | 31.12.2021 | Change |
|---|------------------|------------------|--------------------|--------------------|
| Gold holdings | 01 | 56 099.3 | 55 690.7 | + 408.6 |
| Foreign currency investments | 02, 26 | 800 566.2 | 966 202.2 | -165 636.0 |
| Reserve position in the IMF | 03, 24 | 2 136.6 | 2 000.8 | + 135.8 |
| International payment instruments | 04, 24 | 11 380.7 | 11 912.5 | -531.8 |
| Monetary assistance loans | 05, 24 | 877.5 | 908.0 | -30.5 |
| Claims from US dollar repo transactions | | - | 2 147.2 | -2 147.2 |
| Claims from Swiss franc repo transactions | 23 | - | 3 216.0 | -3 216.0 |
| Swiss franc securities | 06 | 3 564.8 | 4 031.7 | -466.9 |
| Secured loans | | 4 430.5 | 9 202.4 | -4 771.9 |
| Tangible assets | 07 | 440.5 | 437.2 | + 3.3 |
| Participations | 08, 25 | 132.3 | 135.6 | -3.3 |
| Other assets | 09, 27 | 1 748.5 | 891.9 | + 856.6 |
| Total assets | | 881 376.8 | 1 056 776.2 | - 175 399.4 |

LIABILITIES

In CHF millions

| | Item in Notes | 31.12.2022 | 31.12.2021 | Change |
|--|------------------|------------------|--------------------|-------------------|
| Banknotes in circulation | 10 | 81 696.8 | 90 685.3 | -8 988.5 |
| Sight deposits of domestic banks | | 466 922.7 | 651 091.0 | -184 168.3 |
| Liabilities towards the Confederation | 11 | 16 667.9 | 12 617.1 | +4 050.8 |
| Sight deposits of foreign banks and institutions | | 27 584.2 | 28 156.2 | -572.0 |
| Other sight liabilities | 12 | 27 803.9 | 35 297.9 | -7 494.0 |
| Liabilities from Swiss franc repo transactions | | 67 144.8 | - | +67 144.8 |
| SNB debt certificates | 13 | 98 168.8 | - | +98 168.8 |
| Other term liabilities | | - | 2 173.8 | -2 173.8 |
| Foreign currency liabilities | 14, 26 | 16 739.7 | 20 888.5 | -4 148.8 |
| Counterpart of SDRs allocated by the IMF | 04 | 10 919.1 | 11 325.1 | -406.0 |
| Other liabilities | 15, 27 | 1 960.9 | 292.4 | +1 668.5 |
| Equity | | | | |
| Provisions for currency reserves ¹ | | 95 679.1 | 86 981.0 | +8 698.1 |
| Share capital | 16 | 25.0 | 25.0 | - |
| Distribution reserve ¹ | | 102 543.5 | 90 943.1 | +11 600.4 |
| Annual result | | -132 479.5 | 26 300.0 | -158 779.5 |
| Total equity | | 65 768.0 | 204 249.1 | -138 481.1 |
| Total liabilities | | 881 376.8 | 1 056 776.2 | -175 399.4 |

¹ Before appropriation of profit, cf. p. 176.

Income statement and appropriation of profit for 2022

INCOME STATEMENT

In CHF millions

| | Item in Notes | 2022 | 2021 | Change |
|--|------------------|-------------------|-----------------|-------------------|
| Net result from gold | | 408.5 | -56.4 | + 464.9 |
| Net result from foreign currency positions | 17 | -131 458.5 | 25 656.4 | -157 114.9 |
| Net result from Swiss franc positions | 18 | -1 038.5 | 1 064.9 | -2 103.4 |
| Net result, other | 19 | 6.7 | 17.0 | -10.3 |
| Gross income | | -132 081.8 | 26 681.9 | -158 763.7 |
| Banknote expenses | | -36.5 | -33.7 | -2.8 |
| Personnel expenses | 20, 21 | -188.3 | -182.8 | -5.5 |
| General overheads | 22 | -134.0 | -127.8 | -6.2 |
| Depreciation on tangible assets | 07 | -38.9 | -37.7 | -1.2 |
| Annual result | | -132 479.5 | 26 300.0 | -158 779.5 |

APPROPRIATION OF PROFIT¹

In CHF millions

| | 2022 | 2021 | Change |
|--|-------------------|------------------|-------------------|
| - Allocation to provisions for currency reserves | -9 567.9 | -8 698.1 | -869.8 |
| = Distributable annual result | -142 047.4 | 17 601.9 | -159 649.3 |
| + Profit carried forward (distribution reserve before appropriation of profit) | 102 543.5 | 90 943.1 | + 11 600.4 |
| = Net profit/loss | -39 504.0 | 108 545.0 | -148 049.0 |
| - Payment of a dividend of 6% | - | -1.5 | + 1.5 |
| - Profit distribution to Confederation and cantons | - | -6 000.0 | + 6 000.0 |
| = Balance carried forward to following year's financial statements (distribution reserve after appropriation of profit) | -39 504.0 | 102 543.5 | -142 047.5 |

¹ The determination and distribution of profits are governed by arts. 30 and 31 NBA. The portion of the annual result remaining after the allocation to the provisions for currency reserves is the distributable annual result. Together with the distribution reserve, this makes up the net profit/net loss. If a net profit is achieved, this is used for distributions. In the event of a net loss, no distribution is made.

3

Changes in equity

In CHF millions

| | Share capital | Provisions for currency reserves | Distribution reserve | Annual result | Total |
|--|---------------|----------------------------------|----------------------|-------------------|------------------|
| Equity as at 1 January 2021 | 25.0 | 79 073.6 | 83 982.4 | 20 869.6 | 183 950.6 |
| Endowment of provisions for currency reserves pursuant to NBA | | 7 907.4 | | -7 907.4 | |
| Allocation to distribution reserve | | | 6 960.7 | -6 960.7 | |
| Distribution of dividends to shareholders | | | | -1.5 | -1.5 |
| Profit distribution to Confederation and cantons | | | | -6 000.0 | -6 000.0 |
| Annual result | | | | 26 300.0 | 26 300.0 |
| Equity as at 31 December 2021 (before appropriation of profit) | 25.0 | 86 981.0 | 90 943.1 | 26 300.0 | 204 249.1 |
| Equity as at 1 January 2022 | 25.0 | 86 981.0 | 90 943.1 | 26 300.0 | 204 249.1 |
| Endowment of provisions for currency reserves pursuant to NBA | | 8 698.1 | | -8 698.1 | |
| Allocation to distribution reserve | | | 11 600.4 | -11 600.4 | |
| Distribution of dividends to shareholders | | | | -1.5 | -1.5 |
| Profit distribution to Confederation and cantons | | | | -6 000.0 | -6 000.0 |
| Annual result | | | | -132 479.5 | -132 479.5 |
| Equity as at 31 December 2022 (before appropriation of profit) | 25.0 | 95 679.1 | 102 543.5 | -132 479.5 | 65 768.0 |
| Appropriation of profit | | | | | |
| Endowment of provisions for currency reserves pursuant to NBA ¹ | | 9 567.9 | | -9 567.9 | |
| Release from distribution reserve ² | | | -142 047.4 | 142 047.4 | |
| Distribution of dividends to shareholders | | | | - | - |
| Profit distribution to Confederation and cantons | | | | - | - |
| Equity after appropriation of profit | 25.0 | 105 247.0 | -39 504.0 | - | 65 768.0 |

1 The allocation to the provisions for currency reserves is made as part of the profit appropriation (i.e. after the General Meeting of Shareholders on 28 April 2023). After the allocation for 2022, which will amount to CHF 9.6 billion, the provisions for currency reserves will increase to CHF 105.2 billion.

2 The distribution reserve only changes once a year, as part of the profit appropriation (i.e. after the General Meeting of Shareholders on 28 April 2023). After the profit appropriation for 2022, it will amount to CHF -39.5 billion.

4.1 ACCOUNTING AND VALUATION PRINCIPLES**GENERAL****Basic principles**

The Swiss National Bank is a special-statute joint-stock company with head offices in Berne and Zurich. The present financial statements have been drawn up in accordance with the provisions of the National Bank Act (NBA) and the Swiss Code of Obligations (CO) as well as the accounting principles detailed in these notes. The statements present a true and fair view of the financial position and the results of operations of the SNB. Unless otherwise stated, the accounting principles are based on the Swiss GAAP FER standards (Accounting and Reporting Recommendations). Departures from Swiss GAAP FER occur only if an accounting principle runs counter to the provisions of the NBA or if the special nature of the SNB needs to be taken into account. In a departure from Swiss GAAP FER, no cash flow statement is prepared. The structure and designation of the items in the annual financial statements take into consideration the special character of the business conducted at a central bank.

At its meeting of 3 March 2023, the Bank Council approved the 2022 financial report for submission to the Federal Council and the General Meeting of Shareholders.

Changes from previous year

Compared with the previous year, no changes were made to the accounting and valuation principles.

Cash flow statement

In accordance with art. 29 NBA, the SNB is exempt from the requirement to prepare a cash flow statement.

Financial liabilities

Swiss GAAP FER 31 requires that the conditions for financial liabilities be disclosed. Given the special status of a central bank, such a disclosure is of limited informative value. The majority of the liabilities presented directly reflect the implementation of the SNB's monetary policy, i.e. the provision of liquidity to or the absorption of liquidity from the money market. By virtue of its exclusive right to issue banknotes, the SNB runs no liquidity or refinancing risks from liabilities in Swiss francs. Because the SNB can create the necessary liquidity and determine the level and structure of its financing itself, it is always in a position to meet its obligations. In light of this, the SNB will not be publishing a detailed report of the conditions which apply to its financial liabilities.

Consolidated financial statements

The SNB does not hold any material participating interests which are subject to consolidation. It therefore does not draw up consolidated financial statements.

Recording of transactions

The SNB's business transactions are recorded and valued on the day the transaction is concluded (trade date accounting). However, they are not posted until the value date. Transactions already concluded, with a value date after the balance sheet date, are stated under off-balance-sheet business.

Expenses are recognised in the financial year in which they are incurred, and income in the financial year in which it is earned.

Accrual accounting

Under art. 8 NBA, the SNB is exempt from taxation on profits. Tax exemption applies both to direct federal taxes and to cantonal and municipal taxes.

Profit tax

The rights of the SNB's shareholders are restricted by law. The shareholders cannot exert any influence on financial or operational decisions. Banking services provided to members of the executive management are carried out at normal banking industry conditions. No banking services are provided to members of the Bank Council. In the 2022 financial year, there were no disclosable transactions with companies in which the SNB has a significant participation.

Transactions with related parties

Foreign currency positions are translated at year-end rates. Income and expenses in foreign currency are translated at the exchange rates applicable at the time when such income and expenses were posted to the accounts. All valuation changes are reported in the income statement.

Foreign currency translation

BALANCE SHEET AND INCOME STATEMENT

Gold holdings consist of gold ingots and gold coins. The gold is stored in Switzerland (roughly 70%) and abroad (roughly 30%). These holdings are stated at market value. Valuation gains and losses are reported under net result from gold.

Gold holdings

Negotiable securities (money market instruments, bonds and equities) as well as credit balances (sight deposits and call money, time deposits) and claims from foreign currency repo transactions are recorded under foreign currency investments. Securities, which make up the bulk of the foreign currency investments, are stated at market value inclusive of accrued interest, while credit balances and claims from repo transactions are stated at nominal value inclusive of accrued interest.

Foreign currency investments

Gains and losses from revaluation at market value, interest income and expenses, dividends, and exchange rate gains and losses are stated under net result from foreign currency positions. Negative interest is recorded as a reduction of interest income.

The management of foreign currency investments also includes securities lending transactions. Securities lent by the SNB from its own portfolio are secured by appropriate collateral. The SNB receives interest on the securities loaned. Loaned securities remain in the foreign currency investments item and are disclosed in the notes to the annual financial statements. Interest income from securities lending is stated under net result from foreign currency positions.

Reserve position in IMF

The reserve position in the International Monetary Fund (IMF) consists of the Swiss quota less the IMF's sight deposit account balance at the SNB as well as of claims based on the New Arrangements to Borrow (NAB).

The quota is Switzerland's portion of the IMF capital which is financed by the SNB. It is denominated in Special Drawing Rights (SDRs), the IMF's unit of account. The part of the quota that is not drawn on remains in a sight deposit account at the SNB. The IMF can access these Swiss franc assets at any time.

With the NAB, the IMF can – in the event of a crisis or if its own resources are in short supply – draw on credit lines from participants in these arrangements. Credit lines not drawn by the IMF are recorded as irrevocable lending commitments under the SNB's off-balance-sheet business.

The reserve position is stated at nominal value inclusive of accrued interest. The income from interest on the reserve position as well as the exchange rate gains and losses from a revaluation of the reserve position are stated under net result from foreign currency positions.

International payment instruments

International payment instruments comprise sight deposits in SDRs with the IMF. These deposits result from the allocation of SDRs and the purchase and sale of SDRs under the voluntary trading arrangement with the IMF. Sight deposits in SDRs are stated at nominal value inclusive of accrued interest. They attract interest at market conditions. Interest income and exchange rate gains and losses are stated under net result from foreign currency positions.

The liability entered into with the allocation is stated on the liabilities side of the balance sheet under counterpart of SDRs allocated by the IMF.

On the basis of the Monetary Assistance Act, Switzerland can participate in multilateral assistance operations aimed at preventing or remedying serious disruptions to the international monetary system. In such an event, the Confederation can instruct the SNB to grant a loan. Switzerland can also contribute to special funds or other IMF facilities, particularly those in favour of low-income countries, or grant bilateral monetary assistance loans to individual countries. In both of these cases, the Confederation can request that the SNB grant a loan. In return, the Confederation guarantees the SNB the interest and principal repayment on the loan in all of the above cases.

Monetary assistance loans

Currently outstanding are claims from the loans to the Poverty Reduction and Growth Trust (PRGT). The PRGT is administered by the IMF and is used to finance long-term loans at subsidised interest rates to low-income countries. These claims are stated at nominal value inclusive of accrued interest. Interest income and exchange rate gains and losses are stated under net result from foreign currency positions.

This item records claims from US dollar repo transactions arising from the coordinated central bank action to further enhance the provision of US dollar liquidity via the standing US dollar swap arrangements. The SNB uses repo auctions to provide US dollar liquidity. It engages in foreign exchange swaps with the US Federal Reserve for this purpose.

Claims from US dollar repo transactions

Claims from US dollar repo transactions are fully backed by collateral eligible for SNB repos. They are stated at nominal value inclusive of accrued interest. Net interest income is stated under net result from foreign currency positions.

The amount in Swiss francs for the account of the US Federal Reserve is stated on the liabilities side under other term liabilities.

Claims from repo transactions are fully backed by collateral eligible for SNB repos. They are stated at nominal value inclusive of accrued interest. Interest income is stated under net result from Swiss franc positions. Negative interest is recorded as a reduction of interest income.

Claims from Swiss franc repo transactions

Swiss franc securities are made up exclusively of negotiable bonds. They are stated at market value inclusive of accrued interest. Price gains and losses and interest income are stated under net result from Swiss franc positions.

Swiss franc securities

Secured loans Claims arising from the SNB COVID-19 refinancing facility are stated under secured loans. The facility allows banks to obtain liquidity from the SNB by assigning as collateral loans that have been granted under surety and loan guarantee programmes provided by the federal government or the cantons. The interest rate corresponds to the SNB policy rate. The claims are stated at nominal value. Net interest income is stated under net result from Swiss franc positions. Negative interest is recorded as a reduction of interest income.

Tangible assets Tangible assets comprise land and buildings, fixed assets under construction, software, and sundry tangible assets. For individual purchases, the minimum value for recognition as an asset is CHF 20,000. Other investments resulting in an increase in value (projects) are recognised as an asset from an amount of CHF 100,000. Tangible assets are stated at acquisition cost less required depreciation.

PERIOD OF DEPRECIATION

| | |
|---|-----------------|
| Land and buildings | |
| Land | No depreciation |
| Buildings (building structure) | 50 years |
| Conversions (technical equipment and interior finishing work) | 10 years |
| Fixed assets under construction ¹ | No depreciation |
| Software | 3 years |
| Sundry tangible assets | 3–12 years |

¹ Finished fixed assets are reclassified under the corresponding tangible assets category once they are in operational use.

The recoverable value is checked periodically. If this results in a decrease in value, an impairment loss is recorded. Scheduled and unscheduled depreciations are reported in the income statement under depreciation on tangible assets.

Profits and losses from the sale of tangible assets are stated under net result, other.

Participations In principle, participations are valued at acquisition cost less required value adjustments. However, the participation in Orell Füssli Ltd is valued on the basis of the pro rata book value of equity. The result from participations is stated under net result, other.

The SNB uses forward foreign exchange transactions (including foreign exchange swaps), foreign exchange options, credit derivatives, futures and interest rate swaps to manage its foreign currency investments. These are used to manage positioning with regard to shares, interest rates, credit risk and currencies (cf. also accountability report, chapter 5.4). Whenever possible, derivative financial instruments are stated at market value. If no market value is available, fair value is determined in accordance with generally recognised actuarial methods. Positive or negative replacement values are stated under other assets or other liabilities respectively. Valuation changes are recorded in the income statement and stated under net result from foreign currency positions.

Derivative financial instruments

The SNB does not state accrued expenses and deferred income as separate items in its balance sheet. For materiality reasons, they are reported under other assets or other liabilities, and are disclosed in the notes to the accounts.

Accrued expenses and deferred income

The banknotes in circulation item shows the nominal value of all the banknotes issued from any valid series as well as from series that have been recalled but can be exchanged for an unlimited period of time.

Banknotes in circulation

Sight deposit account balances of domestic banks in Swiss francs form the basis on which the SNB steers monetary policy. They also facilitate the settlement of cashless payments in Switzerland. These balances are stated at nominal value. The SNB can apply positive or negative interest on sight deposits, using a system of tiered remuneration. If the SNB policy rate is zero or positive, sight deposits up to a certain threshold are remunerated at the SNB policy rate. Sight deposits above this threshold are remunerated at the SNB policy rate minus a discount. Until the SNB policy rate was raised into positive territory on 23 September 2022, the negative SNB policy rate was charged on sight deposits exceeding a given exemption threshold set by the SNB. Interest expenses and interest income on sight deposit accounts are stated under net result from Swiss franc positions.

Sight deposits of domestic banks

The SNB holds sight deposit accounts in Swiss francs for the Confederation. The account balances are remunerated at the SNB policy rate up to a certain threshold. Balances above this threshold are remunerated at the SNB policy rate minus a discount. Until the SNB policy rate was raised into positive territory on 23 September 2022, the sight deposit accounts were non-interest-bearing. In addition, the Confederation may place time deposits with the SNB at market rates. The liabilities towards the Confederation are stated at nominal value inclusive of accrued interest.

Liabilities towards Confederation

| | |
|---|---|
| Sight deposits of foreign banks and institutions | The SNB holds sight deposits for foreign banks and institutions which facilitate payment transactions in Swiss francs. The accounting and valuation principles as well as the interest rate conditions are the same as those for sight deposits of domestic banks. |
| Other sight liabilities | <p>The main components in other sight liabilities in Swiss francs are sight deposits of non-banks, the SNB pension fund's account and the accounts of active and retired SNB staff members.</p> <p>The accounting and valuation principles as well as the interest rate conditions for non-banks are the same as those for sight deposits of domestic banks.</p> <p>The SNB pension fund account is stated at nominal value; the remuneration is in line with that of sight deposits of domestic banks. Interest expenses and interest income are stated under net result from Swiss franc positions.</p> <p>Accounts of active and retired staff members are stated at nominal value inclusive of accrued interest. These accounts bear interest up to a certain amount. Interest expenses are stated under net result from Swiss franc positions.</p> |
| Liabilities from Swiss franc repo transactions | Liabilities arising from repo transactions are stated at nominal value inclusive of accrued interest. Interest expenses are stated under net result from Swiss franc positions. |
| SNB debt certificates | <p>To absorb liquidity from the market, the SNB can issue its own, interest-bearing debt certificates (SNB Bills) in Swiss francs. Money market management requirements dictate the frequency, term and amount of these issues. SNB Bills are valued at issue price plus cumulative discount accretion (i.e. the discount is amortised over the term of the issue). Interest expenses are stated under net result from Swiss franc positions.</p> <p>The SNB may participate in auctions of SNB Bills. Its own portfolio of acquired securities is offset against the total of issued securities in the SNB debt certificates item. When conducting liquidity-absorbing repo transactions, the SNB may use SNB Bills from its own portfolio as collateral.</p> |
| Other term liabilities | This balance sheet item contains term liabilities in Swiss francs arising from swap transactions with the US Federal Reserve. These are stated at nominal value. |

Foreign currency liabilities comprise different sight liabilities and short-term term liabilities as well as short-term repo transactions related to the management of foreign currency investments. The latter are carried out at market conditions. These repo transactions (temporary transfer of securities against sight deposits, with reverse settlement at maturity) result in a short-term increase in the balance sheet total. On the one hand, the securities remain on the SNB's books, while on the other, the cash received as well as the obligation to repay it at maturity are stated in the balance sheet. Foreign currency liabilities are stated at nominal value inclusive of accrued interest. Interest expenses and exchange rate gains and losses are stated under net result from foreign currency positions. Negative interest is recorded as a reduction of interest expenses.

Foreign currency liabilities

This item comprises the liability vis-à-vis the IMF for the SDRs allocated to Switzerland. It attracts the same rate of interest as the SDRs on the assets side of the balance sheet. Interest expenses and exchange rate gains and losses are stated under net result from foreign currency positions.

Counterpart of SDRs allocated by IMF

Art. 30 para. 1 NBA stipulates that the SNB set up provisions permitting it to maintain the currency reserves at a level necessary for monetary policy. In so doing, it must take into account economic developments in Switzerland. These special-law provisions are equity-like in nature and are incorporated in the 'Changes in equity' table (cf. p. 177). The allocation is made as part of the profit appropriation. The Bank Council approves the level of these provisions annually.

Provisions for currency reserves

With the exception of the dividend, which – pursuant to the NBA – may not exceed 6% of the share capital, the Confederation and the cantons are entitled to the SNB's remaining profit after adequate provisions for currency reserves have been set aside. To achieve a smoothing of payments in the medium term, the annual profit distributions are fixed in advance for a certain period in an agreement concluded between the Federal Department of Finance and the SNB. The distribution reserve contains profits that have not yet been distributed. It is offset against losses and can therefore also be negative.

Distribution reserve

The SNB's pension plans are incorporated into one pension fund scheme under the defined contribution system. In accordance with Swiss GAAP FER 16, any share of actuarial surplus or deficit (overfunding or underfunding) is shown on the assets side of the balance sheet or reported as a liability.

Pension fund

There are no events after the balance sheet date which need to be mentioned or considered in the 2022 annual financial statements.

Events after balance sheet date

Valuation rates

VALUATION RATES

| | 31.12.2022 In CHF | 31.12.2021 In CHF | Change In percent |
|-------------------------------|----------------------|----------------------|----------------------|
| 1 euro (EUR) | 0.9860 | 1.0366 | -4.9 |
| 1 US dollar (USD) | 0.9223 | 0.9137 | +0.9 |
| 100 yen (JPY) | 0.6998 | 0.7939 | -11.9 |
| 1 pound sterling (GBP) | 1.1140 | 1.2351 | -9.8 |
| 1 Canadian dollar (CAD) | 0.6810 | 0.7202 | -5.4 |
| 1 Australian dollar (AUD) | 0.6262 | 0.6635 | -5.6 |
| 100 Korean won (KRW) | 0.0732 | 0.0768 | -4.7 |
| 100 Chinese yuan (CNY) | 13.3766 | 14.3751 | -6.9 |
| 100 Danish krone (DKK) | 13.2591 | 13.9394 | -4.9 |
| 1 Singapore dollar (SGD) | 0.6884 | 0.6774 | +1.6 |
| 100 Swedish krona (SEK) | 8.8701 | 10.0734 | -11.9 |
| 1 Special Drawing Right (SDR) | 1.2381 | 1.2841 | -3.6 |
| 1 kilogram of gold | 53 941.10 | 53 548.29 | +0.7 |

4.2 NOTES TO THE BALANCE SHEET AND INCOME STATEMENT

Item 01

GOLD HOLDINGS**Breakdown by type**

| | 31.12.2022 | | 31.12.2021 | |
|--------------|----------------|-----------------|----------------|-----------------|
| | In tonnes | In CHF millions | In tonnes | In CHF millions |
| Gold ingots | 1 001.0 | 53 993.7 | 1 001.0 | 53 600.5 |
| Gold coins | 39.0 | 2 105.6 | 39.0 | 2 090.2 |
| Total | 1 040.0 | 56 099.3 | 1 040.0 | 55 690.7 |

FOREIGN CURRENCY INVESTMENTS

Item 02

Breakdown by investment type in CHF millions

| | 31.12.2022 | 31.12.2021 | Change |
|-------------------------------|------------------|------------------|-------------------|
| Sight deposits and call money | 88 728.4 | 129 098.2 | -40 369.8 |
| Claims from repo transactions | 16 738.2 | 21 705.5 | -4 967.3 |
| Money market instruments | 2 636.8 | 9 904.3 | -7 267.5 |
| Bonds ¹ | 505 118.8 | 582 198.9 | -77 080.1 |
| Equities | 187 343.8 | 223 295.3 | -35 951.5 |
| Total | 800 566.2 | 966 202.2 | -165 636.0 |

1 Of which CHF 545.3 million (2021: CHF 612.4 million) lent under securities lending operations.

Breakdown by issuer and borrower category in CHF millions

| | 31.12.2022 | 31.12.2021 | Change |
|------------------------------------|------------------|------------------|-------------------|
| Governments | 465 542.9 | 548 791.5 | -83 248.6 |
| Monetary institutions ¹ | 94 109.2 | 134 537.9 | -40 428.7 |
| Corporations | 240 914.1 | 282 872.8 | -41 958.7 |
| Total | 800 566.2 | 966 202.2 | -165 636.0 |

1 BIS, central banks and multilateral development banks.

Breakdown by currency¹ in CHF millions

| | 31.12.2022 | 31.12.2021 | Change |
|--------------|------------------|------------------|-------------------|
| EUR | 303 448.5 | 368 945.8 | -65 497.3 |
| USD | 298 228.3 | 362 607.2 | -64 378.9 |
| JPY | 62 396.2 | 77 316.1 | -14 919.9 |
| GBP | 55 625.9 | 65 223.3 | -9 597.4 |
| CAD | 19 633.9 | 23 883.0 | -4 249.1 |
| AUD | 14 463.8 | 15 516.4 | -1 052.6 |
| KRW | 14 460.1 | 15 549.6 | -1 089.5 |
| CNY | 8 978.6 | 11 130.1 | -2 151.5 |
| DKK | 5 699.2 | 6 601.4 | -902.2 |
| SGD | 3 475.4 | 3 507.2 | -31.8 |
| SEK | 3 004.4 | 4 109.6 | -1 105.2 |
| Other | 11 151.8 | 11 812.4 | -660.6 |
| Total | 800 566.2 | 966 202.2 | -165 636.0 |

1 Excluding foreign exchange derivatives.

RESERVE POSITION IN THE IMF

In CHF millions

| | 31.12.2022 | 31.12.2021 | Change |
|---|----------------|----------------|---------------|
| Swiss quota in the IMF ^{1,2} | 7 153.7 | 7 410.9 | -257.2 |
| Less: IMF's Swiss franc sight deposit at the SNB ³ | -5 083.1 | -5 577.6 | +494.5 |
| Claim from participation in the IMF | 2 070.6 | 1 833.3 | +237.3 |
| Loan based on New Arrangements to Borrow (NAB) ² | 66.0 | 167.5 | -101.5 |
| Total reserve position in the IMF | 2 136.6 | 2 000.8 | +135.8 |

1 SDR 5,771.1 million; change due to exchange rates.

2 Including accrued interest.

3 Corresponds to the untransferred portion of the quota.

Details: New Arrangements to Borrow (NAB)¹ in CHF millions

| | 31.12.2022 | 31.12.2021 | Change |
|---------------------------------|------------|------------|--------|
| Lending commitment ² | 13 719.5 | 14 229.6 | -510.1 |
| Amount drawn | 66.0 | 167.5 | -101.5 |
| Amount not drawn | 13 653.5 | 14 062.1 | -408.6 |

1 Maximum lending commitment totalling SDR 11,081.3 million, arising from liabilities from NAB, in favour of the IMF for special cases; revolving and without a federal guarantee (cf. accountability report, chapter 7.2.1).

2 Change due to exchange rates.

INTERNATIONAL PAYMENT INSTRUMENTS

Item 04

In CHF millions

| | 31.12.2022 | 31.12.2021 | Change |
|-----------------------------------|-----------------|-----------------|---------------|
| SDRs from allocation ¹ | 10 919.1 | 11 325.1 | -406.0 |
| SDRs purchased/sold (net) | 461.6 | 587.4 | -125.8 |
| Total | 11 380.7 | 11 912.5 | -531.8 |

1 Corresponds to the IMF's allocation of SDR 8,819 million; change due to exchange rates. The liability entered into with the allocation is stated in the balance sheet under counterpart of SDRs allocated by the IMF (cf. accountability report, chapter 7.2.1).

Details: Exchange arrangement for international payment instruments (voluntary trading arrangement)¹

In CHF millions

| | 31.12.2022 | 31.12.2021 | Change |
|---------------------------------------|------------|------------|--------|
| Purchase/sale commitment ² | 5 459.9 | 5 662.9 | -203.0 |
| SDRs purchased | -461.6 | -587.4 | +125.8 |
| SDRs sold | - | - | - |
| Total commitment ³ | 4 998.3 | 5 075.5 | -77.2 |

1 The SNB has committed to purchasing or selling SDRs against foreign currencies (USD, EUR) up to an agreed maximum of SDR 4,410 million (cf. accountability report, chapter 7.2.1).

2 Change due to exchange rates.

3 Maximum purchase commitment.

MONETARY ASSISTANCE LOANS

In CHF millions

| | 31.12.2022 | 31.12.2021 | Change |
|--|--------------|--------------|--------------|
| Claims from PRGT loans ^{1, 2} | 877.5 | 816.6 | +60.9 |
| Claims from bilateral loans ² | – | 91.4 | –91.4 |
| Total | 877.5 | 908.0 | –30.5 |

1 Poverty Reduction and Growth Trust of the IMF.

2 Including accrued interest.

Details: Drawn lending commitments in CHF millions

| | 31.12.2022 | 31.12.2021 | Change |
|--|------------|------------|--------|
| Lending commitment to PRGT ^{1, 2} | 1 857.1 | 1 926.2 | –69.1 |
| Amount drawn | 888.6 | 820.8 | +67.8 |
| Amount repaid | 15.2 | 4.3 | +10.9 |
| Claims ³ | 877.5 | 816.6 | +60.9 |
| Amount not yet drawn | 968.5 | 1 105.4 | –136.9 |

1 Poverty Reduction and Growth Trust of the IMF; limited-term lending commitment to the PRGT in the amount of SDR 1,500 million; not revolving and with a federally guaranteed repayment of principal and payment of interest (cf. accountability report, chapter 7.2.1).

2 Change due to exchange rates.

3 Including accrued interest.

SWISS FRANC SECURITIES

Item 06

Breakdown by borrower category in CHF millions

| | 31.12.2022 | 31.12.2021 | Change |
|--------------|----------------|----------------|---------------|
| Governments | 1 260.6 | 1 542.5 | -281.9 |
| Corporations | 2 304.2 | 2 489.2 | -185.0 |
| Total | 3 564.8 | 4 031.7 | -466.9 |

Breakdown of *governments* borrower category in CHF millions

| | 31.12.2022 | 31.12.2021 | Change |
|-----------------------------|----------------|----------------|---------------|
| Swiss Confederation | 738.8 | 906.3 | -167.5 |
| Cantons and municipalities | 373.6 | 448.7 | -75.1 |
| Foreign states ¹ | 148.2 | 187.6 | -39.4 |
| Total | 1 260.6 | 1 542.5 | -281.9 |

1 Including public authorities.

Breakdown of *corporations* borrower category in CHF millions

| | 31.12.2022 | 31.12.2021 | Change |
|--|----------------|----------------|---------------|
| Domestic mortgage bond institutions | 1 789.1 | 1 931.1 | -142.0 |
| Other domestic corporations ¹ | 44.2 | 46.0 | -1.8 |
| Foreign corporations ² | 470.9 | 512.1 | -41.2 |
| Total | 2 304.2 | 2 489.2 | -185.0 |

1 Primarily international organisations with their head office in Switzerland.

2 Banks, international organisations and other corporations.

TANGIBLE ASSETS

In CHF millions

| | Land and buildings ¹ | Fixed assets under construction | Software | Sundry tangible assets ² | Total |
|-------------------------------------|---------------------------------|---------------------------------|----------|-------------------------------------|-------|
| Historical cost | | | | | |
| 1 January 2022 | 707.0 | 13.4 | 90.0 | 81.8 | 892.3 |
| Additions | 1.0 | 29.4 | 5.7 | 6.1 | 42.2 |
| Disposals | – | – | –3.3 | –7.8 | –11.1 |
| Reclassified | 1.8 | –4.3 | 2.3 | 0.2 | |
| 31 December 2022 | 709.9 | 38.5 | 94.6 | 80.3 | 923.4 |
| Cumulative value adjustments | | | | | |
| 1 January 2022 | 317.8 | | 80.2 | 57.1 | 455.1 |
| Scheduled depreciation | 20.3 | | 7.5 | 11.1 | 38.9 |
| Disposals | – | | –3.3 | –7.8 | –11.1 |
| Reclassified | – | | – | – | |
| 31 December 2022 | 338.1 | | 84.4 | 60.4 | 482.9 |
| Net book values | | | | | |
| 1 January 2022 | 389.2 | 13.4 | 9.8 | 24.7 | 437.2 |
| 31 December 2022 | 371.8 | 38.5 | 10.3 | 19.9 | 440.5 |

1 Insured value: CHF 622.4 million.

2 Insured value: CHF 71.7 million.

Tangible assets from previous year in CHF millions

| | Land and buildings ¹ | Fixed assets under construction | Software | Sundry tangible assets ² | Total |
|-------------------------------------|---------------------------------|---------------------------------|----------|-------------------------------------|-------|
| Historical cost | | | | | |
| 1 January 2021 | 697.6 | 6.5 | 85.2 | 84.7 | 874.0 |
| Additions | 1.3 | 20.4 | 7.4 | 7.8 | 36.8 |
| Disposals | -0.9 | - | -3.7 | -14.0 | -18.6 |
| Reclassified | 9.0 | -13.4 | 1.1 | 3.4 | - |
| 31 December 2021 | 707.0 | 13.4 | 90.0 | 81.8 | 892.3 |
| Cumulative value adjustments | | | | | |
| 1 January 2021 | 299.7 | - | 76.6 | 59.7 | 436.0 |
| Scheduled depreciation | 19.0 | - | 7.3 | 11.5 | 37.7 |
| Disposals | -0.8 | - | -3.7 | -14.0 | -18.6 |
| Reclassified | - | - | - | - | - |
| 31 December 2021 | 317.8 | - | 80.2 | 57.1 | 455.1 |
| Net book values | | | | | |
| 1 January 2021 | 397.8 | 6.5 | 8.6 | 25.1 | 438.0 |
| 31 December 2021 | 389.2 | 13.4 | 9.8 | 24.7 | 437.2 |

1 Insured value: CHF 622.4 million.

2 Insured value: CHF 71.7 million.

Item 08

PARTICIPATIONS

In CHF millions

| | BIS ¹ | Orell Füssli ² | Landqart ³ | Other | Total |
|--------------------------------------|------------------|------------------------------|-----------------------|-------|-------|
| Equity interest | 3% | 33% | 97% | | |
| Book value as at 1 January 2021 | 90.2 | 43.8 | 0.0 | 0.0 | 134.0 |
| Investments | – | – | – | 0.1 | 0.1 |
| Divestments | – | – | – | – | – |
| Valuation changes | – | 1.5 | – | – | 1.5 |
| Book value as at 31 December 2021 | 90.2 | 45.2 | 0.0 | 0.2 | 135.6 |
| Book value as at 1 January 2022 | 90.2 | 45.2 | 0.0 | 0.2 | 135.6 |
| Investments | – | – | – | – | – |
| Divestments | – | – | – | – | – |
| Valuation changes | – | –3.3 | – | – | –3.3 |
| Book value as at 31 December 2022 | 90.2 | 41.9 | 0.0 | 0.2 | 132.3 |

1 Interest in the BIS, based in Basel, is held for reasons of monetary policy collaboration.

2 Orell Füssli Ltd, based in Zurich, which produces Switzerland's banknotes.

3 Landqart AG, based in Landquart, which manufactures the special paper for Swiss banknotes.

Item 09

OTHER ASSETS

In CHF millions

| | 31.12.2022 | 31.12.2021 | Change |
|--|----------------|--------------|---------------|
| Coins ¹ | 212.4 | 250.7 | –38.3 |
| Foreign banknotes | 1.2 | 0.9 | +0.3 |
| Other accounts receivable | 1 196.6 | 205.9 | +990.7 |
| Prepayments and accrued income | 6.2 | 107.0 | –100.8 |
| Positive replacement values ² | 332.0 | 327.5 | +4.5 |
| Total | 1 748.5 | 891.9 | +856.6 |

1 Coins acquired from Swissmint destined for circulation.

2 Unrealised gains on financial instruments and on outstanding spot transactions (cf. item 27, p.208).

BANKNOTES IN CIRCULATION

Item 10

Breakdown by series¹ in CHF millions

| | 31.12.2022 | 31.12.2021 | Change |
|--------------|-----------------|-----------------|-----------------|
| 9th series | 68 041.2 | 68 334.2 | -293.0 |
| 8th series | 12 638.0 | 21 322.1 | -8 684.1 |
| 6th series | 1 017.6 | 1 029.0 | -11.4 |
| Total | 81 696.8 | 90 685.3 | -8 988.5 |

1 For information on the recall and exchange of banknotes, cf. accountability report, chapter 3.3.
The seventh banknote series, which was created as a reserve series, was never put into circulation.

LIABILITIES TOWARDS THE CONFEDERATION

Item 11

In CHF millions

| | 31.12.2022 | 31.12.2021 | Change |
|-------------------|-----------------|-----------------|------------------|
| Sight liabilities | 3 960.2 | 11 617.1 | -7 656.9 |
| Term liabilities | 12 707.7 | 1 000.0 | + 11 707.7 |
| Total | 16 667.9 | 12 617.1 | + 4 050.8 |

OTHER SIGHT LIABILITIES

Item 12

In CHF millions

| | 31.12.2022 | 31.12.2021 | Change |
|--|-----------------|-----------------|-----------------|
| Sight deposits of non-banks ¹ | 27 370.9 | 34 889.5 | -7 518.6 |
| Deposit accounts ² | 433.0 | 408.4 | + 24.6 |
| Total | 27 803.9 | 35 297.9 | -7 494.0 |

1 Clearing offices, insurance corporations, etc.

2 Primarily accounts of employees and retirees. Also contains current account liabilities towards the SNB pension fund of CHF 17.3 million (2021: CHF 18.4 million).

Item 13

SNB DEBT CERTIFICATES

In CHF millions

| | 31.12.2022 | 31.12.2021 | Change |
|----------------------------------|-----------------|------------|-------------------|
| Issues | 252 872.2 | – | + 252 872.2 |
| Less: SNB portfolio ¹ | –154 703.4 | – | –154 703.4 |
| Total | 98 168.8 | – | + 98 168.8 |

1 On 31 December 2022, SNB debt certificates (SNB Bills) in the nominal amount of CHF 67.8 billion were used as collateral for liquidity-absorbing repo transactions (2021: none).

Item 14

FOREIGN CURRENCY LIABILITIES

In CHF millions

| | 31.12.2022 | 31.12.2021 | Change |
|---|-----------------|-----------------|-----------------|
| Sight liabilities ¹ | 10.0 | 15.6 | –5.6 |
| Liabilities from repo transactions ² | 16 729.6 | 20 873.0 | –4 143.4 |
| Total | 16 739.7 | 20 888.5 | –4 148.8 |

1 Contains current account liabilities towards the SNB pension fund of CHF 3.9 million (2021: CHF 0.7 million).

2 Relating to the management of foreign currency investments.

Item 15

OTHER LIABILITIES

In CHF millions

| | 31.12.2022 | 31.12.2021 | Change |
|--|----------------|--------------|------------------|
| Other accounts payable | 23.6 | 12.0 | + 11.6 |
| Accrued liabilities and deferred income | 345.6 | 17.0 | + 328.6 |
| Negative replacement values ¹ | 1 591.8 | 263.4 | + 1 328.4 |
| Total | 1 960.9 | 292.4 | + 1 668.5 |

1 Unrealised losses on financial instruments and on outstanding spot transactions (cf. item 27, p.208).

SHARE CAPITAL

Item 16

Shares¹

| | 2022 | 2021 | 2020 |
|---|-------------------|-------------|-------------|
| Share capital in CHF | 25 000 000 | 25 000 000 | 25 000 000 |
| Nominal value in CHF | 250 | 250 | 250 |
| Number of shares | 100 000 | 100 000 | 100 000 |
| Ticker symbol/ISIN ² | SNBN/CH0001319265 | | |
| Closing price on 31 December in CHF | 4 790 | 5 240 | 4 680 |
| Market capitalisation in CHF | 479 000 000 | 524 000 000 | 468 000 000 |
| Annual high in CHF | 7 900 | 5 500 | 6 260 |
| Annual low in CHF | 4 060 | 4 590 | 3 280 |
| Average daily trading volume in number of shares | 62 | 41 | 97 |

1 Swiss GAAP FER 31 requires the presentation of earnings per share. This has no informative value in view of the special statutory provisions for the SNB. Shareholders' rights are determined by the NBA and their dividends, in particular, may not exceed 6% of share capital (with a nominal value of CHF 250 per share, a maximum of CHF 15); the Confederation is entitled to one-third and the cantons to two-thirds of the remaining distributable profit. Therefore, no presentation of earnings per share is made.

2 Listed in the Swiss Reporting Standard on SIX Swiss Exchange.

Breakdown of share ownership as at 31 December 2022

| | Cantons | Cantonal banks | Other public law corporations/institutions ¹ | Total public sector shareholders | Total private sector shareholders | Total |
|---|---------------|----------------|---|----------------------------------|-----------------------------------|----------------|
| Registered shareholders | 26 | 24 | 23 | 73 | 2 460 | 2 533 |
| Voting shares | 38 962 | 11 966 | 375 | 51 303 | 14 686 | 65 989 |
| In percent | 59.04% | 18.13% | 0.57% | 77.74% | 22.26% | 100.00% |
| Non-voting shares | | | | | 34 011 | 34 011 |
| Of which shares pending registration of transfer ² | | | | | 22 045 | 22 045 |
| Of which registered shares held in trust ³ | | | | | 2 734 | 2 734 |
| Of which shares with statutory limitation of voting rights ⁴ | | | | | 9 232 | 9 232 |
| Total shares | 38 962 | 11 966 | 375 | 51 303 | 48 697⁵ | 100 000 |

1 Other public law corporations include 20 municipalities.

2 Shares pending registration of transfer are registered shares not entered in the share register.

3 Registered shares held in trust are shares held on behalf of the beneficiary by a bank or asset manager, where the bank or asset manager is listed in the share register without voting rights.

4 Voting rights are limited to a maximum of 100 shares. This limitation shall not apply to Swiss public law corporations and institutions or to cantonal banks pursuant to art. 3a of the Federal Act of 8 November 1934 on Banks and Savings Banks (in accordance with art. 26 para. 2 NBA). In 2022, 26 shareholders, each with more than 100 shares, were affected by the statutory limitation of voting rights.

5 Of which 9,577 shares are in foreign ownership (accounting for 2.74% of voting rights).

Principal shareholders: Public sector

| | Number of shares | 31.12.2022 Participation | Number of shares | 31.12.2021 Participation |
|---------------------|------------------|--------------------------|------------------|--------------------------|
| Canton of Berne | 6 630 | 6.63% | 6 630 | 6.63% |
| Canton of Zurich | 5 200 | 5.20% | 5 200 | 5.20% |
| Canton of Vaud | 3 401 | 3.40% | 3 401 | 3.40% |
| Canton of St Gallen | 3 002 | 3.00% | 3 002 | 3.00% |

Principal shareholders: Private sector¹

| | Number of shares | 31.12.2022 Participation | Number of shares | 31.12.2021 Participation |
|--------------------------|------------------|--------------------------|------------------|--------------------------|
| Theo Siegert, Düsseldorf | 5 010 | 5.01% | 5 039 | 5.04% |

1 Non-public sector shareholders are subject to legal restrictions (art. 26 NBA), i.e. voting rights are limited to 100 shares.

NET RESULT FROM FOREIGN CURRENCY POSITIONS

Item 17

Breakdown by origin in CHF millions

| | 2022 | 2021 | Change |
|-----------------------------------|-------------------|-----------------|-------------------|
| Foreign currency investments | -131 377.2 | 25 653.1 | -157 030.3 |
| Reserve position in the IMF | -54.0 | 0.6 | -54.6 |
| International payment instruments | -6.2 | -5.6 | -0.6 |
| Monetary assistance loans | -21.1 | 8.3 | -29.4 |
| Total | -131 458.5 | 25 656.4 | -157 114.9 |

Breakdown by type in CHF millions

| | 2022 | 2021 | Change |
|---|-------------------|-----------------|-------------------|
| Interest income | 7 408.0 | 7 041.4 | +366.6 |
| Price gain/loss on interest-bearing paper and instruments | -71 998.0 | -16 148.6 | -55 849.4 |
| Interest expenses | -135.4 | 41.1 | -176.5 |
| Dividend income | 4 361.7 | 3 789.2 | +572.5 |
| Price gain/loss on equity securities and instruments | -41 310.7 | 37 101.3 | -78 412.0 |
| Exchange rate gain/loss | -29 750.0 | -6 130.7 | -23 619.3 |
| Asset management, safe custody and other fees | -34.0 | -37.3 | +3.3 |
| Total | -131 458.5 | 25 656.4 | -157 114.9 |

Breakdown of overall net result by currency in CHF millions

| | 2022 | 2021 | Change |
|--------------|-------------------|-----------------|-------------------|
| EUR | -54 996.5 | -15 326.7 | -39 669.8 |
| USD | -44 280.8 | 40 731.4 | -85 012.2 |
| JPY | -10 343.4 | -3 314.2 | -7 029.2 |
| GBP | -10 522.2 | 1 423.2 | -11 945.4 |
| CAD | -2 498.1 | 1 784.1 | -4 282.2 |
| AUD | -1 917.4 | -348.0 | -1 569.4 |
| KRW | -1 950.8 | -980.7 | -970.1 |
| CNY | -607.6 | 1 070.3 | -1 677.9 |
| DKK | -891.0 | 21.3 | -912.3 |
| SGD | -41.4 | -3.4 | -38.0 |
| SEK | -1 223.2 | 188.7 | -1 411.9 |
| SDR | -81.9 | 0.0 | -81.9 |
| Other | -2 104.4 | 410.6 | -2 515.0 |
| Total | -131 458.5 | 25 656.4 | -157 114.9 |

Breakdown of exchange rate gain/loss by currency in CHF millions

| | 2022 | 2021 | Change |
|--------------|------------------|-----------------|------------------|
| EUR | -17 163.0 | -14 425.3 | -2 737.7 |
| USD | 6 208.2 | 12 387.8 | -6 179.6 |
| JPY | -8 619.9 | -5 427.6 | -3 192.3 |
| GBP | -5 595.6 | 1 380.2 | -6 975.8 |
| CAD | -1 066.2 | 1 112.6 | -2 178.8 |
| AUD | -801.3 | -520.0 | -281.3 |
| KRW | -765.8 | -855.9 | +90.1 |
| CNY | -722.4 | 542.2 | -1 264.6 |
| DKK | -323.6 | -251.8 | -71.8 |
| SGD | 54.9 | 52.8 | +2.1 |
| SEK | -532.9 | -318.8 | -214.1 |
| SDR | -121.8 | -4.3 | -117.5 |
| Other | -300.5 | 197.3 | -497.8 |
| Total | -29 750.0 | -6 130.7 | -23 619.3 |

NET RESULT FROM SWISS FRANC POSITIONS

Item 18

Breakdown by origin in CHF millions

| | 2022 | 2021 | Change |
|---|-----------------|----------------|-----------------|
| Negative interest on sight deposit account balances | 609.2 | 1 256.6 | -647.4 |
| Positive interest on sight deposit account balances | -806.9 | - | -806.9 |
| Swiss franc securities | -538.9 | -109.4 | -429.5 |
| Liquidity-providing Swiss franc repo transactions | -38.5 | -0.7 | -37.8 |
| Liquidity-absorbing Swiss franc repo transactions | -84.6 | - | -84.6 |
| Secured loans | -27.9 | -79.9 | +52.0 |
| Liabilities towards the Confederation | -24.8 | - | -24.8 |
| SNB debt certificates | -120.8 | - | -120.8 |
| Other Swiss franc positions | -5.2 | -1.7 | -3.5 |
| Total | -1 038.5 | 1 064.9 | -2 103.4 |

Breakdown by type in CHF millions

| | 2022 | 2021 | Change |
|---|-----------------|----------------|-----------------|
| Negative interest on sight deposit account balances | 609.2 | 1 256.6 | -647.4 |
| Positive interest on sight deposit account balances | -806.9 | - | -806.9 |
| Interest income | -32.5 | -45.1 | +12.6 |
| Price gain/loss on interest-bearing paper and instruments | -560.5 | -135.9 | -424.6 |
| Interest expenses | -235.5 | -1.7 | -233.8 |
| Trading, safe custody and other fees | -12.2 | -9.0 | -3.2 |
| Total | -1 038.5 | 1 064.9 | -2 103.4 |

Item 19

NET RESULT, OTHER

In CHF millions

| | 2022 | 2021 | Change |
|----------------------------|------------|-------------|--------------|
| Commission income | 2.9 | 3.0 | -0.1 |
| Commission expenses | -2.9 | -2.9 | 0.0 |
| Result from participations | 5.0 | 15.2 | -10.2 |
| Income from real estate | 1.7 | 1.6 | +0.1 |
| Other income | 0.1 | 0.1 | 0.0 |
| Total | 6.7 | 17.0 | -10.3 |

Item 20

PERSONNEL EXPENSES¹

Breakdown by type in CHF millions

| | 2022 | 2021 | Change |
|---------------------------------------|--------------|--------------|-------------|
| Wages, salaries and allowances | 144.0 | 140.1 | +3.9 |
| Social security expenses | 34.9 | 33.7 | +1.2 |
| Other personnel expenses ² | 9.4 | 8.9 | +0.5 |
| Total | 188.3 | 182.8 | +5.5 |

1 In terms of full-time equivalents, the number of employees averaged 878 for 2022 (2021: 871).

2 Various social benefits; expenses for staff development, training and recruitment; events, etc.

Remuneration for members of the Bank Council¹ (including employer social security contributions) in CHF thousands

| | Total remuneration (gross) | Employer contributions to pension plans and OASI, VAT ² | 2022 Total | 2021 Total | Change |
|--|----------------------------|--|--------------|--------------|--------------|
| Barbara Janom Steiner, President ^{3, 4, 5} | 186.6 | 64.4 | 251.0 | 244.3 | + 6.7 |
| Romeo Lacher, Vice President ^{3, 4, 5} (since 1.5.2021) | 93.6 | 6.0 | 99.6 | 67.2 | + 32.4 |
| Olivier Steimer, Vice President ^{3, 4, 5} (until 30.4.2021) | – | – | – | 29.2 | – 29.2 |
| Vania Alleva ³ | 47.0 | 3.6 | 50.6 | 57.1 | – 6.5 |
| Christoph Ammann ⁶ | 53.4 | – | 53.4 | 45.0 | + 8.4 |
| Monika Bütler ^{4, 7} (until 30.4.2022) | 20.6 | 1.3 | 21.9 | 59.8 | – 37.9 |
| Rajna Gibson Brandon ⁷ (since 1.5.2022) | 38.4 | 2.5 | 40.9 | – | + 40.9 |
| Heinz Karrer ^{3, 6} (until 30.4.2021) | – | – | – | 26.2 | – 26.2 |
| Christoph Lengwiler ^{3, 6} | 67.2 | 4.3 | 71.5 | 80.9 | – 9.4 |
| Christoph Mäder ^{3, 6} (since 1.5.2021) | 52.6 | 3.4 | 56.0 | 45.1 | + 10.9 |
| Shelby Robert du Pasquier ⁷ | 68.0 | 4.4 | 72.4 | 66.4 | + 6.0 |
| Cornelia Stamm Hurter (since 1.5.2022) | 30.0 | – | 30.0 | – | + 30.0 |
| Ernst Stocker ⁶ (until 30.4.2022) | 17.8 | 1.4 | 19.2 | 63.5 | – 44.3 |
| Cédric Pierre Tille ^{5, 7} | 77.2 | 4.9 | 82.1 | 65.8 | + 16.3 |
| Christian Vitta ⁴ | 46.4 | – | 46.4 | 45.0 | + 1.4 |
| Total | 798.8 | 96.1 | 894.9 | 895.5 | – 0.6 |

1 In accordance with SNB regulations; participation in committee meetings not held on the same day as Bank Council meetings is compensated at a rate of CHF 2,800 per meeting. Special assignments are compensated at a rate of CHF 2,800 per day or CHF 1,400 per half-day.

2 If transferred to the Bank Council member's employer, value added tax may, where applicable, be paid instead of social security contributions.

3 Member of the 'HR processes and strategies' ad hoc committee. A flat-rate fee of CHF 2,000 was paid for associated work in the year under review (2021: CHF 8,000, or CHF 4,000 for work during part of the year).

4 Member of Compensation Committee.

5 Member of Nomination Committee. A flat-rate fee of CHF 14,000 was paid for associated work in the year under review.

6 Member of Audit Committee.

7 Member of Risk Committee.

Remuneration for members of the Regional Economic Councils in CHF thousands

| | 2022 | 2021 | Change |
|------------------------------|-------|-------|--------|
| Chairpersons ^{1, 3} | 57.5 | 54.4 | + 3.1 |
| Members ^{2, 3} | 118.0 | 114.0 | + 4.0 |

1 Remuneration per chairperson (8 persons in total, one of whom opted to forgo compensation until April 2022): CHF 7,500 gross per year.

2 Remuneration per member (20 persons in total from May 2022, previously 19 persons): CHF 6,000 gross per year.

3 Changes are due to vacancies.

The list of Regional Economic Councils can be found on p. 225.

Remuneration for members of executive management¹ (excluding employer social security contributions) in CHF thousands

| | Salaries (gross) | Miscellaneous ² | 2022 Total remuneration | 2021 Total remuneration | Change |
|---|------------------|----------------------------|-------------------------------|-------------------------------|----------------|
| Members of the Governing Board | 3 172.2 | 213.0 | 3 385.2 | 2 873.2 | + 512.0 |
| Thomas J. Jordan, Chairman ³ | 928.4 | 107.7 | 1 036.1 | 945.0 | +91.1 |
| Martin Schlegel, Vice Chairman (since 1.8.2022) | 386.9 | 10.0 | 396.9 | – | +396.9 |
| Andréa M. Maechler | 928.4 | 30.3 | 958.7 | 983.1 | –24.4 |
| Fritz Zurbrügg, Vice Chairman (until 31.7.2022) ⁴ | 928.4 | 65.0 | 993.4 | 945.0 | +48.4 |
| Alternate members of the Governing Board ^{5, 6} | 1 642.3 | 86.2 | 1 728.5 | 1 527.1 | +201.4 |
| Total | 4 814.5 | 299.1 | 5 113.6 | 4 400.3 | + 713.3 |

Remuneration for members of executive management¹ (including employer social security contributions) in CHF thousands

| | Total remuneration | Employer contributions to pension plans and OASI | 2022 Total | 2021 Total | Change |
|---|-----------------------|---|----------------|----------------|---------------|
| Members of the Governing Board | 3 385.2 | 878.9 | 4 264.0 | 3 631.9 | + 632.1 |
| Thomas J. Jordan, Chairman ³ | 1 036.1 | 312.9 | 1 349.0 | 1 252.6 | +96.4 |
| Martin Schlegel, Vice Chairman (since 1.8.2022) | 396.9 | 112.9 | 509.8 | – | +509.8 |
| Andréa M. Maechler | 958.7 | 271.0 | 1 229.7 | 1 255.5 | –25.8 |
| Fritz Zurbrügg, Vice Chairman (until 31.7.2022) ⁴ | 993.4 | 182.1 | 1 175.5 | 1 123.7 | +51.8 |
| Alternate members of the Governing Board ^{5, 6} | 1 728.5 | 470.4 | 2 198.9 | 1 913.7 | +285.2 |
| Total | 5 113.6 | 1 349.3 | 6 462.9 | 5 545.7 | +917.2 |

1 All remuneration is specified in SNB regulations (cf. also 'Corporate governance', p. 152).

2 Representation expenses, General Abonnement travel card, jubilee benefits and further compensation in accordance with regulations.

3 Excluding remuneration in the amount of CHF 74,275 for serving as member of the Board of Directors at the BIS.

4 As of August 2022, consisting of the continuation of salary payments after the term of office has ended. During the six-month cooling-off period, the restrictions on the right to carry out professional activities apply in accordance with the Regulations on the Governing Board. Further information can be found in the business report (chapter 1.5, Remuneration report, p. 152).

5 Three members until 31 July 2022, four members as of 1 August 2022. As regards this increase in the year under review, cf. 'Resources' (p. 160) and 'Changes in bank bodies' (p. 165).

6 Excluding remuneration in the amount of CHF 38,453 for an alternate member of the Governing Board for serving as member of the Board of Directors of Orell Füssli Ltd.

Like all employees, members of executive management are entitled to reduced-rate mortgage loans granted by the SNB pension fund as well as to preferential interest rates on the credit balances of their SNB staff accounts. No additional remuneration as defined by art. 663b^{bis} para. 1 CO was paid.

Of the members of executive management, Dewet Moser, Alternate Member of the Governing Board, held one SNB share as at 31 December 2022 (no change compared to previous year). In addition, as at 31 December 2022, a party related to Thomas J. Jordan, Chairman of the Governing Board, held one SNB share (no change compared to previous year).

In accordance with the 'Code of Conduct for members of the Bank Council', members of the Bank Council may not hold shares in the SNB.

EMPLOYEE BENEFIT OBLIGATIONS^{1, 2}

Item 21

Share of overfunding/underfunding of pension plans³ in CHF millions

| | 31.12.2022 | 31.12.2021 | Change |
|--|------------|------------|--------|
| Overfunding/underfunding in accordance with Swiss GAAP FER 26 ^{3,4} | 7.9 | 156.2 | -148.3 |
| SNB's share of overfunding/underfunding in accordance with Swiss GAAP FER 16 | - | - | - |

1 The pension fund does not have any employer contribution reserves.

2 The pension fund by-laws contain a restructuring clause. The clause will come into effect if it appears likely that the pension fund coverage ratio will drop below 100%. In such a case, a restructuring concept must be drawn up to ensure that the shortfall in coverage can be remedied within a reasonable timeframe with the support of the SNB. The restructuring clause ensures a long-term solution to the problem of a shortfall.

3 The overfunding recorded as at 31 December 2022 is unaudited at the time of reporting.

4 Coverage ratio in accordance with art. 44 of the Ordinance on Occupational Old Age, Survivors' and Invalidity Pension Provision (BVV2) is 120.8% as at 31 December 2022, and is unaudited at the time of reporting (2021: 136.9%, audited figure).

Employee benefit expenses in CHF millions

| | 2022 | 2021 | Change |
|---|------|------|--------|
| Employer contributions | 24.6 | 23.5 | +1.1 |
| Change in share of overfunding/underfunding | - | - | - |
| Employee benefit expenses as part of personnel expenses | 24.6 | 23.5 | +1.1 |

GENERAL OVERHEADS

Item 22

In CHF millions

| | 2022 | 2021 | Change |
|---|--------------|--------------|-------------|
| Premises | 19.8 | 24.9 | -5.1 |
| Maintenance of mobile tangible assets and software | 24.6 | 23.8 | +0.8 |
| Consulting and other third-party support ¹ | 46.1 | 41.7 | +4.4 |
| Administrative expenses | 23.8 | 20.6 | +3.2 |
| Contributions ² | 8.0 | 7.2 | +0.8 |
| Other general overheads | 11.6 | 9.7 | +1.9 |
| Total | 134.0 | 127.8 | +6.2 |

1 Auditing fees for the 2022 financial year totalled CHF 0.3 million (2021: CHF 0.3 million).

The External Auditor did not provide any consulting services (2021: none).

2 Mainly contributions towards the Study Center Gerzensee (SNB foundation).

4.3 NOTES REGARDING OFF-BALANCE-SHEET BUSINESS

Item 23

LIQUIDITY-SHORTAGE FINANCING FACILITY

The liquidity-shortage financing facility is a credit line for eligible counterparties to bridge unexpected short-term liquidity bottlenecks. Liquidity can be drawn by way of special-rate repo transactions. The amounts stated are the maximum amounts that can be drawn.

In CHF millions

| | 31.12.2022 | 31.12.2021 | Change |
|--------------------|------------|------------|--------|
| Lending commitment | 36 187.0 | 36 312.0 | -125.0 |
| Amount drawn | - | - | - |
| Amount not drawn | 36 187.0 | 36 312.0 | -125.0 |

Item 24

COMMITMENTS GRANTED IN THE CONTEXT OF INTERNATIONAL COOPERATION

Commitments to the IMF include irrevocable lending commitments and other commitments which the SNB has granted in the context of international cooperation. The amounts stated are the maximum liabilities arising from these commitments.

Overview: Undrawn lending commitments and exchange arrangement for international payment instruments in CHF millions

| | 31.12.2022 | 31.12.2021 | Change |
|---|-----------------|-----------------|---------------|
| New Arrangements to Borrow (NAB) ¹ | 13 653.5 | 14 062.1 | -408.6 |
| Lending commitment to PRGT ² | 968.5 | 1 105.4 | -136.9 |
| Bilateral lending commitment to IMF ³ | 3 662.0 | 3 662.0 | - |
| Other bilateral lending commitments | - | 91.4 | -91.4 |
| Total undrawn lending commitments | 18 284.0 | 18 920.8 | -636.8 |
| Exchange arrangement for international payment instruments (voluntary trading arrangement) ⁴ | 4 998.3 | 5 075.5 | -77.2 |

1 For further details, cf. item 03, p. 188.

2 For further details, cf. item 05, p. 190.

3 Bilateral lending commitment to the IMF in the maximum amount of CHF 3.7 billion; revolving and with a federally guaranteed repayment of principal and payment of interest (cf. accountability report, chapter 7.2.1).

4 For further details, cf. item 04, p. 189.

OTHER LIABILITIES NOT CARRIED ON BALANCE SHEET

Item 25

In CHF millions

| | 31.12.2022 | 31.12.2021 | Change |
|---|--------------|--------------|-------------|
| Additional funding for the BIS ¹ | 80.0 | 82.9 | -2.9 |
| Liabilities from long-term rental, maintenance and leasing contracts ² | 51.0 | 49.0 | +2.0 |
| Liabilities from procurement of banknotes | 87.0 | 87.0 | - |
| Total | 218.0 | 218.9 | -0.9 |

1 BIS shares are 25% paid up. The additional funding obligation is calculated in SDRs.

2 Including leasehold interest on Metropol building in Zurich.

ASSETS PLEDGED OR ASSIGNED AS COLLATERAL FOR SNB LIABILITIES

Item 26

In CHF millions

| | Book value | 31.12.2022 Liabilities or amount drawn | Book value | 31.12.2021 Liabilities or amount drawn |
|-------------------------------------|-----------------|---|-----------------|---|
| Foreign currency investments in EUR | 10 655.6 | 9 106.3 | 13 340.0 | 12 354.7 |
| Foreign currency investments in USD | 1 250.7 | 837.2 | 2 224.5 | 1 818.0 |
| Foreign currency investments in GBP | 5 983.3 | 5 976.2 | 6 667.6 | 6 700.3 |
| Foreign currency investments in AUD | 807.7 | 809.9 | - | - |
| Total¹ | 18 697.2 | 16 729.6 | 22 232.1 | 20 873.0 |

1 Mainly collateral lodged in connection with repo transactions and futures.

Item 27

OUTSTANDING FINANCIAL INSTRUMENTS¹

In CHF millions

| | Contract value | 31.12.2022 | | Contract value | 31.12.2021 | |
|--|------------------|----------------------------|----------------------------|------------------|----------------------------|----------------------------|
| | | Replacement value Positive | Replacement value Negative | | Replacement value Positive | Replacement value Negative |
| Interest rate instruments | 142 083.4 | 251.8 | 1 437.9 | 340 692.1 | 81.1 | 204.1 |
| Swiss franc repo transactions ² | 32 985.0 | – | – | – | – | – |
| SNB debt certificates ² | 7 910.0 | – | – | – | – | – |
| Forward contracts ¹ | 409.2 | 0.1 | 0.4 | 131.8 | 0.2 | 0.0 |
| Interest rate swaps | 58 612.5 | 248.6 | 1 427.1 | 167 424.6 | 78.8 | 199.3 |
| Futures | 42 166.7 | 3.1 | 10.4 | 173 135.7 | 2.1 | 4.7 |
| Foreign exchange | 11 876.3 | 78.7 | 90.4 | 16 483.6 | 210.3 | 44.3 |
| Forward contracts ¹ | 9 695.9 | 78.7 | 87.3 | 14 677.4 | 210.3 | 43.2 |
| Options | 2 180.4 | – | 3.1 | 1 806.2 | – | 1.2 |
| Equities/indices | 8 175.8 | – | 50.1 | 15 507.0 | 34.0 | 0.5 |
| Forward contracts ¹ | 0.6 | – | 0.0 | 4.0 | 0.0 | 0.0 |
| Futures | 8 175.2 | – | 50.1 | 15 502.9 | 34.0 | 0.5 |
| Credit instruments | 1 654.4 | 1.6 | 13.4 | 731.2 | 2.1 | 14.6 |
| Credit default swaps | 1 654.4 | 1.6 | 13.4 | 731.2 | 2.1 | 14.6 |
| Total | 163 790.0 | 332.0 | 1 591.8 | 373 413.9 | 327.5 | 263.4 |

1 Including spot transactions with value date in the new year.

2 Only transactions to be settled in the new year.

FIDUCIARY INVESTMENTS

Item 28

Fiduciary business covers investments which the SNB makes in its own name but on the basis of a written contract exclusively for the account of and at the risk of the counterparty (mainly the Confederation). The transactions are stated at nominal value inclusive of accrued interest.

In CHF millions

| | 31.12.2022 | 31.12.2021 | Change |
|---|----------------|----------------|----------------|
| Fiduciary investments for the Confederation | 1 685.6 | 1 383.1 | + 302.5 |
| Other fiduciary investments | 8.7 | 7.2 | + 1.5 |
| Total | 1 694.4 | 1 390.2 | + 304.2 |

Report of the External Auditor for the General Meeting of Shareholders

REPORT OF THE STATUTORY AUDITOR ON THE FINANCIAL STATEMENTS

Opinion

We have audited the financial statements of Swiss National Bank (SNB), which comprise the balance sheet as at 31 December 2022, the income statement and statement of changes in equity for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion, the financial statements (pages 173 to 209) give a true and fair view of the financial position of the SNB as at 31 December 2022 and of its financial performance for the year then ended in accordance with the accounting and valuation principles detailed in the notes and comply with Swiss law.

Basis for opinion

We conducted our audit in accordance with Swiss law and Swiss Standards on Auditing (SA-CH). Our responsibilities under those provisions and standards are further described in the “Auditor’s Responsibilities for the Audit of the Financial Statements” section of our report. We are independent of the SNB in accordance with the provisions of Swiss law, together with the requirements of the Swiss audit profession and we have fulfilled our other ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

KEY AUDIT MATTERS

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the financial statements of the current period. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Foreign currency investments

Key audit matter: In absolute figures, foreign currency investments constitute the SNB’s most important balance sheet position. Due to their composition and amount, even small changes to the negotiable securities prices and the Swiss franc exchange rates can lead to material effects on the valuation in the balance sheet as well as on gross income, and therefore also on the SNB’s equity. Therefore, the valuation of the negotiable securities within foreign currency investments was considered to be an area of focus in our audit.

Our audit approach for the foreign currency investments comprised, among others, the following key audit procedures:

We compared the valuation of the negotiable securities (money market instruments, bonds and equities) included within foreign currency investments with reference values that we obtained by applying our own valuation approach. The valuation methodology we used took into account, among other things, market liquidity and other characteristics relevant to the valuation of the individual negotiable securities. Further, we tested the valuation approach used in the relevant IT applications.

For further information on foreign currency investments can be found in items 02 and 26 of the notes to the annual financial statements.

The Bank Council is responsible for the other information. The other information comprises the information included in the annual report but does not include the financial statements and our auditor's report thereon.

Other information

Our opinion on the financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

The Bank Council is responsible for the preparation of the financial statements that give a true and fair view in accordance with the accounting and valuation principles detailed in the notes and the provisions of Swiss law, and for such internal control as the Bank Council determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error. Unless otherwise stated, the accounting and valuation principles are based on the Swiss GAAP FER standards. Departures from Swiss GAAP FER occur only if the special nature of the SNB needs to be taken into account.

Bank Council's responsibilities for the financial statements

**Auditor's responsibilities
for the audit of the financial
statements**

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Swiss law and SA-CH will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Swiss law and SA-CH, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the SNB's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with the Bank Council or its relevant committee regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide the Bank Council or its relevant committee with a statement that we have complied with relevant ethical requirements regarding independence and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, actions taken to eliminate threats or safeguards applied.

From the matters communicated with the Bank Council or its relevant committee, we determine those matters that were of most significance in the audit of the financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report, unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

REPORT ON OTHER LEGAL AND REGULATORY REQUIREMENTS

In accordance with article 728a para. 1 item 3 CO and PS-CH 890, we confirm that an internal control system exists, which has been designed for the preparation of financial statements according to the instructions of the Bank Council.

We recommend that the financial statements submitted to you be approved.

KPMG LTD

ERICH SCHÄRLI
Licensed Audit Expert
Auditor in Charge

ADRIAN WALDER
Licensed Audit Expert

Zurich, 3 March 2023

Proposals of the Bank Council

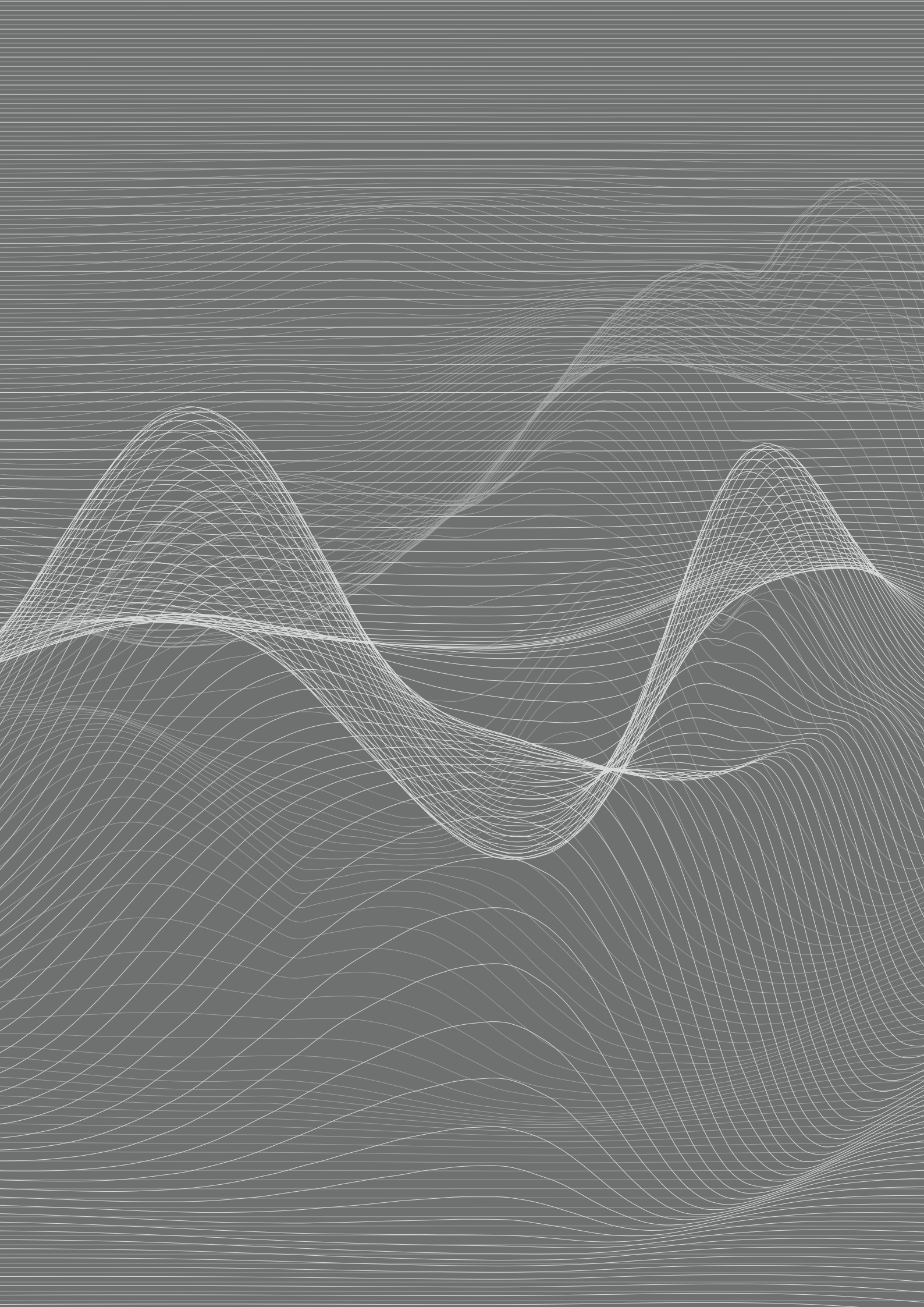
Proposals of the Bank Council to the General Meeting of Shareholders

At its meeting of 3 March 2023, the Bank Council approved the financial report for 2022 for submission to the Federal Council and to the General Meeting of Shareholders.

The External Auditor signed its report on 3 March 2023.
On 17 March 2023, the Federal Council approved the financial report.

The Bank Council presents the following proposals to the General Meeting of Shareholders:

1. that the financial report for 2022 be approved;
2. that the Bank Council be granted discharge;
3. that Angelo Ranaldo, Professor of Finance and Systemic Risk at the University of St. Gallen, be elected to the Bank Council for the remainder of the 2020–2024 term of office;
4. that KPMG Ltd be appointed as the External Auditor for the 2023–2024 term of office.



Selected information

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- January** On 26 January 2022, the Federal Council approves the SNB's proposal to reactivate the sectoral countercyclical capital buffer. The buffer is to be set at 2.5% of risk-weighted exposures secured by residential property in Switzerland. The deadline for banks to comply with the increased countercyclical capital buffer requirements is 30 September (cf. Annual Report 2021, p. 106).
- March** On 7 March, the SNB reports a profit of CHF 26.3 billion for 2021. For the financial year just ended, it sets the allocation to the provisions for currency reserves at CHF 8.7 billion. After taking into account the distribution reserve of CHF 90.9 billion, net profit comes to CHF 108.5 billion. This allows the payment of a dividend of CHF 15 per share, the legally stipulated maximum amount. A profit distribution of CHF 6 billion is paid to the Confederation and the cantons as the conditions for a distribution of this amount, specified in the agreement for the financial years 2020–2025, have been met. Of the total amount to be paid out, one-third is allocated to the Confederation and two-thirds to the cantons (cf. Annual Report 2021, pp. 98, 168–169).
- At its quarterly assessment of 24 March, the SNB leaves its policy rate and the interest rate on sight deposits with the SNB at -0.75% . In light of the highly valued Swiss franc, it is willing to intervene in the foreign exchange market as necessary. In so doing, it takes the overall currency situation and the inflation rate differential with other countries into consideration. Russia's invasion of Ukraine subsequently leads to a strong increase in uncertainty worldwide. Against this backdrop, the SNB with its expansionary monetary policy ensures price stability and supports the Swiss economy (cf. pp. 43 et seq.).
- June** At its quarterly assessment of 16 June, the SNB tightens its monetary policy and raises the SNB policy rate by 0.5 percentage points to -0.25% . In doing so, it seeks to counter increased inflationary pressure and prevent inflation from spreading more broadly to goods and services. To provide appropriate monetary conditions, the SNB is also willing to be active in the foreign exchange market as necessary. If there were to be an excessive appreciation of the Swiss franc, the SNB would be prepared to purchase foreign currency. If the Swiss franc were to weaken, however, the SNB would consider selling foreign currency. With effect from 1 July, the SNB also adjusts the threshold factor used to calculate the level of banks' sight deposits at the SNB exempt from negative interest. The factor is lowered from 30 to 28. This ensures that the secured short-term Swiss franc money market rates are close to the SNB policy rate (cf. pp. 43 et seq.).

In addition, the SNB presents its annual Financial Stability Report. The environment is subject to high uncertainty and presents various risks. From the financial stability perspective, it is crucial that risk exposures be backed by sufficient capital. In the case of the globally active banks, these are primarily credit and market risks, as well as operational risks and business risks. As regards the domestically focused banks, the focus is on the development of the Swiss mortgage and residential real estate markets. With vulnerabilities in these markets still high, adequate capitalisation of domestically focused banks is of key importance. The reactivation of the countercyclical capital buffer as of 30 September 2022 contributes to maintaining the banking system's resilience (cf. pp. 106 et seq.).

At its quarterly assessment of 22 September, the SNB tightens its monetary policy further and raises the SNB policy rate by 0.75 percentage points to 0.5%. In doing so, it seeks to counter the rise in inflationary pressure and a broad spread of inflation to goods and services. To provide appropriate monetary conditions, the SNB is also willing to be active in the foreign exchange market as necessary. If there were to be an excessive appreciation of the Swiss franc, the SNB would be prepared to purchase foreign currency. If the Swiss franc were to weaken, however, the SNB would consider selling foreign currency. Furthermore, the SNB adjusts the implementation of its monetary policy to the positive interest rate environment. This ensures that the secured short-term Swiss franc money market rates remain close to the SNB policy rate. Banks' sight deposits held at the SNB are remunerated at the SNB policy rate up to a certain threshold. Sight deposits above this threshold are remunerated at an interest rate of zero percent. The SNB will also use liquidity-absorbing measures (cf. pp. 43 et seq.).

September

At its quarterly assessment of 15 December, the SNB tightens its monetary policy further and raises the SNB policy rate by 0.5 percentage points to 1.0%. In doing so, it counters increased inflationary pressure and a further spread of inflation. To provide appropriate monetary conditions, the SNB is also willing to be active in the foreign exchange market as necessary. The SNB will also sell foreign currency if this is appropriate from a monetary policy perspective. Conversely, the SNB remains willing to purchase foreign currency if there were to be excessive appreciation pressure. Banks' sight deposits held at the SNB are remunerated at the SNB policy rate up to a certain threshold. Sight deposits above this threshold are remunerated at an interest rate of 0.5%. With this tiered remuneration of sight deposits and open market operations, the SNB ensures that the secured short-term money market rates are close to the SNB policy rate (cf. pp. 43 et seq.).

December

2

Bank supervisory and management bodies, Regional Economic Councils

as at 1 January 2023

BANK COUNCIL

(2020–2024 term of office)

| | |
|------------------------|---|
| Barbara Janom Steiner | Attorney-at-law, President of the Bank Council, Chair of the Nomination Committee, Member of the Compensation Committee, 2015/2020 ¹ |
| * Romeo Lacher | Chairperson of the Board of Directors of Julius Baer Group Ltd and Bank Julius Baer & Co. Ltd, Vice President of the Bank Council, Chair of the Compensation Committee, Member of the Nomination Committee, 2021 ¹ |
| * Vania Alleva | President of the trade union Unia and Vice President of the Swiss Federation of Trade Unions, 2019/2020 ¹ |
| Christoph Ammann | Member of the Cantonal Government and Head of the Department of Economic Affairs, Energy and Environment of the Canton of Berne, Member of the Audit Committee, 2019/2020 ¹ |
| * Rajna Gibson Brandon | Professor of Finance at the University of Geneva, Member of the Risk Committee, 2022 ¹ |
| Christoph Lengwiler | External lecturer at the Institute of Financial Services Zug IFZ at Lucerne University of Applied Sciences and Arts, Chair of the Audit Committee, 2012/2020 ¹ |
| * Christoph Mäder | Attorney-at-law, President of economiesuisse (Swiss Business Federation), Member of the Audit Committee, 2021 ¹ |
| Shelby R. du Pasquier | Attorney-at-law and Partner at Lenz & Staehelin, Chair of the Risk Committee, 2012/2020 ¹ |
| Cornelia Stamm Hurter | Attorney-at-law, President of the Cantonal Government and Head of the Department of Finance of the Canton of Schaffhausen, 2022 ¹ |
| * Cédric Pierre Tille | Professor at the Graduate Institute of International and Development Studies, Geneva, Member of the Nomination and Risk Committees, 2011/2020 ¹ |
| Christian Vitta | Member of the Cantonal Government and Head of the Department of Finance and Economic Affairs of the Canton of Ticino, Member of the Compensation Committee, 2016/2020 ¹ |

In accordance with art. 40 para. 1 NBA, all members of the Bank Council hold Swiss citizenship.

* Elected by the General Meeting of Shareholders.

¹ Assumption of office / re-election to the Bank Council.

RELEVANT AFFILIATIONS OF BANK COUNCIL MEMBERS

Relevant affiliations of the Bank Council members are listed on the SNB website at www.snb.ch, The SNB/Supervisory and executive bodies/Bank Council.

EXTERNAL AUDITOR

(2022–2023 term of office)

KPMG Ltd

GOVERNING BOARD

(2021–2027 term of office)

| | |
|--------------------|---|
| Thomas J. Jordan | Chairman of the Governing Board, Head of Department I, Zurich |
| Martin R. Schlegel | Vice Chairman of the Governing Board, Head of Department II, Berne |
| Andréa M. Maechler | Member of the Governing Board, Head of Department III, Zurich |

ENLARGED GOVERNING BOARD

(2021–2027 term of office)

| | |
|--------------------|---|
| Thomas J. Jordan | Chairman of the Governing Board, Head of Department I, Zurich |
| Martin R. Schlegel | Vice Chairman of the Governing Board, Head of Department II, Berne |
| Andréa M. Maechler | Member of the Governing Board, Head of Department III, Zurich |
| Petra Gerlach | Alternate Member of the Governing Board, Department I, Zurich |
| Attilio Zanetti | Alternate Member of the Governing Board, Department I, Zurich |
| Dewet Moser | Alternate Member of the Governing Board, Department II, Berne |
| Thomas Moser | Alternate Member of the Governing Board, Department III, Zurich |

In accordance with art. 44 paras. 1 and 3 NBA, all members and alternate members of the Governing Board hold Swiss citizenship and are resident in Switzerland.

BOARD OF DEPUTIES

(2021–2027 term of office)

| | |
|-----------------|--|
| Petra Gerlach | Alternate Member of the Governing Board, Department I, Zurich |
| Attilio Zanetti | Alternate Member of the Governing Board, Department I, Zurich |
| Dewet Moser | Alternate Member of the Governing Board, Department II, Berne |
| Thomas Moser | Alternate Member of the Governing Board, Department III, Zurich |

RELEVANT AFFILIATIONS OF THE ENLARGED GOVERNING BOARD MEMBERS

Relevant affiliations of the Enlarged Governing Board are listed on the SNB website at www.snb.ch, The SNB/Supervisory and executive bodies/Enlarged Governing Board.

REGIONAL ECONOMIC COUNCILS

(2020–2024 term of office)

| | |
|-------------------------------------|---|
| Central Switzerland | Alain Grossenbacher, Co-Owner and CEO of Eberli Holding AG, Chairperson |
| | Peter Galliker, CEO of Galliker Transport AG |
| | Anke Krause, CEO and Co-Owner of Gamma Group Ltd |
| | Adrian Steiner, Member of the Board of Directors and CEO of Thermoplan AG |
| Eastern Switzerland | Christoph Schmidt, Member of the Management Board of Weisse Arena Group and Member of the Board of Directors of Hotel Schweizerhof Flims-Waldhaus AG, Chairperson |
| | Katharina Lehmann, CEO, Owner and Delegate of the Board of Directors of Blumer-Lehmann Ltd |
| | Cristian Rusch, CEO of Filtrox AG |
| | Michael Thüler, CEO of stürmsfs ag |
| Fribourg/Vaud/Valais | Alain Métrailler, Managing Director of Dénériaz Groupe Holding SA, Chairperson |
| | Alain Berset, Chief Business Officer of WIFAG-Polytype Holding Ltd |
| | Valentin Matillon, Chief Financial Officer of Hedera Dx Ltd |
| Geneva/Jura/Neuchâtel | Jean-Marc Thévenaz, Managing Director of easyJet Switzerland SA, Chairperson |
| | Joris Engisch, CEO of Jean Singer & Cie SA |
| | Isabelle Harsch, CEO of Henri Harsch HH SA |
| Italian-speaking Switzerland | Enzo Lucibello, President of DISTI – Distributori Ticinesi, Chairperson |
| | Riccardo Biaggi, Managing Partner of Fiduciaria Mega SA |
| | Beatrice Fasana, Managing Director of Sandro Vanini SA |
| Mittelland | Mirko Feller, CEO of Emch+Berger AG, Berne, Chairperson |
| | Martina Gerster, CEO and Member of the Board of Directors of Härterei Gerster AG |
| | Martin Keller, Chairman of the Executive Board and CEO of the fenaco cooperative |
| | Urs Kessler, CEO of Jungfraubahnen Management AG |
| Northwestern Switzerland | Monika Friedli-Walser, CEO and Co-Owner of de Sede AG, Chairperson |
| | Peter Fischer, Chairman of the Board of Directors of Fischer Reinach Ltd |
| | Adrian Werren, Head of the Finance Directorate of Coop Group |
| | Simone Wyss Fedele, CEO of Switzerland Global Enterprise |
| Zurich | Martin Hirzel, President of Swissmem, Chairperson |
| | Manuela Beer, CEO of PKZ Burger-Kehl & Co. Ltd |
| | Christian Keller, Chairman and General Manager of IBM Switzerland Ltd |

3 Organisational chart

as at 1 January 2023

GENERAL MEETING OF SHAREHOLDERS

EXTERNAL AUDITOR

BANK COUNCIL

INTERNAL AUDIT

GOVERNING BOARD

ENLARGED GOVERNING BOARD

BOARD OF DEPUTIES

DEPARTMENT I

Secretariat General

Secretariat Supervisory and Management Bodies

Communications

Documentation

Research Coordination, Education and Sustainability

Economic Affairs

Monetary Policy Analysis

Forecast and Analysis Switzerland

Forecast and Analysis International

Economic Data Science

Regional Economic Relations

International Monetary Cooperation

Multilateral Cooperation

International Policy Analysis

Bilateral Cooperation

Statistics

Balance of Payments and Swiss Financial Accounts

Banking Statistics

Publications and Data Banks

Legal Services

Compliance

Human Resources

Premises and Technical Services

DEPARTMENT II

Financial Stability

Banking System

Systemically Important Banks

Oversight

Cash

Specialist Support

Procurement and Logistics

Cash Processing

Cash Circulation

Accounting

Controlling

Risk Management

Operational Risk and Security

DEPARTMENT III

Money Market and Foreign Exchange

Money Market

Foreign Exchange and Gold

Asset Management

Portfolio Management

Portfolio Trading

Banking Operations

Banking Operations Analysis

Middle Office

Back Office

Information Technology

Banking Applications

Economic Information Systems

Business Support Processes

Infrastructure

Central IT Services

Financial Market Analysis

Singapore

Websites**WWW.SNB.CH**

The website provides information on the SNB's organisation and responsibilities as well as its statistics and publications. It also contains information for the media, the financial markets, shareholders and the general public. The website content is available in German, French, Italian and English.

On its website, the SNB publishes press releases and speeches by members of the Governing Board.

The speeches by members of the Governing Board on monetary policy issues are usually published in German, French or English, with a summary in German, French, Italian and English.

Also to be found on the website is a glossary, which explains important terms from the world of finance and monetary policy.

'Questions and answers' deals with topics relevant to the SNB.

DATA.SNB.CH

On its data portal, the SNB provides an extensive range of data which are relevant for monetary policy as well as for monitoring the economy. From April 2022, the important monetary policy data (SNB policy rate, SARON, special rate, interest rate on sight deposits, the exemption threshold factor used until September 2022, and the threshold factor used thereafter) are published on the data portal, together with information on the sight deposits at the SNB as well as the minimum reserve requirements and banks' compliance with them. One of the major datasets is the statistical data compiled by the SNB on banks and financial markets, the balance of payments, direct investment, the international investment position and the Swiss financial accounts. The SNB also publishes detailed data on its money and foreign exchange market operations.

The data portal comprises a table selection with predefined tables and charts, datasets with supplementary data series, and a resources section. This section contains information on the data portal and an overview for each topic, describing the range of data available and the correlations. It also features focus articles that are closely related to the published data.

YOUTUBE, TWITTER AND LINKEDIN

Social media

The SNB's YouTube channel offers an extensive range of videos. There are numerous films showing the design and security features as well as the production process of the ninth banknote series. The film 'The Swiss National Bank – What it does and how it works', which lasts about 15 minutes, takes a behind-the-scenes look at the SNB and its monetary policy. The videos are available in German, French, Italian and English. There are also recordings of the news conferences and general meetings of shareholders (Web TV) as well as SNB research events (Research TV). The YouTube channel and the individual videos can be accessed via the SNB website.

On Twitter, the SNB regularly posts news about relevant publications available on its website as well as information on other current topics and projects.

The SNB also uses LinkedIn as a means of communication and regularly posts contributions on current publications and topics. Open positions are also advertised on LinkedIn.

ANNUAL REPORT

Publications

The Annual Report is published at the end of March (online) and at the beginning of April (print) in German, French, Italian and English.

SUSTAINABILITY REPORT

The Sustainability Report covers operational environmental and social topics as well as the SNB's contributions to society. It is published annually in March in German, French, Italian and English (online only).

QUARTERLY BULLETIN

The Quarterly Bulletin comprises the 'Monetary policy report' used for the Governing Board's quarterly monetary policy assessment and the 'Business cycle signals – Results of the SNB company talks'. The Quarterly Bulletin is published at the end of March, June, September and December in German, French and Italian (print and online) as well as in English (online).

FINANCIAL STABILITY REPORT

The Financial Stability Report assesses the stability of Switzerland's banking sector. It is published annually in June in English, and in September in German and French (print and online).

DIRECT INVESTMENT

The Direct Investment report is published annually in December in German, French and English (print and online). It examines the developments in Switzerland's direct investments abroad as well as the changes in foreign direct investment in Switzerland.

SNB ECONOMIC STUDIES, SNB WORKING PAPERS AND SNB RESEARCH REPORT

SNB Economic Studies (print and online) and SNB Working Papers (online only) present articles on economic issues and research results. They are typically published in English. The annual SNB Research Report provides an overview of the SNB's research activities in the past year (in English, online only).

MONETARY ECONOMIC ISSUES TODAY

The 'Monetary Economic Issues Today' Festschrift published by the SNB to mark the 75th birthday of Ernst Baltensperger comprises 27 articles covering a cross-section of monetary economics. It offers an insight into current research issues and is available from bookshops.

THE SWISS NATIONAL BANK IN BRIEF

The Swiss National Bank in Brief gives an overview of the SNB's tasks, its organisation and the legal basis of its activities. It is published annually in German, French, Italian and English (print and online).

THE SWISS NATIONAL BANK 1907–2007

'The Swiss National Bank 1907–2007', a commemorative publication marking the 100th anniversary of the Swiss National Bank, deals with the SNB's history and various monetary policy topics. All four language versions are available on the SNB website at www.snb.ch, The SNB/History/Publications. Commemorative publications in connection with earlier anniversaries are available on the website in German and French.

THE SWISS NATIONAL BANK IN BERNE – AN ILLUSTRATED CHRONICLE

A chronicle of the Swiss National Bank in Berne entitled 'Die Schweizerische Nationalbank in Bern – eine illustrierte Chronik' was published in collaboration with the Society for Art History in Switzerland to mark the 100th anniversary of the inauguration of the SNB's head office at Bundesplatz 1 in Berne. The bilingual (German and French), illustrated book is available at www.snb.ch, The SNB/History/SNB celebrates 100th anniversary of building in Berne.

THE SWISS NATIONAL BANK IN ZURICH

THE PFISTER BUILDING

‘The Swiss National Bank in Zurich: The Pfister Building 1922–2022’ was published to mark the centenary of the Swiss National Bank’s main building at Börsenstrasse 15. The book documents the architecture and the construction history of the building. It also sheds light on the rise of Zurich as a financial centre, the foundation of the SNB, and the consequences of these developments for Zurich’s downtown cityscape. The abundantly illustrated volume is available from bookshops in German and English.

ART AT THE SNB

The SNB has been acquiring works of contemporary Swiss art for display on its premises since 1966. ‘Kunst in der SNB, L’art à la BNS, Art at the SNB’ provides an insight into the SNB’s art holdings. The trilingual volume (German, French and English) can be obtained from the SNB’s library.

OUR NATIONAL BANK

‘Our National Bank’, a resource for schools and the general public, can be found at our.snb.ch. It provides easily accessible information on topics such as the SNB and its monetary policy, the importance of price stability and the history of the minimum exchange rate. The resource is available in German, French, Italian and English, and can also be obtained in brochure form in all four languages (print and online).

ICONOMIX

Iconomix is the SNB’s web-based educational programme. It offers a range of teaching material that can be either downloaded or ordered. It is aimed at teachers of economics and social studies at upper secondary schools, but is largely open to the general public. Iconomix is available in full in German, French and Italian, and partially in English, at www.iconomix.ch.

Swiss National Bank, Library

Email: library@snb.ch

Telephone: +41 58 631 11 50

Postal address: P.O. Box, 8022 Zurich

Address: SNB Forum, Fraumünsterstrasse 8, 8001 Zurich

Educational resources

Ordering publications
and other resources

5 Addresses

HEAD OFFICES

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| St Gallen | Neugasse 43 P.O. Box 645 9004 St Gallen | Telephone Email | +41 58 631 40 70 st.gallen@snb.ch |

AGENCIES

The Swiss National Bank maintains agencies operated by cantonal banks in Appenzell, Chur, Fribourg, Geneva, Glarus, Liestal, Lucerne, Sarnen, Schaffhausen, Schwyz, Sion, Stans and Zug.

BRANCH OFFICE

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SNB FORUM

| | | | |
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LIBRARY

| | | | |
|---------------|--|-----------|------------------|
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| | | Email | library@snb.ch |

WEBSITE

www.snb.ch

6

Rounding conventions and abbreviations

ROUNDING CONVENTIONS

The figures in the income statement, balance sheet and tables are rounded; totals may therefore deviate from the sum of individual items.

The figures 0 and 0.0 are rounded values representing less than half of the unit used, yet more than zero (rounded zero).

A dash (-) in place of a number stands for zero (absolute zero).

ABBREVIATIONS

| | |
|------|--|
| AMM | Automated market maker |
| APP | Asset Purchase Programme (ECB) |
| AUD | Australian dollar |
| BCBS | Basel Committee on Banking Supervision (BIS) |
| BIS | Bank for International Settlements |
| BVV | Ordinance on Occupational Old Age, Survivors' and Invalidity Pension Provision |
| CAD | Canadian dollar |
| CBDC | Central bank digital currency |
| CCDI | Competence Centre for Diversity & Inclusion at the University of St. Gallen |
| CCyB | Countercyclical capital buffer |
| CDS | Credit default swap |
| CGFS | Committee on the Global Financial System (BIS) |
| CLS | Continuous Linked Settlement |
| CMF | Committee on Financial Markets (OECD) |
| CNY | Chinese yuan (renminbi) |
| CO | Swiss Code of Obligations |
| CPI | Consumer price index |
| CPIA | Federal Act on Currency and Payment Instruments |
| CPMI | Committee on Payments and Market Infrastructures (BIS) |
| CRF | SNB COVID-19 refinancing facility |
| CSSP | Committee on Statistics and Statistical Policy (OECD) |
| DDoS | Distributed denial-of-service |
| DKK | Danish krone |
| DLT | Distributed ledger technology |
| ECB | European Central Bank |
| EPC | Economic Policy Committee (OECD) |
| ERCO | Ordinance against Excessive Remuneration in Listed Companies Limited by Shares |
| ETH | Federal Institute of Technology |
| EU | European Union |
| EUR | Euro |

| | |
|----------|---|
| Eurostat | EU statistical office |
| FDF | Federal Department of Finance |
| Fed | US Federal Reserve |
| FINMA | Swiss Financial Market Supervisory Authority |
| FinMIA | Financial Market Infrastructure Act |
| FMI | Financial market infrastructure |
| FOEN | Federal Office for the Environment |
| FOH | Federal Office for Housing |
| FSB | Financial Stability Board |
| FX | Foreign exchange |
| GAAP | Swiss Accounting and Reporting Recommendations (Swiss GAAP FER) |
| GBP | Pound sterling |
| GDP | Gross domestic product |
| GFXC | Global Foreign Exchange Committee |
| G20 | Group of the 20 leading advanced and emerging economies |
| HR | Human resources |
| ICS | Internal control system |
| ILO | International Labour Organization |
| IMF | International Monetary Fund |
| IMFC | International Monetary and Financial Committee (IMF) |
| ISDA | International Swaps and Derivatives Association |
| ISIN | International Securities Identification Number |
| ISD | Isolation domain |
| JPY | Japanese yen |
| KRW | South Korean won |
| LCH | London Clearing House Ltd |
| Libor | London Interbank Offered Rate |
| MC | Markets Committee (BIS) |
| MMDRC | Money market debt register claims |
| MRA | Mutual Recognition Agreement |
| NAB | New Arrangements to Borrow (IMF) |
| NBA | National Bank Act |
| NBFI | Non-bank financial intermediaries |
| NBO | National Bank Ordinance |
| NCSC | National Cyber Security Centre |
| NGFS | Central Banks and Supervisors Network for Greening the Financial System |
| OASI | Old age and survivors' insurance |
| OECD | Organisation for Economic Co-operation and Development |
| PEPP | Pandemic Emergency Purchase Programme (ECB) |
| PRGT | Poverty Reduction and Growth Trust (IMF) |
| PS-CH | Swiss audit standard |
| Repo | Repurchase agreement |

| | |
|-----------------|---|
| RST | Resilience and Sustainability Trust (IMF) |
| SA-CH | Swiss Standards on Auditing |
| SARON | Swiss Average Rate Overnight |
| SBB | Swiss Federal Railways |
| SCION | Scalability, Control and Isolation on Next-Generation Networks |
| SDR | Special Drawing Right (IMF) |
| SECO | State Secretariat for Economic Affairs |
| SEK | Swedish krona |
| SFSO | Swiss Federal Statistical Office |
| SGD | Singapore dollar |
| SIC | Swiss Interbank Clearing |
| SIF | State Secretariat for International Finance |
| SoPaCEB | Social Partnership Centre for Equal Pay in the Banking Industry |
| SR | Classified Compilation of Federal Legislation |
| SSFN | Secure Swiss Finance Network |
| SWIFT | Society for Worldwide Interbank Financial Telecommunication |
| Swiss FS-CSC | Swiss Financial Sector Cyber Security Centre |
| TBTF | Too big to fail |
| TPI | Transmission Protection Instrument |
| USD | US dollar |
| VAT | Value Added Tax |
| VTA | Voluntary trading arrangement (IMF) |

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