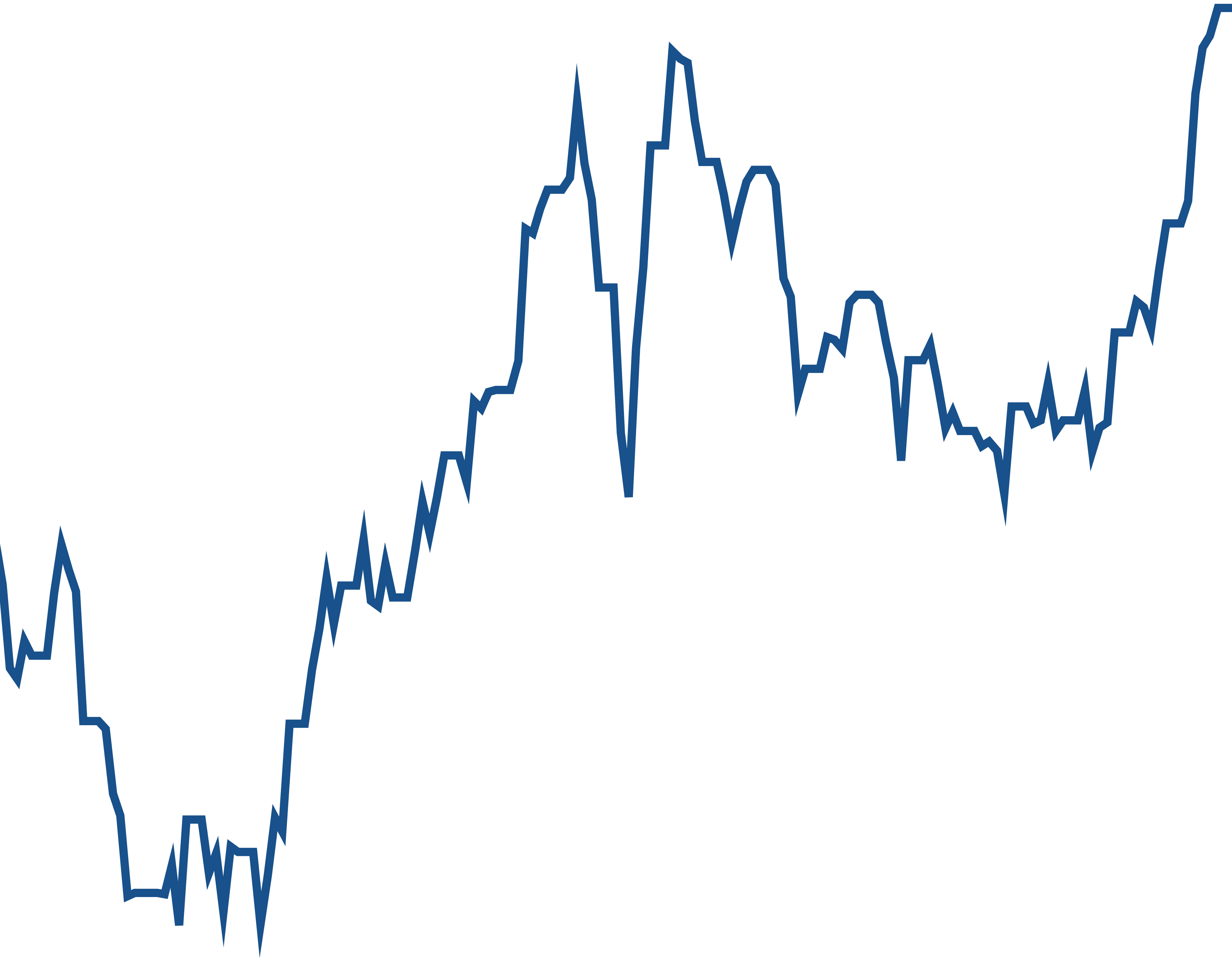
March 2023

# Federal Treasury

# Activity report 2022



Schweizerische Eidgenossenschaft
Confédération suisse
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Federal Department of Finance FDF
**Federal Finance Administration FFA**

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The Federal Treasury activity report explains the strategies and results with respect to the Confederation's debt management, liquidity management and foreign exchange management in 2022. It is tailored primarily to the Federal Council, the Finance Delegation, and the Swiss Federal Audit Office. Once they have acknowledged it, the report will also be made accessible to interested members of the public.

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# 100

## billion

in debt is managed by the Federal Treasury. 83 billion of this is market debt (money market debt register claims and bonds).

# 0.89

## percent

was the interest on the bonds issued in 2022.
The average yield was thus in positive territory for the first time in 4 years.

# 10.2

## years

is the average term to maturity of the Confederation's market debt.

# Summary

When Russian troops invaded Ukraine at the end of February 2022, an open war of aggression broke out in Europe for the first time in decades. Not so long ago, an escalation of this kind seemed unimaginable in our globalized and economically interconnected world. The next crisis was already looming in the wake of the COVID-19 pandemic, which had been only partly overcome. The post-pandemic economic upswing, still faltering supply chains, the robust labor market with historically low unemployment, and the persistent shortage of skilled workers, combined with the war-induced surge in energy prices, fueled inflation on both sides of the Atlantic. Often described as temporary toward the end of 2021, inflation increased even further in 2022, and in some cases reached double-digit figures in the USD and euro areas. Swiss inflation remained quite moderate by comparison, and only temporarily exceeded the 3% mark. Central banks were challenged by this situation, and commenced their U-turn on interest rates earlier and more consistently than expected. The US Federal Reserve was the first to make a move in March, and gradually raised its benchmark interest rate from 0.25% to 4.5% in seven steps over the course of the year. The Swiss National Bank (SNB) followed suit in June, and sharply hiked its policy rate to 1.0% in three steps, thereby abruptly ending the negative interest rate policy that it started in 2015. After some hesitation, the European Central Bank (ECB) likewise returned to a normalized monetary policy and positive interest rates in July.

The war in Ukraine and the rapid and sharp rise in interest rates led to significant valuation adjustments and comparatively high volatility in almost all asset classes. In 2022, Swiss bonds posted a negative performance of more than 12% as measured by the Swiss Bond Index (SBI), the Swiss equity market fell by just over 16%, and the value of real estate and gold also declined. The yields on all Confederation bonds rose above zero, and the entire Confederation bond curve with a term to maturity of more than one year was above the 1% mark toward year-end. The yield on 10-year Confederation bonds ended the year at its annual high of just over 1.5%.

Capital market participants showed little sign of being impressed by these turbulent times: in actual fact, the return to positive interest rates provided a distinct boost to investor demand. Bonds worth just under CHF 74 billion were issued, and the volume of bonds outstanding on the Swiss-franc capital market climbed to a new high of CHF 581 billion. With a volume of CHF 6.9 billion, the federal government was the third-largest issuer, behind the two Pfandbrief institutions, and the outstanding volume of Confederation bonds rose to CHF 68.3 billion. Together with many companies from the non-financial sector, energy suppliers in particular used the Swiss-franc bond market to cover their increased liquidity needs triggered by the energy crisis.

Like the two preceding years dominated by the pandemic, 2022 was also very challenging for the Federal Treasury, especially in terms of liquidity planning. On the one hand, further COVID-19 expenditure was approved, but only some of it was utilized. On the other hand, a CHF 10 billion rescue mechanism was established for systemically important energy providers, which meant that the Federal Treasury had to increase its liquidity holdings accordingly. In addition, the funds parked with the Confederation during the negative interest rate regime by the cantons and institutional investors (primarily withholding tax refunds) and the Substitute Occupational Benefit Institution were increasingly withdrawn, as positive returns once again beckoned on the market. Planning the funding requirements proved to be correspondingly challenging.

With the return to positive interest rates, one of the Federal Treasury's core activities, investing disposable funds, suddenly came to the fore again. From 2011 onward, it was no longer possible to invest short-term funds with a time horizon of a few days or weeks in an interest-bearing manner. Accordingly, these funds remained in the SNB sight deposit account and investing activities were discontinued due to a lack of appeal. Once positive yields could again be achieved on the money market, the Federal Treasury resumed actively managing its disposable funds.

However, 2022 was both eventful and challenging in other respects as well. For example, the first green Confederation bond was issued in October. The extensive preparatory work paid off, as the issue was successful and attracted a lot of attention among market participants. Another exciting and complex project involved hedging the foreign currency requirements for the purchase of the new fighter jets and ground-based air defense systems (Air2030).

An additional milestone was reached with the introduction of the new treasury management system. The project was successfully completed at the end of the year, somewhat behind schedule. Many front- and back-office tasks were digitalized and automated with the new system. The first Federal Treasury forum was also held, and covered the current challenges for the federal budget and the federal government's 2023 issuance program. The market participants invited were highly interested in the forum.

# 100

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(money market debt register claims and bonds).

# Guidelines and targets

The central Treasury, run by the Federal Finance Administration (FFA), ensures the Confederation's ability to fulfill its payment obligations at all times (Art. 60 para. 1 of the Financial Budget Act). The three main tasks of the Federal Treasury stem from this statutory mandate:

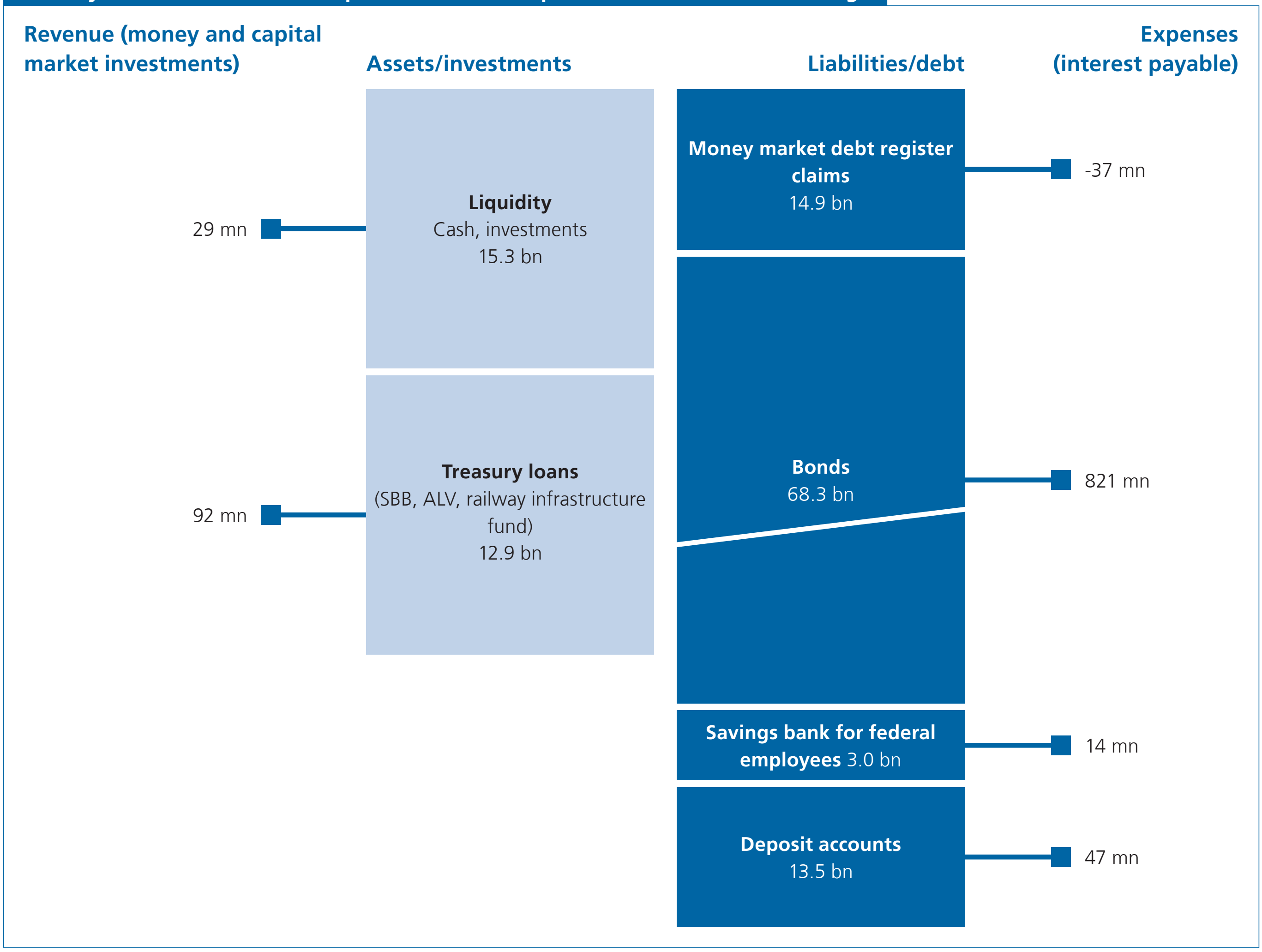
— *Debt management:* coverage of the funding needs by means of funding in the money and capital market at the lowest possible cost and with an acceptable degree of risk

— *Liquidity management:* assurance of an appropriate level of liquidity to even out liquidity fluctuations; low-risk short-term investment of liquidity at usual market interest rates or short-term coverage of liquidity shortfalls

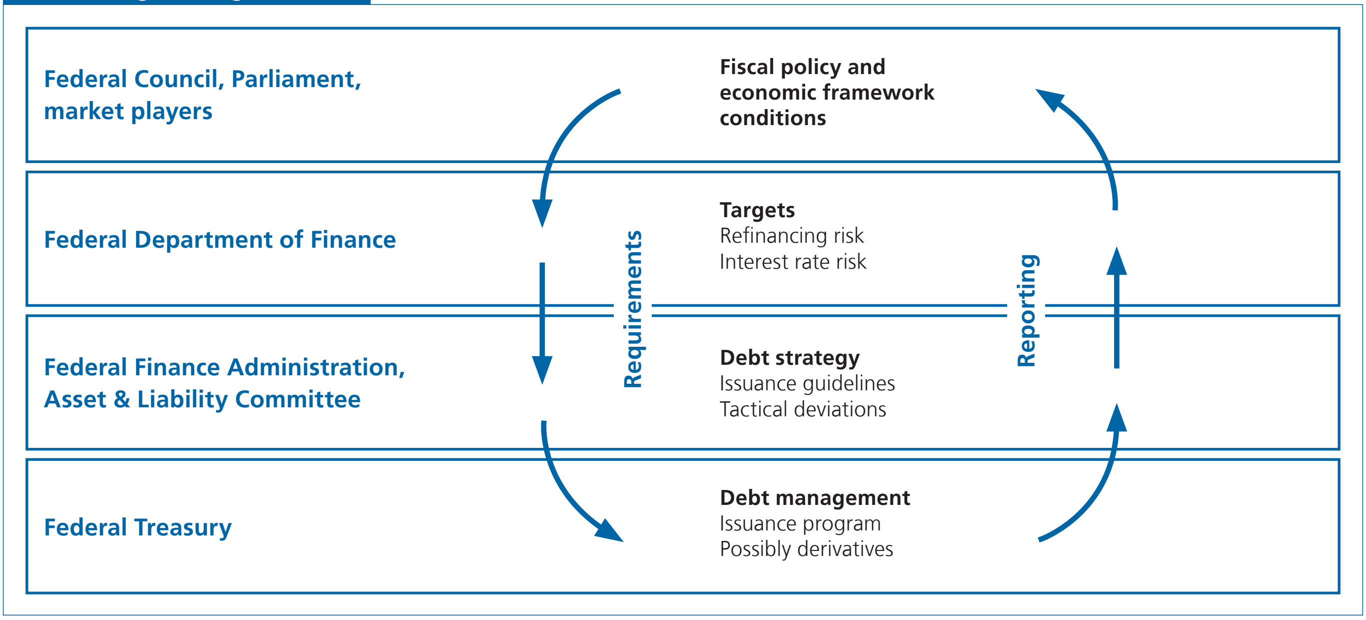
— *Foreign exchange management:* central procurement and management of foreign currencies to ensure planning certainty

**The Federal Treasury ensures the Confederation's ability to fulfill its payment obligations at all times**

**Treasury statement of financial position and its impact on the 2022 federal budget**



**Debt management governance**




The Federal Treasury manages a significant proportion of the Confederation's balance sheet. Its activities involve substantial expenditure and receipts. Since the Confederation is a net borrower, this mostly concerns debt management with interest payable.

The Federal Treasury has little leeway regarding the volume of debt, as the funding requirements depend primarily on the development of the federal budget and thus on fiscal policy. Nevertheless, the Federal Treasury's debt management has a significant impact on interest payable: since the interest rates for short maturities are generally lower than those for long ones, the Federal Treasury can reduce the average interest burden by issuing more short-term debt instruments. However, this increases the interest rate and refinancing risk, as the debt needs to be renewed more frequently. Conversely, it can reduce these risks by issuing long-dated instruments, but this leads to higher interest expenditure on average.

The interest rate risk is a relevant variable for fiscal policy, as unexpected changes in interest expenditure affect the leeway for budgeting other expenditure. Consequently, the Federal Treasury has a risk limit which it may not exceed for debt management. This risk budget is part of the FFA's targets in performance management. They are agreed with the Department on an annual basis. Within these risk guidelines, the FFA's Asset and Liability Management Committee (ALCO) specifies a debt strategy which the Federal Treasury has to implement with its issuing activity. Monitoring and reporting are carried out by an independent middle office (Risk Control).

Liquidity and foreign exchange management are also associated with risks, which are controlled by the ALCO and monitored by Risk Control.

## Targets

| | Limit | Actual 2021 | Actual 2022 |
|---|---|---|---|
| **Refinancing risk:** the FFA helps ensure that the Confederation's refinancing risk is bearable. | | | |
| Maturity profile of money and capital market debt under 1 year (%, maximum) | 30 | 19 | 23 |
| Maturity profile of money and capital market debt under 5 years (%, maximum) | 60 | 38 | 38 |
| Maturity profile of money and capital market debt under 10 years (%, maximum) | 85 | 60 | 60 |
| **Interest rate risk:** the FFA helps ensure that the interest rate risk is bearable for the federal budget in the short and medium term. | | | |
| Accumulated interest rate risk for following 4-year period: additional interest expense that will not be exceeded in 9/10 cases (CHF mn) | 500 | 411 | 358 |

**Debt management risks**

The Confederation is confronted by two inherent risks when managing its debt:

*Interest rate risk:* in the event of a rise in interest rates, debt has to be issued at a higher rate of interest. This leads to higher interest expenditure, i.e. to a burden for the federal budget. The interest rate risk can be quantified using statistical simulations.

*Refinancing risk:* as a result of declining creditworthiness on the part of the Confederation or major financial market turmoil, (re)financing in the market could result in higher/unfavorable market interest rates, or, in an extreme situation, could even prove impossible. This could jeopardize the objective of ensuring the Confederation's ability to fulfill its payment obligations. The maturity profile of outstanding debt as well as ratings are key indicators for the refinancing risk.

# 0.89

percent

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The average yield was thus in positive territory for the first time in 4 years.

# 2022 Treasury activity

## ■ Developments on the Swiss capital market

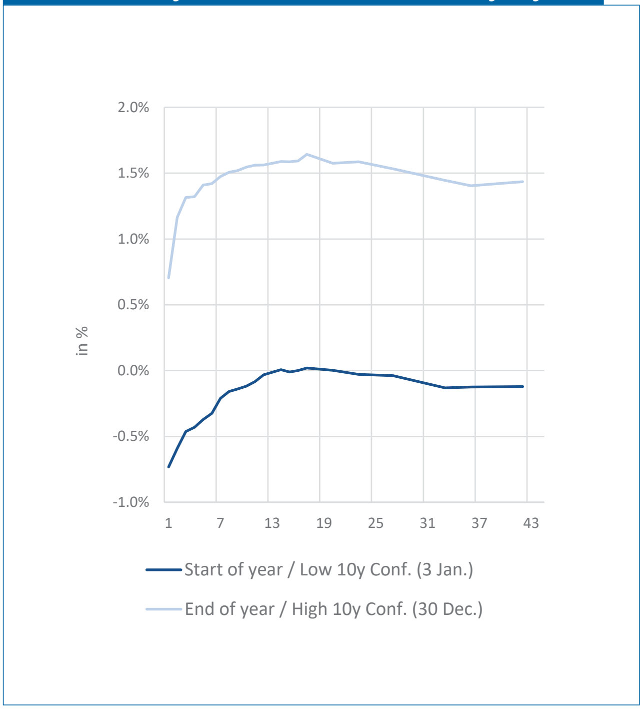
2022 was yet another extremely challenging year for capital markets. Although the repercussions of the COVID-19 pandemic slowly began to subside at the beginning of 2022 and the measures to contain the pandemic were gradually lifted, a new, unexpected flashpoint emerged in February with Russia's war of aggression in Ukraine. Even though the two states are relatively small in terms of economic output, their prominent positions in various commodity markets meant that the outbreak of the war had major consequences for the global economy. These included extensive sanctions, disrupted supply chains and, from a historical perspective, extreme price spikes on energy markets. All of these factors combined exacerbated a problem that many were still describing as temporary toward the end of 2021 – inflation. Last year, inflation reached levels that were scarcely considered possible only a short time ago. Accordingly, the central banks felt compelled to sharply raise key interest rates on a regular basis. Inflation in Switzerland was much lower than in many other countries, thanks in particular to the strong Swiss franc, as well as a smaller share of the energy component and a higher share of administered prices in the Consumer Price Index. As inflation was nevertheless above the target range, the SNB likewise abandoned negative interest rates in September, after more than seven years.

**In the year of the interest rate turnaround, the yield on 10-year Confederation bonds rose from -0.1% to 1.6%**

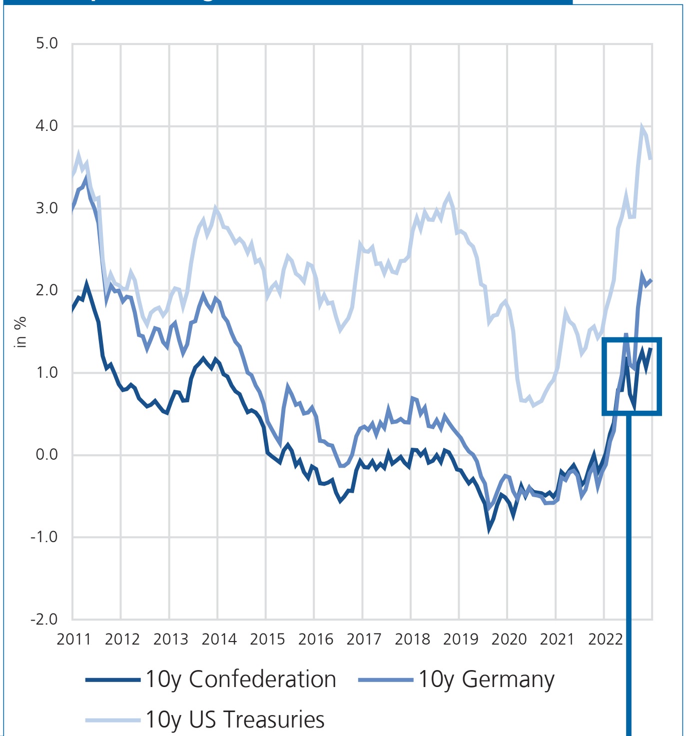
The turnaround on interest rates naturally had a major impact on capital markets. Confederation bond yields are a prime example of this. While the entire curve was still negative a year earlier, all outstanding Confederation bonds, with the exception of the bond maturing in February 2023, had a yield of more than 1% at the end of 2022. Aside from the rise in interest rates, volatility also became much more pronounced. Intraday swings of 10 basis points or more were the rule rather than the exception for trading days. After increasing sharply across the board following the outbreak of the pandemic, credit spreads (i.e. risk premia relative to the swap rate) declined steadily until early 2022. With the outbreak of the war and rising inflation, they widened again significantly from the second quarter of 2022 onward. Of course, this primarily applied to bonds issued by utilities, which were hit the hardest by the energy crisis and in many cases had to resort to fiscal policy support measures, especially in Europe. From the summer onward, however, credit spreads tended to narrow again. By year-end, they had even returned to the levels seen at the beginning of the year.

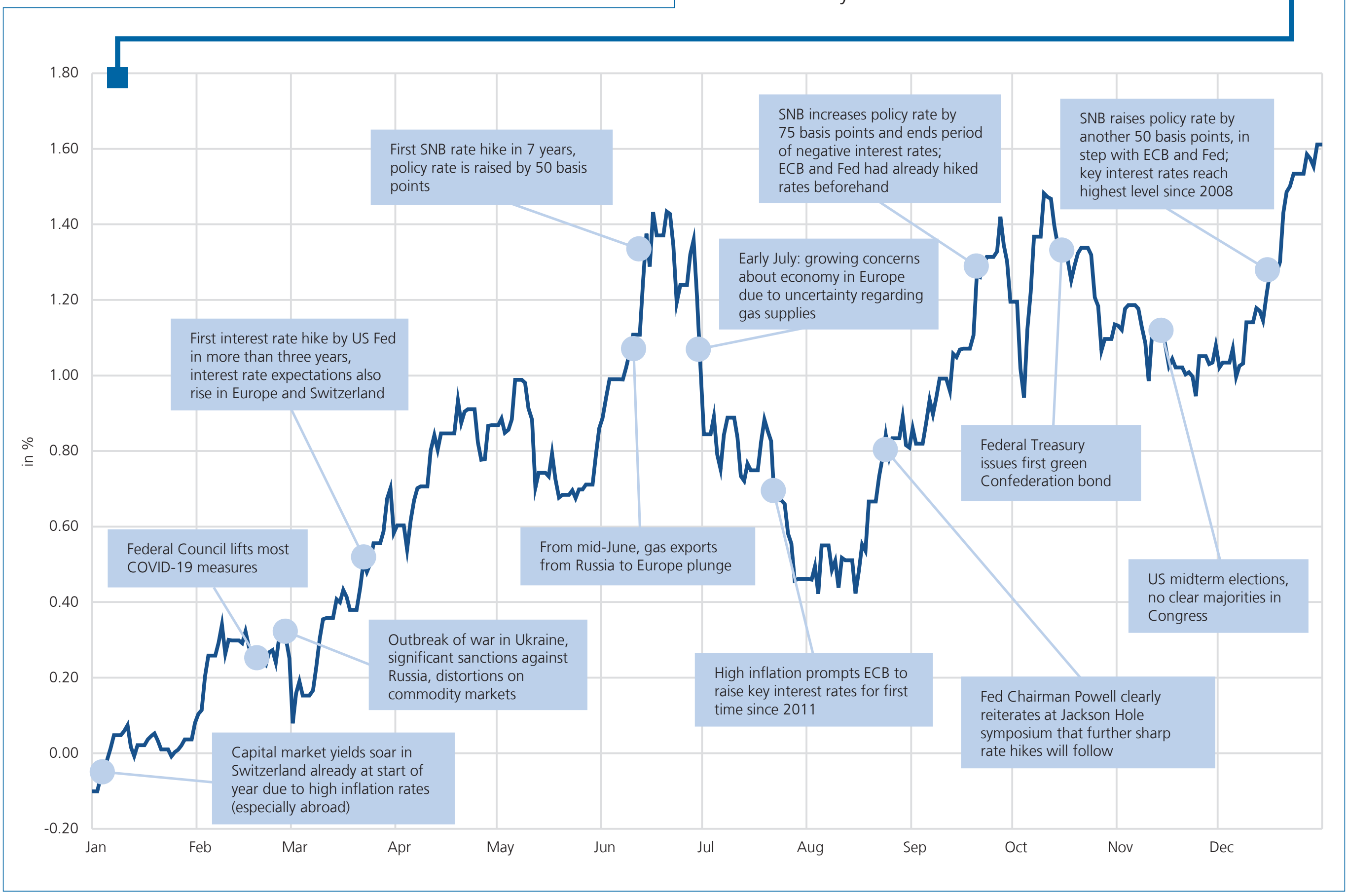
Capital market participants in Switzerland were unfazed by these troubled times. Although yields and volatility were already on the rise at the start of the year, the volume of bonds outstanding continuously climbed to new highs. Overall, issuance volumes were higher than at any time over the last 10 years. The domestic segment was the main growth driver, with non-financial companies and utilities in particular borrowing very actively. The volume outstanding amounted to CHF 581 billion at year-end, almost CHF 24 billion more than a year earlier. The domestic segment accounted for just over three quarters of this volume, meaning that its growth trend continued. The foreign segment grew by just under 3% year on year to CHF 138 billion, thereby confirming the growth trend that started in 2021. The total issuance volume on the Swiss capital market was just under CHF 74 billion, three quarters of which was attributable to the domestic segment. The Pfandbrief institutions remained the largest issuers (just under 21 bn in total), followed by the federal government. The same picture emerges when looking at the volume of debt outstanding, with Pfandbriefbank leading the way with around CHF 85 billion, followed by Pfandbriefzentrale (77 bn) and the federal government (68 bn; excluding unsold own tranches).

## Confed. bond yield curve (term to maturity & yield)



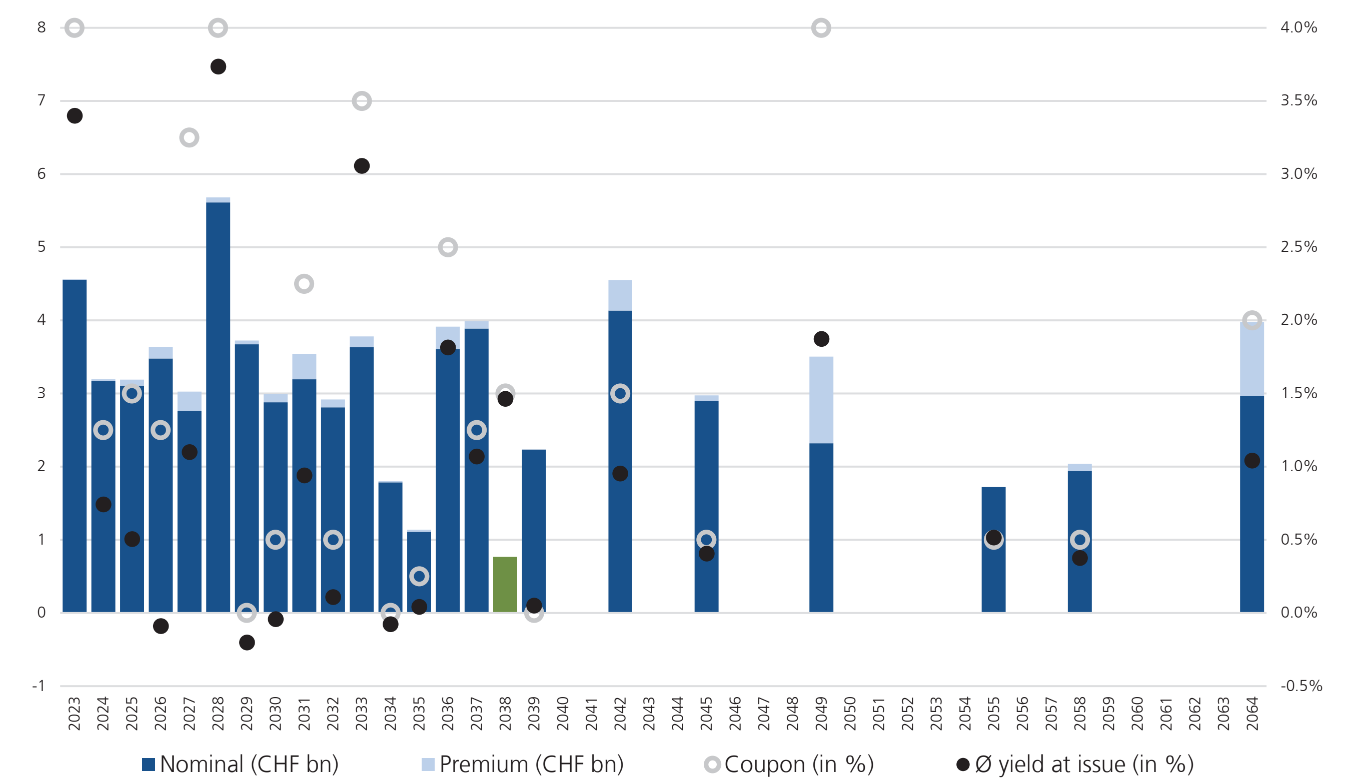

## Development of government bond interest rates



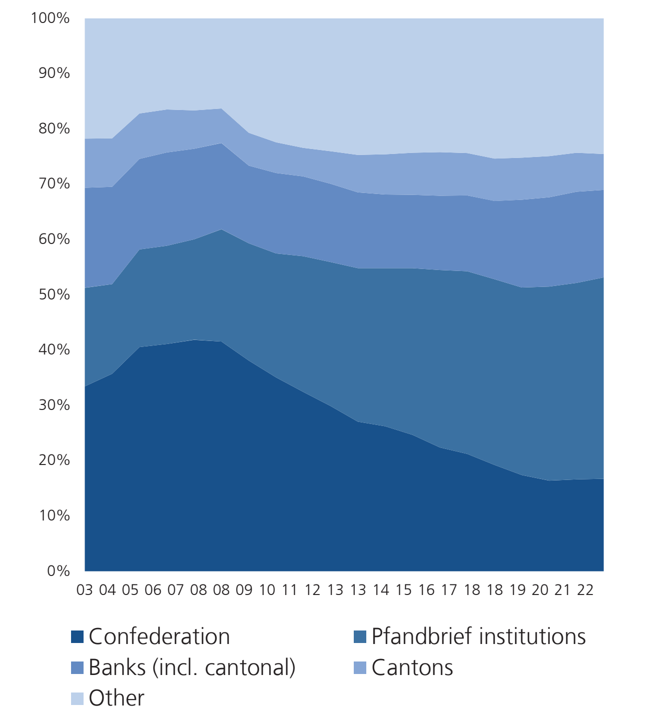




Source: Bloomberg

## Outstanding bonds in nominal terms and at amortized cost

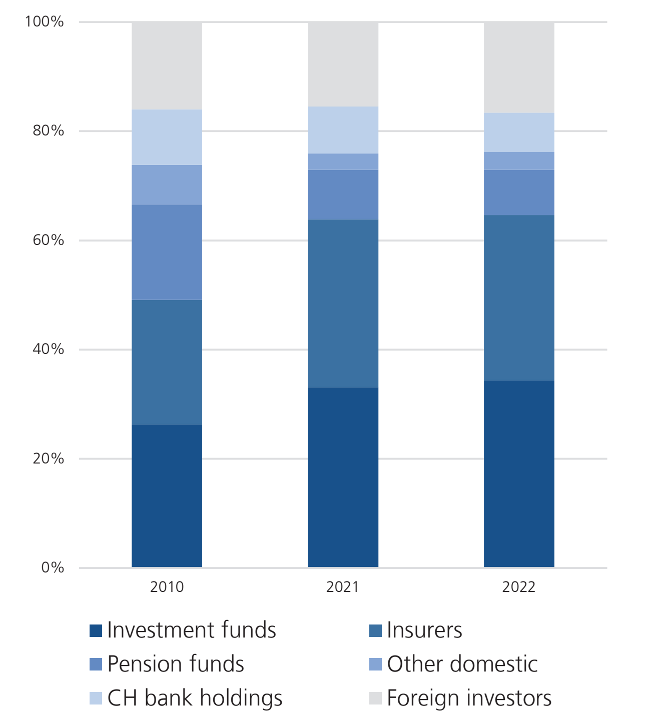



## Outstanding bonds in CHF domestic segment




Source: SIX

## Confederation bond investor base




Source: SNB

## Funding requirements and liquidity trend

Last year, several developments marked a turning point in the federal government's liquidity trend. The Confederation started the year with a liquidity balance of CHF 12.6 billion. The issuance program envisaged a net increase of CHF 2.5 billion in capital market debt, and a rise of CHF 2 billion in the volume of money market debt register claims. The net debt increase of CHF 4.5 billion was intended mainly to cover pandemic-related expenditure.

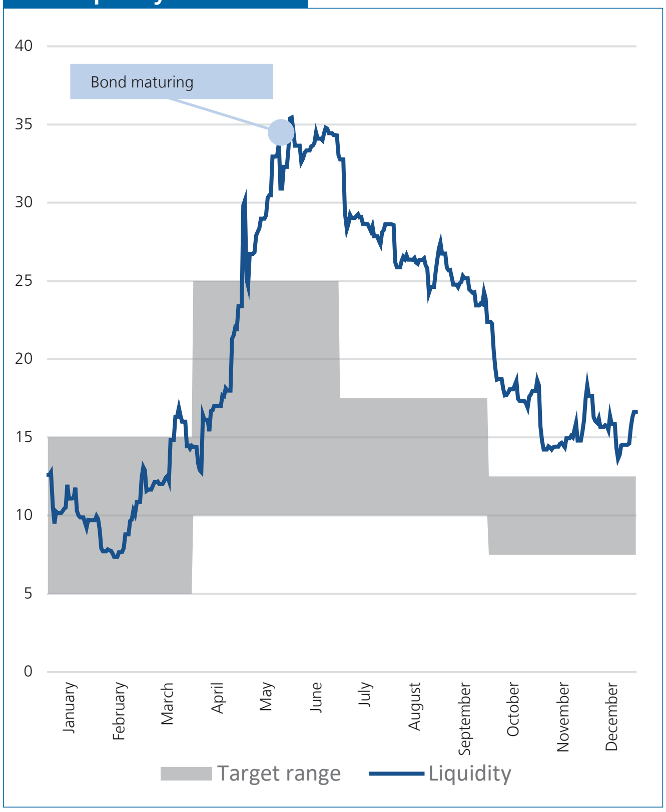
As the year progressed, however, it soon became apparent that the COVID-19 pandemic was likely to end earlier than expected. Current cash flows and extrapolations indicated that the approved pandemic-related expenditure (including supplementary credits) totaling CHF 10.0 billion would not be fully utilized. However, the outbreak of the war in Ukraine had direct and indirect adverse effects on the federal finances. Direct repercussions were experienced as a result of the supplementary credits for people from Ukraine seeking protection. Indirectly, the sharp rise in energy costs put an additional burden on the federal budget. The liquidity needs were impacted primarily by the rescue mechanism for the electricity industry that was approved in September. Based on this, the Federal Treasury must henceforth be in a position to provide up to CHF 10 billion to bridge the industry's liquidity gap at short notice.

**The interest rate turnaround caused outflows to increase rapidly**

**Aggregate net cash flows federal budget in bn**


Calculation: daily change in SNB sight deposit account less financing activities

**2022 liquidity trend in bn**



The turnaround on interest rates was another watershed moment. When the Swiss National Bank initially raised the policy rate to -0.25% in June, it became apparent that the negative interest rate regime and the associated impact on the federal budget would soon be a thing of the past. However, until mid-year, the federal budget's net cash flows (excluding financing) were still considerably higher than in previous years and also 2019, which was spared from the pandemic. But once the policy rate was hiked to 0.50% in September, outflows increased sharply. Before the return to a positive interest rate environment, various players postponed as much as possible their recovery of withholding tax and also COVID-19 hardship assistance funds already granted in order to minimize their negative interest burden. However, as these players can take advantage of better opportunities in the positive interest rate environment, the recovery of these funds, and thus outflows, suddenly surged.

Ultimately, the pandemic-related expenditure incurred during the course of the year was CHF 3.3 billion, almost on a par with the level budgeted by the Federal Council in summer 2021. Meanwhile, additional expenses of over CHF 0.7 billion were incurred as a result of the war in Ukraine, and net withholding tax revenue was around CHF 3.2 billion lower than budgeted. To cover these cash outflows and to provide the CHF 10 billion approved in the rescue mechanism, the Federal Treasury substantially increased its volume of outstanding money market debt register claims, especially from the end of August, to CHF 14.9 billion in the end (increase of 4.5 bn). In addition, capital market debt was increased by CHF 3.4 billion in net terms instead of the planned CHF 2.5 billion, with the result that, at CHF 16.6 billion, the liquidity target of CHF 17 billion was almost achieved at the end of the year.

## ■ Investment activity

### Liquidity

As part of its liquidity management, the Federal Treasury may invest and borrow funds in the money market. However, since money market yields were zero or negative over the last decade, the Federal Treasury made little use of this possibility. Consequently, liquidity was always placed in the non-interest-bearing sight deposit account at the SNB. However, once the policy rate moved into positive territory, the Federal Treasury resumed the investment of short-term funds, focusing on three instruments. The sight deposit account at the SNB provides the Federal Treasury with a risk-free investment opportunity that bears interest at the SNB policy rate up to a certain threshold. In its daily liquidity planning, the Federal Treasury's aim is to utilize this limit on the sight deposit account to the fullest extent possible. In addition, fixed-term deposits with maturities of between one week and one year are concluded with the SNB at standard market conditions. Access to the Swiss repo market provides a third instrument for investing funds. This instrument can be used in particular for investing unexpected liquidity that temporarily exceeds the threshold on the sight deposit account.

At the start of the year, only CHF 1 billion of SNB fixed-term deposits were outstanding; these must be held at all times to cover possible intraday liquidity shortfalls. When the policy rate was raised in September, SNB fixed-term deposits were immediately increased to CHF 11 billion. Thereafter, the outstanding volume of fixed-term deposits fluctuated between CHF 8.7 billion and CHF 14 billion, and ended the year at CHF 12.7 billion. The yield achieved was always based on the prevailing OIS SARON swap rate for the corresponding maturity. During the year under review, repo transactions were executed solely to check operational readiness. Furthermore, only one canton was granted a short-term loan extending beyond the end of the year; it amounted to CHF 0.1 billion.

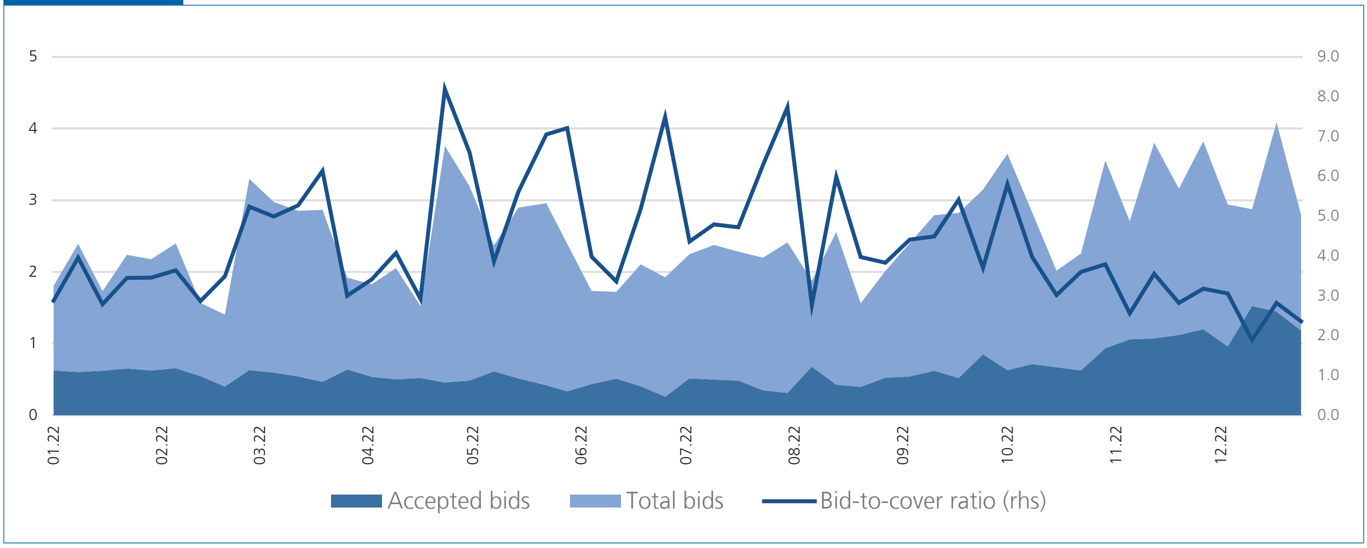
**Repo transactions**
Repos (repurchase agreements) are financial transactions in which a lender provides cash to a borrower for a specified period of time in exchange for collateral (e.g. bonds). They essentially consist of two transactions, a spot and a forward transaction. In the first leg, the borrower sells collateral to the lender (spot transaction). At the same time, the parties agree on the repurchase of the collateral at a future date (forward transaction). In a conventional repo transaction, the lender receives interest at the repo rate in addition to the amount lent when the transaction is completed. Repos normally have terms of between one day and 12 months. They are an important component of the interbank market and provide the financial system with liquidity. Moreover, the SNB uses repo trading to implement its monetary policy strategy by keeping the short-term repo rate – the Swiss Average Rate Overnight (SARON) – close to its policy rate. An important feature of repos compared with other financial transactions is the considerable reduction in credit risk achieved through the exchange of collateral. The Federal Treasury joined the repo market at the beginning of 2019.

### Treasury loans

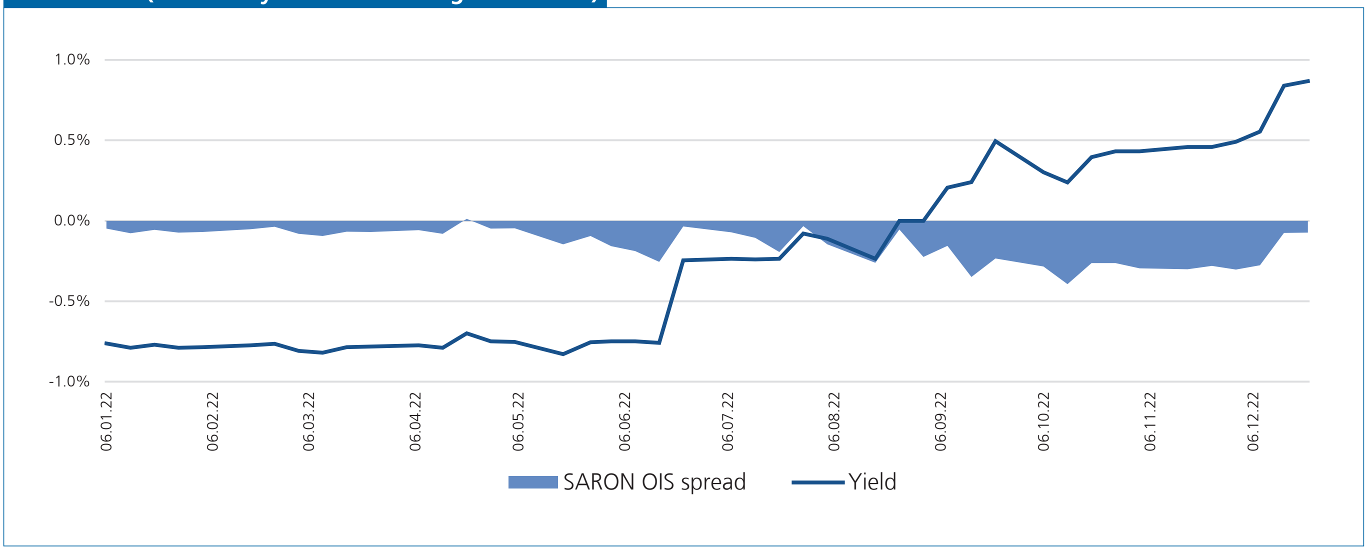
The Federal Treasury may affiliate administrative units of the decentralized Federal Administration that maintain separate accounts to the central Treasury for the management of their liquidity. This also applies to organizations which, based on special legislation, may have funds invested and managed by the Federal Treasury. The Federal Treasury enters into treasury agreements with the eligible entities. In certain cases, the treasury agreements provide that the administrative units may also take out loans from the Federal Treasury. The interest rate on such loans is generally based on the prevailing OIS SARON swap rate for the relevant term, plus a risk margin. During the year under review, this option was used almost exclusively by SBB and the railway infrastructure fund (RIF). Outstanding loans to SBB rose from CHF 5.8 billion to CHF 6.3 billion during the year, while those to the RIF decreased from CHF 6.0 billion to CHF 5.8 billion. As a result, treasury loans totaling CHF 12.2 billion were outstanding at the end of the year.

# Money market debt register claims

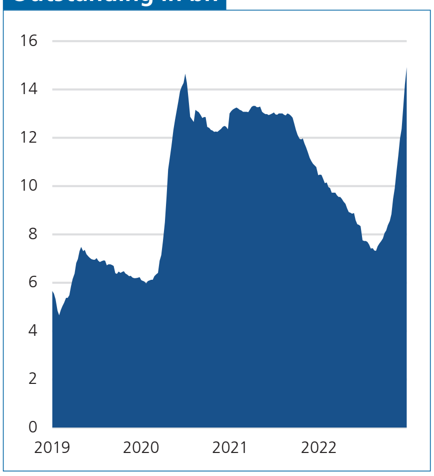
## Auctions in bn



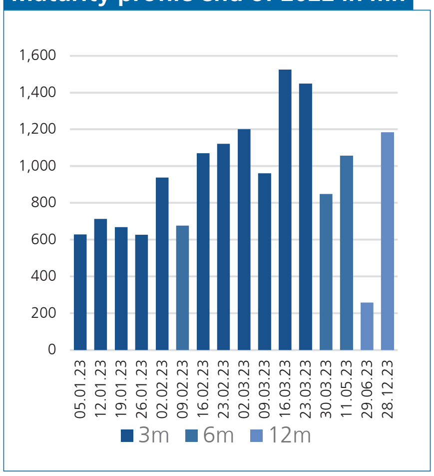

## Yields in % (3m money market debt register claims)



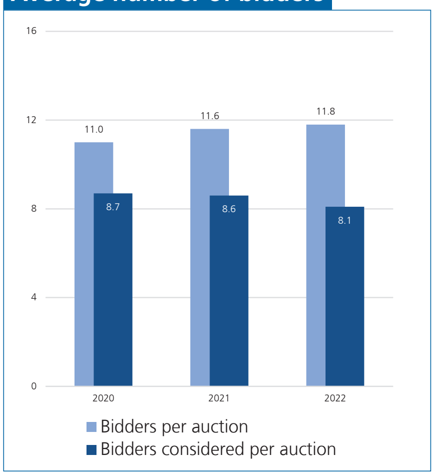

## Outstanding in bn




## Maturity profile end of 2022 in mn




## Average number of bidders



## ■ Funding in the money market

### Money market debt register claims

Due to their short maturities and weekly auctions, money market debt register claims are ideal for managing the Confederation's short-term liquidity. In view of the significantly changing funding needs, this instrument was once again in the focus of the Federal Treasury last year. The volume of outstanding money market debt register claims stood at CHF 10.4 billion at the beginning of the year. It was planned to increase the volume by CHF 2 billion by the end of the year, while keeping the outstanding volume within a range of CHF 8 billion to CHF 14 billion over the course of the year. Thanks to the apparent reduction in the need for approved pandemic-related funds and the federal budget's better-than-expected general cash flows, the volume of outstanding money market debt register claims was gradually reduced to CHF 7.3 billion up to the end of August.

In view of the end of the SNB's negative interest rate policy in September and the resulting liquidity outflows, as well as the rescue mechanism for the electricity industry announced at the beginning of September, an increase in volume was once again needed. Whereas on average around CHF 0.5 billion was borrowed per week up to the end of August, the volume was expanded to an average of CHF 0.6 billion per week from September and was clearly accelerated especially from November onward, with a volume of CHF 1.2 billion per week. At year-end, the outstanding volume totaled CHF 14.9 billion. Bid volumes averaged CHF 2.3 billion per auction until the end of August, rising to CHF 2.7 billion from September and CHF 3.3 billion from November. As a result, the bid-to-cover ratio decreased continuously from 4.7 to 3.0 between August and November.

By contrast, the relative financing costs (spread to OIS SARON swap rate) of the auctions of money market debt register claims did not follow this trend. For example, the spread averaged -10 basis points until the end of August, -25 basis points on average from September onward, and -18 basis points from November onward. The relative increase in the price of money market debt register claims is also likely to have been linked to the trend of the USD/CHF cross currency base, which averaged -19 basis points for the corresponding maturity until the end of September, but widened sharply thereafter to an average of -76 basis points through to the end of the year. This situation is likely to have attracted more USD investors to the market for money market debt register claims and, in relative terms, led to higher prices and thus lower yields. The relative financing costs also show that the SNB Bills introduced from September 2022 did not have a negative impact on the money market debt register claims program.

Absolute financing costs rose sharply in view of the policy rate hikes. Until the SNB first raised the policy rate to -0.25% on June 16, 2022, money market debt register claims (three-month maturity) could still be allocated at yields averaging -0.77%. Thereafter, the average yield achieved was -0.04%, until the policy rate hike in September caused the average yield to rise to 0.46%. Following the December rate increase, the remaining three-month money market debt register claim was allocated at 0.87%. The average yield achieved over the course of the year was -0.19% (volume-weighted 0.00%). The previous year, money market debt register claims contributed to a CHF 99.5 million reduction in interest expenditure thanks to negative interest rates. Due to the U-turn on interest rates, the expense reduction fell to CHF 37.0 million in net terms (interest receipts: 47.8 mn; interest expense 10.8 mn).

**Money market debt register claims**

Money market debt register claims (T-bills) are interest-bearing debt instruments that are issued at a discount by the FFA. These are tradable debt register claims entered in a main register kept by SIX SIS Ltd. Money market debt register claims have maturities of three, six and twelve months. A total of 16 money market debt register claims are always outstanding (11 three-month ones, 3 six-month ones and 2 twelve-month ones). The auctions are held weekly on Tuesdays on the platform of SIX Repo Ltd (rate tender with Dutch or single rate allocation procedure). No nominal interest rate is specified in the case of money market debt register claims; the interest is in the form of a discount at the time of issuance. This means that money market debt register claims are normally issued at a price that is less than 100% of the nominal value. Redemption is then at 100%.

The regular issuance of these money market instruments is an important pillar of the Confederation's refinancing. A liquid market for money market debt register claims that functions well enables the Confederation to raise even larger volumes of borrowed capital at favorable conditions at any time.

**Toward year-end, the volume allocated rose to over CHF 1 billion**

## ■ Funding in the capital market

The issuance calendar published at the beginning of December 2021 envisaged a nominal target volume of CHF 6.0 billion for 2022, spread over eleven auction dates, and the opportunistic sale of own tranches. Including the bond of around CHF 3.5 billion maturing in 2022, this plan corresponded to an increase of just under CHF 2.5 billion in bonds outstanding. Unlike in the two preceding years, this issuance target was not adjusted as the year progressed. Despite the persistently high uncertainty about the Federal Administration's actual funding needs, the Federal Treasury's issuance was virtually in line with the target until the start of the fourth quarter. As the outflows from the federal budget surged following the turnaround on interest rates, the Federal Treasury exceeded its issuance target on the last three auction dates of the year. In total, around CHF 6.9 billion was raised through the auctions and the sale of own tranches. At year-end, the Confederation's outstanding bond volume totaled CHF 68.3 billion (excluding residual holdings of own tranches), and was around CHF 3.4 billion higher than a year earlier, meaning that the increase in long-term market debt already observed the previous year continued. There was consistent demand for Confederation bonds; relative to the swap rate, Confederation bonds even traded at a very favorable level for the federal government. However, the central banks' interest rate hikes caused the average yield achieved through all auctions and the sale of own tranches to return to positive territory (0.89%), unlike in previous years. The average term to maturity of these issues was around 20.2 years (2021: -0.21%; 13.7 years).

**For the first time in four years, the average yield was in positive territory**

**Confederation bonds**

Confederation bonds are the Confederation's most important instrument for covering its long-term funding requirements. The auctions generally take place on the second Wednesday of every month and are carried out on the platform of SIX Repo Ltd: upon issuance, only the nominal interest rate (coupon) and maturity are defined, while the issue amount and issue price (and thus the yield) are determined on the basis of the bids submitted by the platform participants (banks and insurance companies). Like with money market debt register claims, the Federal Treasury allocates the bonds according to the single rate ("Dutch") procedure, i.e. uniformly at the lowest acceptable price. The SNB is responsible for the technical and administrative processing of the auctions.

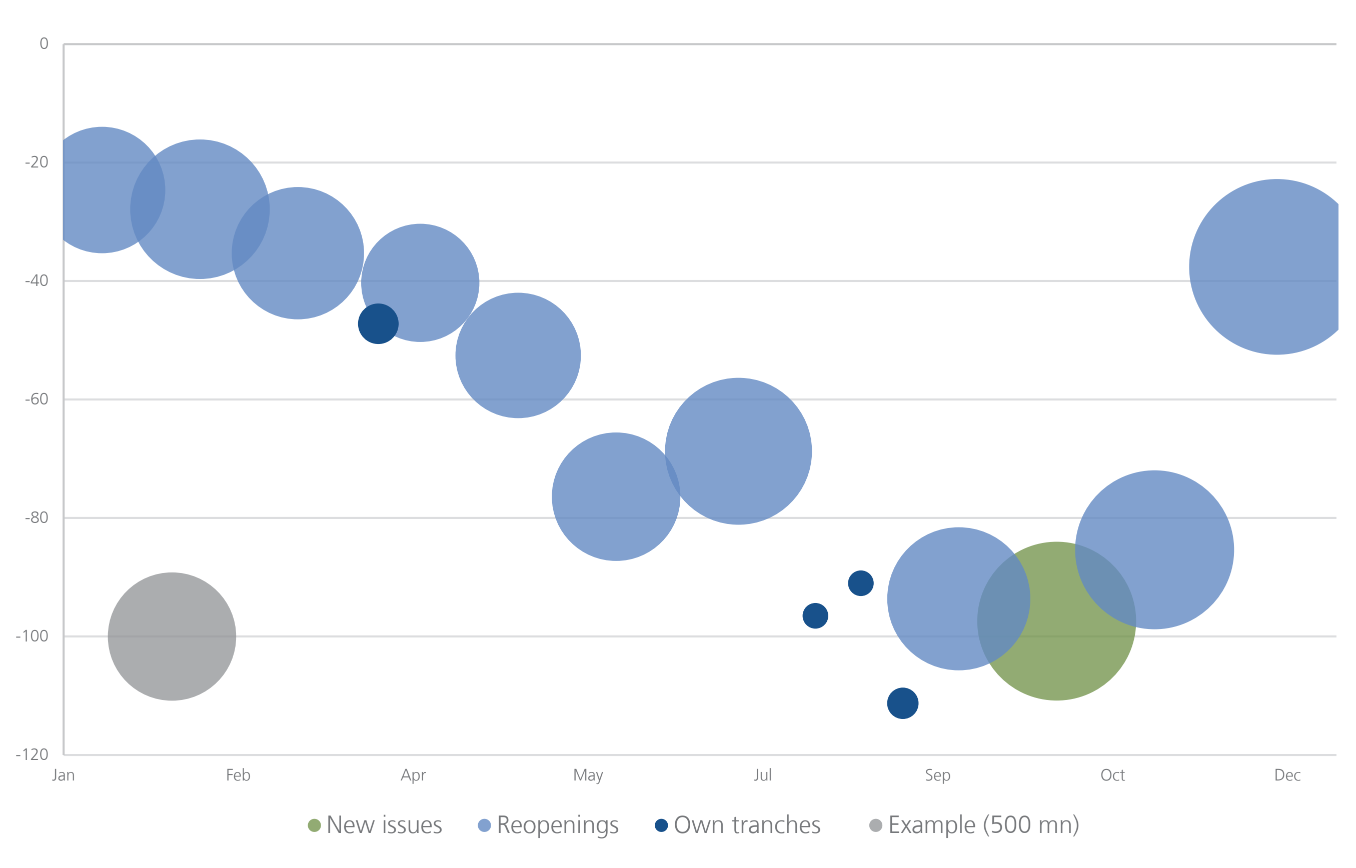
Confederation bonds are listed on the Swiss stock exchange (SIX Swiss Exchange). Effective since summer 2022, they are no longer issued as global certificates, but rather as uncertificated securities in the form of intermediated securities. The Confederation holds a limited volume of securities as proprietary holdings (first time not yet placed). These so-called own tranches are retained from auctions and if needed can be sold directly on the market between the ordinary auction dates. An overview of the own tranches available can be found on the FFA and SNB websites.

Confederation bonds contain a reopening clause. As a result, a bond can be reopened with several auctions, thereby increasing its liquidity on the secondary market. The outstanding Confederation bonds, with their respective terms to maturity and yields, form the yield curve for government bonds. These yields constitute the risk-free reference interest rates for market participants, which allows for an efficient primary and secondary market not just for bonds, but also for associated interest rate derivatives.

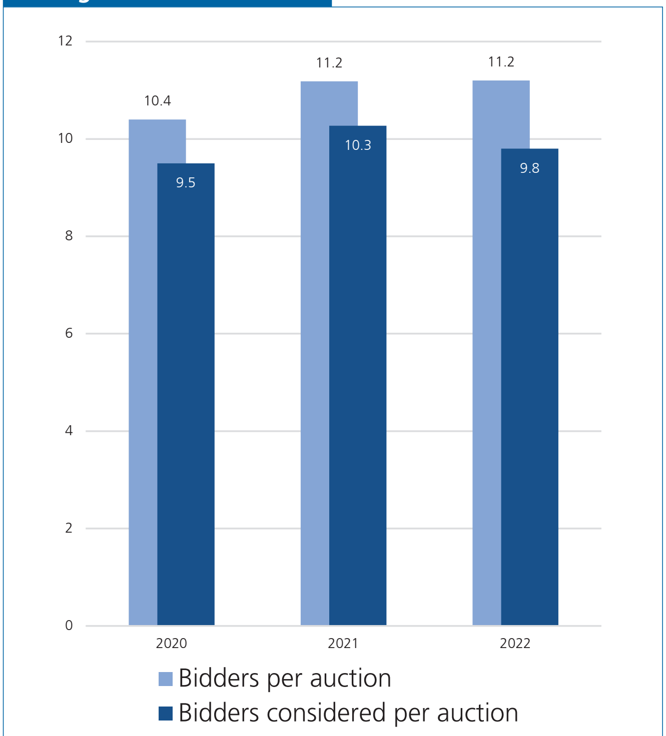
The new green Confederation bonds launched in 2022 are treated in the same way as conventional bonds from an issuing perspective. This means that green bonds will also be regularly reopened in the issuance process after the initial issue in order to ensure secondary market liquidity. Moreover, the Federal Treasury can choose to issue additional green Confederation bonds. The target volume included in the issuance calendar includes both conventional and green Confederation bonds.

## Development of the primary market for Confederation bonds

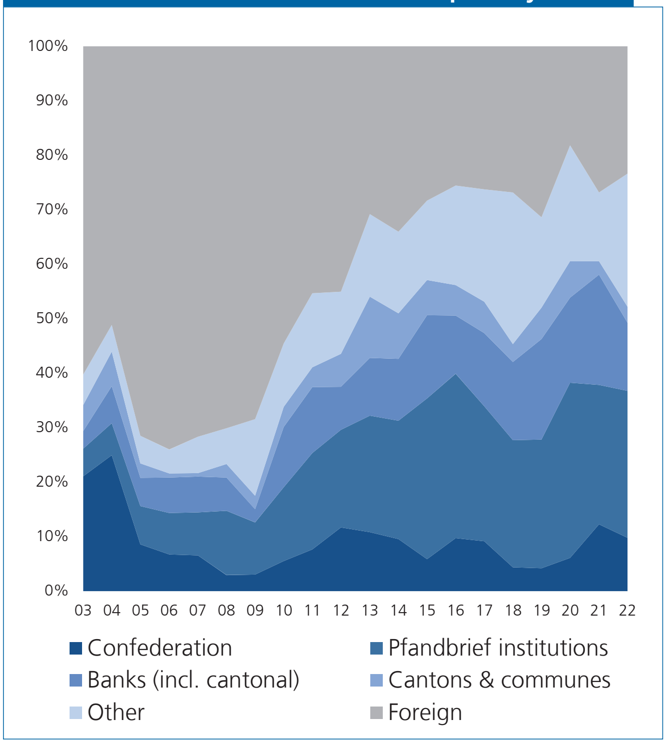
### Volume-weighted auction swap spread (in bp)




### Average number of bidders




### Share of Confederation bonds on CHF primary market



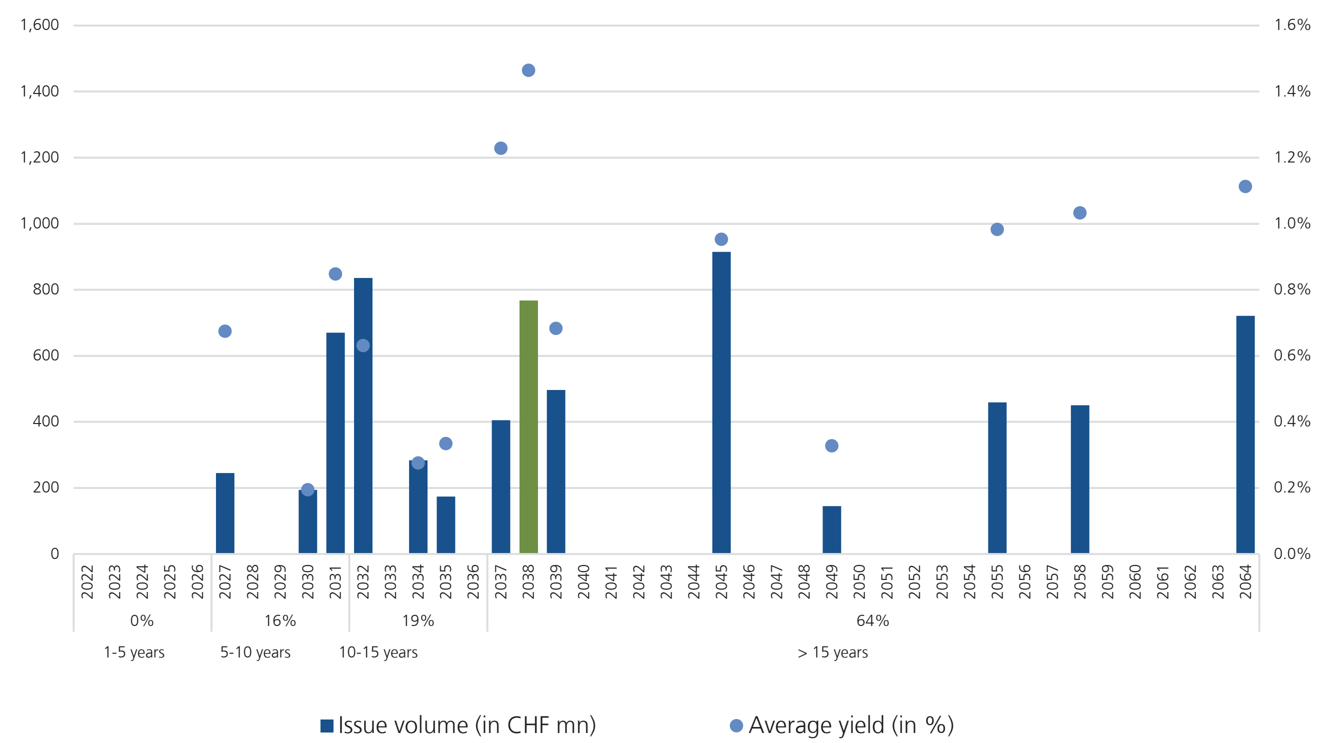

Source: SNB

# 2022 bond auctions

## Auction results

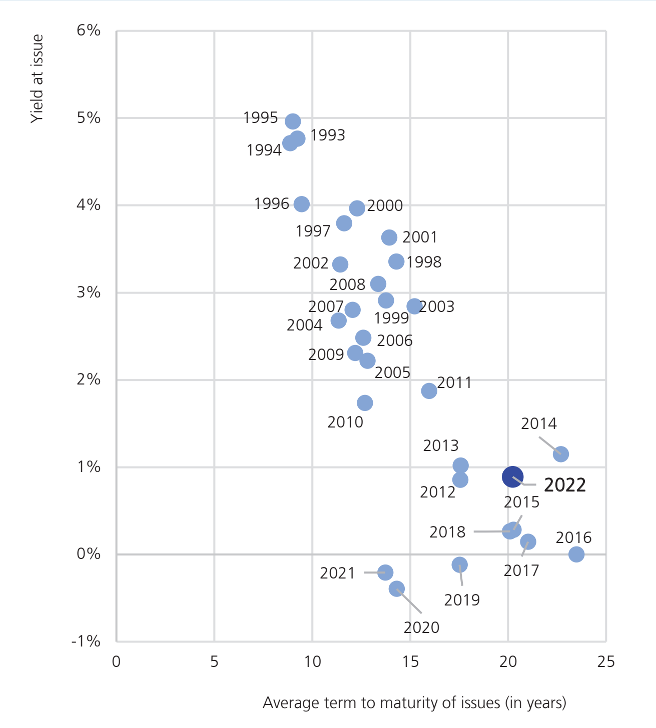
| Auction | Issue | Coupon | Maturity | Issue volume (in CHF mn) | Total outstanding (in CHF mn) | Yield | Spread to swap | Bid-to-cover |
|---|---|---|---|---|---|---|---|---|
| 12.01.2022 | Conf. 27.06.18/32 | 0.500% | 27.06.2032 | 249.2 | 2225.0 | 0.048% | -21.8 | 1.6 |
| 12.01.2022 | Conf. 24.07.19/39 | 0.000% | 24.07.2039 | 236.5 | 1972.2 | 0.130% | -27.6 | 1.7 |
| 09.02.2022 | Conf. 27.05.15/30 | 0.500% | 27.05.2030 | 194.5 | 2881.8 | 0.195% | -24.1 | 1.7 |
| 09.02.2022 | Conf. 26.06.19/34 | 0.000% | 26.06.2034 | 283.7 | 1787.4 | 0.276% | -28.6 | 2.0 |
| 09.02.2022 | Conf. 28.06.17/45 | 0.500% | 28.06.2045 | 113.3 | 2029.0 | 0.248% | -32.5 | 1.7 |
| 09.03.2022 | Conf. 22.06.11/31 | 2.250% | 22.06.2031 | 212.7 | 2738.9 | 0.201% | -31.9 | 1.2 |
| 09.03.2022 | Conf. 23.06.21/35 | 0.250% | 23.06.2035 | 174.0 | 1109.6 | 0.335% | -33.0 | 1.9 |
| 09.03.2022 | Conf. 06.01.99/49 | 4.000% | 06.01.2049 | 144.9 | 2310.2 | 0.328% | -43.0 | 1.6 |
| 13.04.2022 | Conf. 27.06.07/27 | 3.250% | 27.06.2027 | 133.0 | 2653.0 | 0.498% | -40.5 | 1.6 |
| 13.04.2022 | Conf. 28.06.17/45 | 0.500% | 28.06.2045 | 291.4 | 2370.4 | 0.972% | -40.2 | 1.9 |
| 11.05.2022 | Conf. 27.06.18/32 | 0.500% | 27.06.2032 | 238.9 | 2463.9 | 0.864% | -51.9 | 2.3 |
| 11.05.2022 | Conf. 24.05.17/55 | 0.500% | 24.05.2055 | 239.0 | 1482.5 | 0.886% | -53.2 | 2.1 |
| 08.06.2022 | Conf. 27.06.12/37 | 1.250% | 27.06.2037 | 111.3 | 3595.1 | 1.232% | -65.5 | 1.9 |
| 08.06.2022 | Conf. 25.06.14/64 | 2.000% | 25.06.2064 | 390.1 | 2617.1 | 1.181% | -79.5 | 1.6 |
| 13.07.2022 | Conf. 27.06.18/32 | 0.500% | 27.06.2032 | 205.1 | 2669.0 | 0.731% | -78.0 | 1.3 |
| 13.07.2022 | Conf. 30.05.16/58 | 0.500% | 30.05.2058 | 450.5 | 1941.4 | 1.033% | -64.5 | 1.7 |
| 14.09.2022 | Conf. 27.06.07/27 | 3.250% | 27.06.2027 | 111.8 | 2764.8 | 0.884% | -90.1 | 2.0 |
| 14.09.2022 | Conf. 28.06.17/45 | 0.500% | 28.06.2045 | 510.0 | 2900.4 | 1.099% | -94.4 | 1.3 |
| 12.10.2022 | Conf. 26.10.22/38 | 1.500% | 26.10.2038 | 766.3 | 766.3 | 1.465% | -97.4 | 1.3 |
| 09.11.2022 | Conf. 27.06.18/32 | 0.500% | 27.06.2032 | 142.4 | 2811.4 | 1.119% | -75.0 | 1.3 |
| 09.11.2022 | Conf. 27.06.12/37 | 1.250% | 27.06.2037 | 294.0 | 3889.1 | 1.227% | -83.9 | 1.1 |
| 09.11.2022 | Conf. 25.06.14/64 | 2.000% | 25.06.2064 | 331.1 | 2968.2 | 1.034% | -91.1 | 1.0 |
| 14.12.2022 | Conf. 22.06.11/31 | 2.250% | 22.06.2031 | 457.6 | 3196.5 | 1.149% | -37.5 | 1.6 |
| 14.12.2022 | Conf. 24.07.19/39 | 0.000% | 24.07.2039 | 260.1 | 2232.3 | 1.186% | -39.3 | 1.9 |
| 14.12.2022 | Conf. 24.05.17/55 | 0.500% | 24.05.2055 | 219.8 | 1722.4 | 1.089% | -35.8 | 1.3 |
| **Total** | | | | **6761.2** | | **0.892%** | **-60.1** | **1.6** |

## Maturities and yields

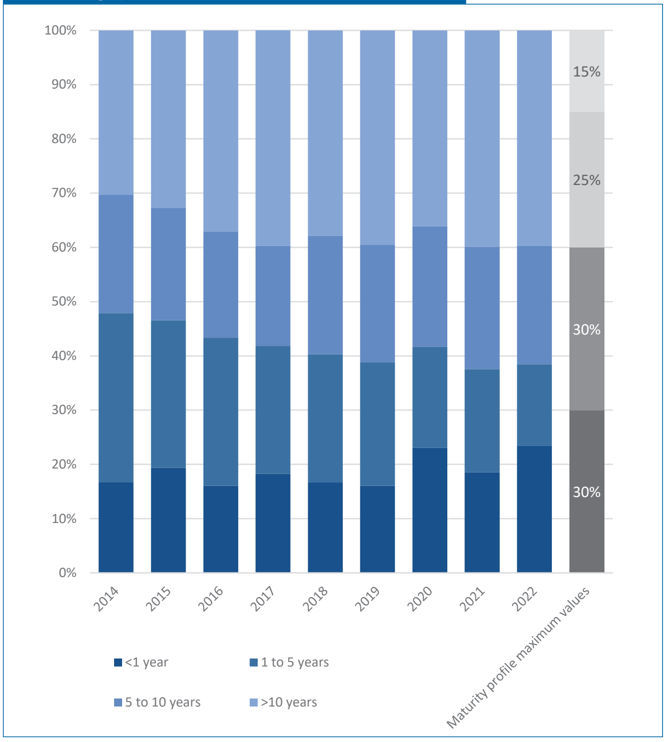


# Duration and term to maturity

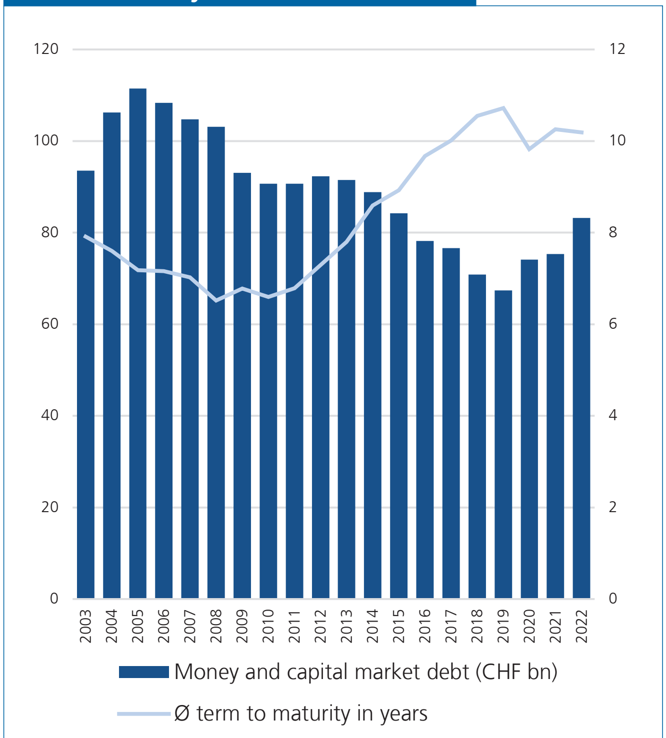
## Duration and yield of Confederation bonds



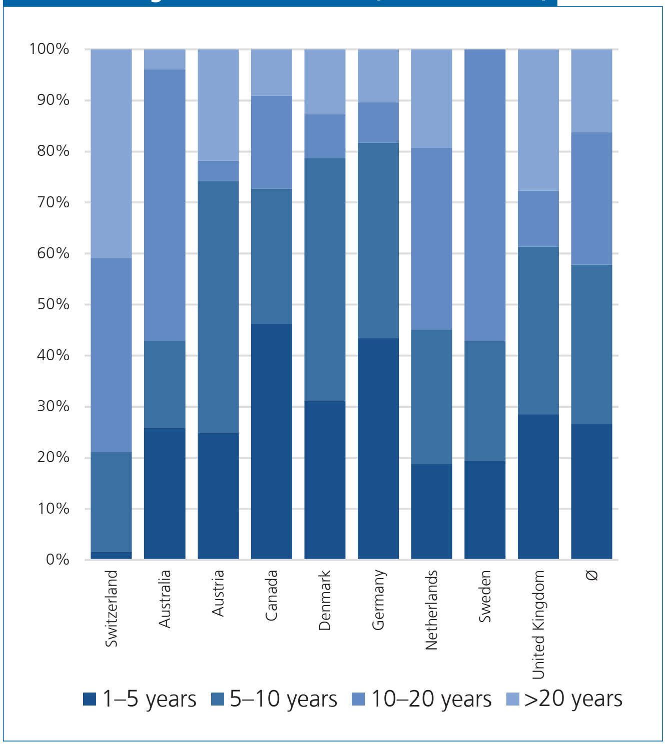

## Maturity profile of federal market debt




## Term to maturity of federal market debt

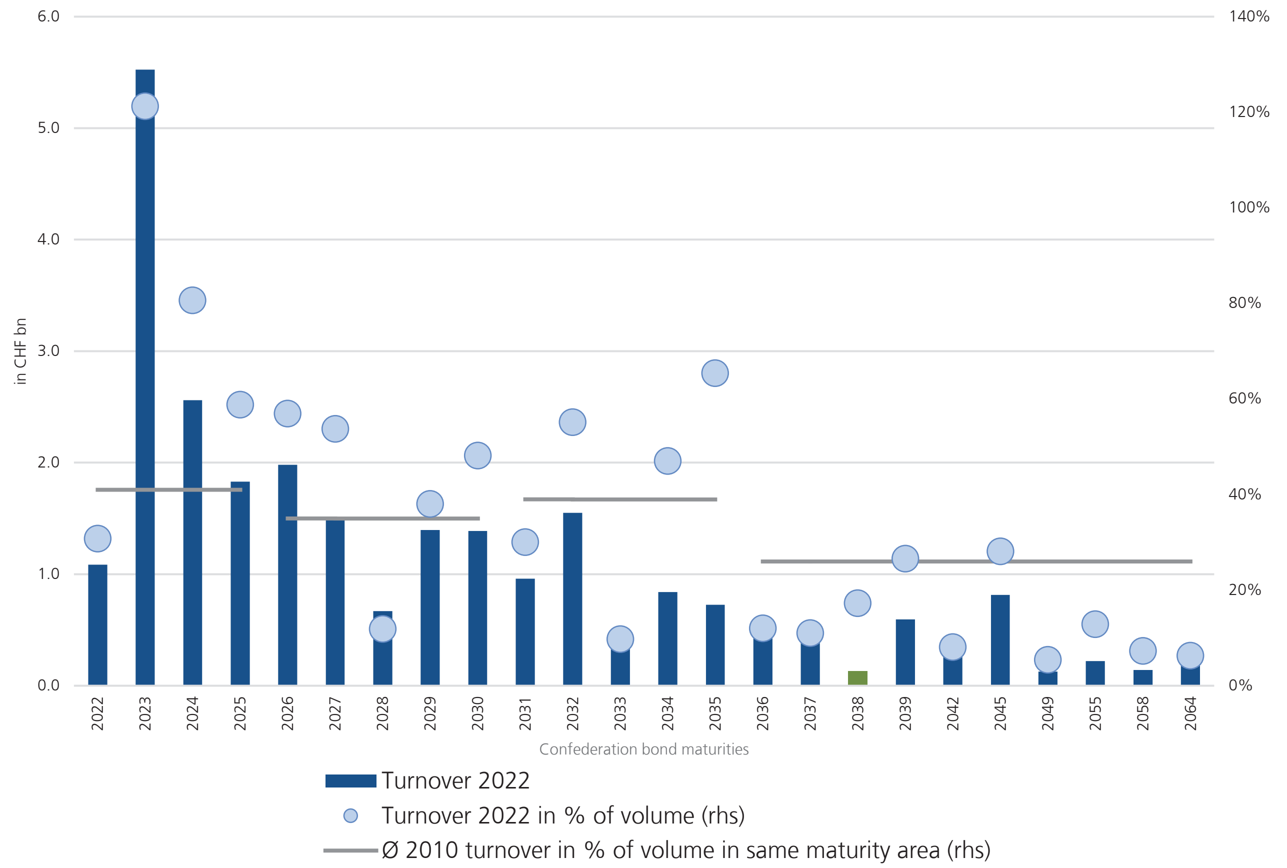



## Duration of government bonds (issued in 2022)

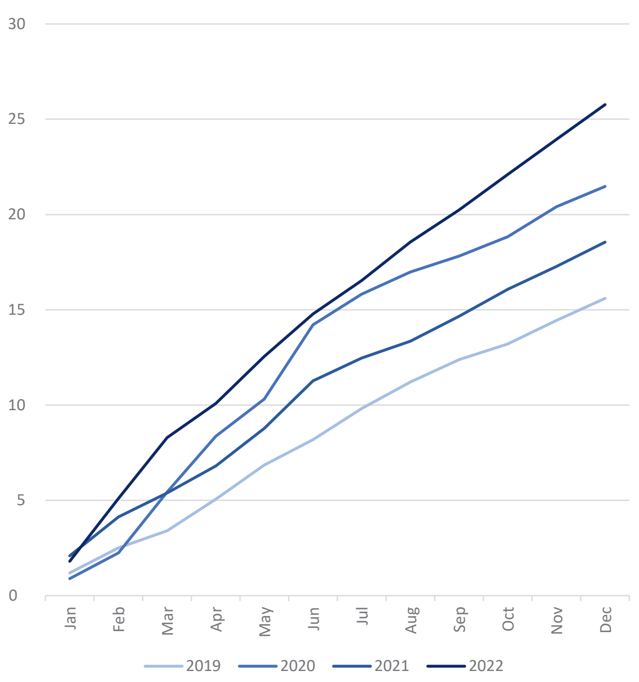


# Development of the secondary market for Confederation bonds

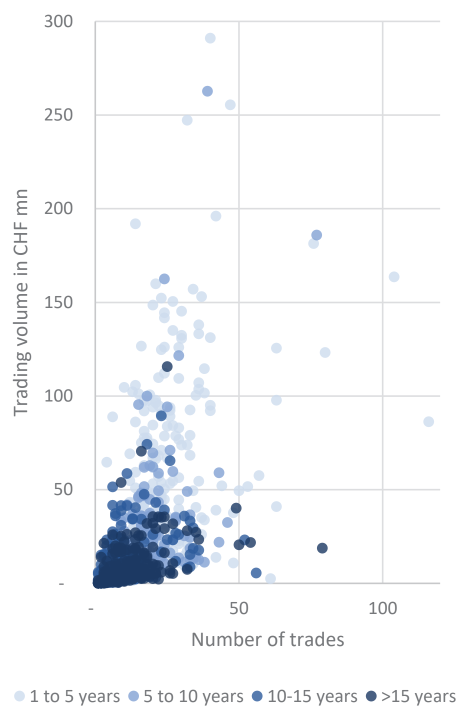
## Confederation bond trading volumes on the secondary market




## Cumulative trading volumes in bn




## Daily trading activity by maturity segment




Source: SIX

**Issuing principles of the Federal Treasury**

1. The Confederation is committed to an efficient Swiss capital market that functions well, thereby ensuring regular and reliable refinancing opportunities. By issuing bonds, it makes sure that the most important maturities of 1 to 13 years are covered with liquid bonds. In the case of extremely long maturities, intermittent anchor points are to be placed on the yield curve with individual bonds.
2. The Confederation's debt portfolio comprises around 20 underlying bonds. There is only one bond per maturity.
3. The issuance program, together with auction dates and the gross and net annual funding requirements, is publicly communicated in December of the previous year.
4. Bond auctions take place on a monthly basis, with a summer break in August. Two dates are optional (usually October and December).
5. A bond with a maximum volume of CHF 5 billion is to mature per year. A minimum volume of CHF 2 billion is sought with the 10-year benchmark bond.
6. If possible, bonds should mature in the months of May to September; new underlying bonds are launched accordingly during this period.
7. Reopenings are possible for all bonds with a term to maturity of more than one year.
8. Pricing at auctions (allocation) is based on the funding requirement, investor demand, absolute interest rates, bid and offer prices, and the swap spread of the underlying bond.
9. Subject to a federal funding requirement, own tranches can be acquired from the Federal Treasury between the auction dates at market conditions (pricing same as for bond auctions). Maturities that are not (or no longer) covered by auctions in the respective year are preferred.
10. Bonds with a shorter term to maturity can be redeemed within the framework of liquidity management.

### Auction review

The Federal Treasury conducted eleven auctions in 2022. The two optional dates in October and December were used. Due to the comparatively high issuance volume, three different bonds were issued simultaneously on four auction dates. Two bonds were auctioned on six other dates. The first ever green Confederation bond was issued at the October auction. No additional bonds were auctioned on this date, in order to focus on this new issue.

The Federal Treasury issued bonds with a face value of CHF 6.8 billion through the auctions (2021: 7.2 bn). The average volume-weighted auction yield was 0.89% in 2022 (2021: -0.38%). This was the first time in four years that the federal government had to pay to issue new debt. After very high premia were regularly collected in previous years due to the extremely low capital market yields, the premia associated with the 2022 auctions amounted to CHF 182 million (2021: 800 mn).

The bonds auctioned will mature between 2027 and 2064, and, with the exception of the short end of the yield curve, cover all maturities. The average term to maturity (duration) of the bonds auctioned, i.e. excluding the own tranches sold, was 21.5 years. As shown by the issues' long average term to maturity, the largest volume (4.1 bn) was raised in the long and ultra-long segments, with maturities of over 15 years. The maturity segment up to 10 years accounted for just under CHF 1.5 billion, and the 10 to 15 years segment for just under CHF 1.2 billion. This result is somewhat surprising, as the capital market was extremely volatile and the Confederation bond yield curve was largely inverted (longer maturities offered lower yields than shorter maturities), meaning that investors were unable to achieve a term premium. Overall, the average term to maturity was considerably higher than in the two pandemic years, and also significantly above average by international standards.

The Federal Treasury once again, with the approval of the Asset & Liability Committee (ALCO), thus deviated from the issuance strategy defined as optimal, which provides for a much shorter duration. This means that the maximum permissible interest rate risk is not fully utilized. The Federal Treasury intends to use this tactical deviation to ensure that the federal government can benefit from the low interest rates for a long time if they rise again in the medium term. Although this deviation – if the shape of the yield curve is normal – is associated with a certain term premium in the short term, the Confederation's interest expenditure was reduced further. Over the past decade, this expenditure has fallen steadily from around CHF 2.5 billion to well under CHF 1 billion per year. However, due to the U-turn on interest rates, debt servicing costs are likely to rise gradually in the years ahead. Since only a relatively small proportion of the outstanding bonds is refinanced each year, interest expenditure for long-term market debt will increase quite slowly. The ALCO decided to end the tactical deviation at the end of 2022. Consequently, the Federal Treasury will strive to achieve a shorter average term to maturity at issuance in 2023. Nevertheless, it will also pay attention to market conditions and investor demand. To allow for the larger issuance volume at the shorter end of the range, the upper limit previously targeted for individual outstanding maturities will be raised from CHF 4 billion to CHF 5 billion.

### Relative financing costs at record lows during the year

Compared with the previous two years, the federal government's relative financing costs (measured by the yield spread to the swap rate) decreased significantly and reached a new low at the beginning of the fourth quarter. While the average spread to swap (SARON basis) was slightly positive shortly after the outbreak of the pandemic, it declined somewhat in the previous year and averaged around -16 basis points in 2021. Although issuance volumes were again well above the pre-pandemic levels in 2022, the relative financing costs continued to improve steadily from January to October. While the volume-weighted spread was still -25 basis points at the first auction of the year, a spread of -97 basis points was achieved when the first green Confederation bond was issued. This trend was interrupted again at the last two auctions of the year. At the December auction in particular, investors again demanded higher yields in order to be persuaded to buy Confederation bonds. With a spread of just under -38 basis points, the federal government's financing costs nonetheless remained at a very favorable level. The average spread for the year was -60 basis points, which was also significantly lower than during the years prior to the pandemic, when issuance volumes were substantially lower.

This development had no impact on the investor structure of Confederation bonds, which remained largely unchanged. While the proportion held by foreign investors rose minimally year on year (from 16% to 17%), more than three quarters of the bonds remained in the hands of domestic investors (76%). Swiss banks' proprietary holdings fell by around 1 percentage point on the previous year, and stood at just over 7%. The average number of auction participants and the average number of counterparties considered likewise changed only marginally compared with the previous year. The same was true for the bid-to-cover ratio (the ratio of bids to the allocated volume), which remained more or less at the previous years' level at 1.6. The average demand per bond issued was around 5% higher than a year earlier at CHF 425 million. Before the pandemic, when issuance volumes were much lower, it was around CHF 200 million. At CHF 270 million, the average allocation volume was down by around CHF 10 million on the previous year. Both the greatest demand and the largest allocation volume were seen when the first green Confederation bond was issued in October. Interestingly, the level of relative financing costs does not seem to have a direct impact on demand: a weak negative correlation can be observed. This means that the relative financing costs, which were extremely favorable for the federal government, did not deter investors from buying Confederation bonds. It would appear that other factors play a more important role, such as the search for secure and liquid investments in times of heightened uncertainty.

Confederation bond trading on the secondary market was above average compared with recent years. A total volume of around CHF 26 billion was traded (2021: 19 bn) over the year as a whole. An analysis of the individual maturities shows that Confederation bonds maturing in the next five years accounted for just under half of the trading volume. As usual, the highest trading volume was seen in the case of bonds with the shortest terms to maturity (i.e. 2022, 2023, 2024). This segment accounted for almost 40% of the total volume, while the bond maturing in 2023 alone accounted for 20% of the annual turnover. A similar picture was observed with regard to the number of trades per day. While long maturities were traded only sporadically, trading in short maturities was much more active. Notwithstanding the high trading activity, bid-ask spreads widened noticeably in 2022 compared with previous years. This is generally seen as an indication of a decline in secondary market liquidity. The difference relative to earlier years was observed primarily in the second and third quarters, which is when the spread to the swap rate was most clearly in negative territory. Similarly, the high volatility in interest rate markets is likely to have led to wider bid-ask spreads.

### Sale of own tranches

The sale of own tranches was much less substantial in 2022 than in the two preceding years. Overall, own tranches with a nominal value of CHF 120 million were placed in five transactions. The premium associated with own tranches was around CHF 13 million. The maturities of the own tranches traded ranged from 2045 to 2064, and were thus limited exclusively to the long end of the yield curve. The volume-weighted average yield was 0.71%, and the average term to maturity was 28.1 years (2021: -0.31%; 15.6 years). Unlike in the preceding two years, when own tranches were placed throughout the year, most of the activity last year was confined to August, when the Federal Treasury traditionally takes a break from auctions.

The instrument was used less frequently in 2022 than in prior years, primarily because the Federal Treasury was able to meet its funding requirements with the auctions. Starting with the first auction of the year, the issuance target was met almost spot on, and the cash outflows from the federal budget were in line with expectations in the first half of the year. Although the instrument was used less frequently last year, the Federal Treasury will continue to sell own tranches at market conditions at the request of counterparties between auction dates, provided a federal funding requirement exists.

### First issuance of green Confederation bonds

The Federal Council decided in November 2021 to prepare a basis for the issuance of green Confederation bonds. With the help of this new financing instrument, the Federal Council wants to contribute to the Swiss financial center becoming an international leader in sustainable financial services. The funds raised with green bonds may be allocated solely to federal expenditure that has a positive environmental impact, such as the promotion of public transportation, the preservation of biodiversity and the construction of eco-friendly buildings, for example. The market for green bonds has grown robustly in recent years, both in Switzerland and internationally. Sovereign issuers in particular play an important role in this regard. The Federal Council instructed an interdepartmental working group under the leadership of the Federal Treasury to prepare the first issue.

Between March and August 2022, the working group drew up the framework for the first issue for the attention of the Federal Council. In doing so, it was guided by the Green Bond Principles of the International Capital Market Association (ICMA) and supported by Crédit Agricole Corporate and Investment Bank (CACIB). Green federal expenditure was identified by analyzing the budget and was assigned to the categories of (1) clean transportation, (2) agriculture, forestry, natural landscapes and biodiversity, (3) green buildings and energy efficiency, (4) renewable energy, (5) international cooperation, and (6) research, innovation and awareness-raising. With the expenditure allocated to issue proceeds, the Federal Council primarily aims to address the combined challenges of climate change and declining biodiversity, and thereby contribute to the achievement of the sustainability goals. The framework was certified by ISS ESG.

Because of the Confederation's relatively low issuance volume, the Federal Treasury has deliberately refrained from establishing a separate green yield curve. Instead, green bonds are essentially treated in the same way as conventional bonds: there is only one bond per maturity (irrespective of whether it is conventional or green), outstanding bonds can be reopened, and there is generally one new issue per year. Under these conditions, the first gap in the yield curve was chosen as the maturity for the first issue (maturity 2038). Unlike when conventional bonds are first issued, the Federal Treasury, in cooperation with CACIB and UBS, conducted a global investor call prior to the auction. Despite a highly volatile market environment, demand for the green issue was very good, but not significantly above average relative to previous initial issues. With demand of CHF 974 million, the Federal Treasury raised approximately CHF 766 million (excluding 300 mn in own tranches).

The bid-to-cover ratio was within the normal range. Consequently, unlike in other European countries, the initial issue was not significantly oversubscribed. However, in view of the issue being denominated in Swiss francs and the fact that conventional Confederation bonds are also widely regarded as sustainable, this was in line with expectations. The Federal Treasury did not communicate any greenium (i.e. pricing benefits over conventional bonds). This was primarily due to the issuance procedure (no fixed volume target, no directly comparable conventional bond), which made it impossible to determine the greenium precisely. In principle, however, the expectation that the financing costs were no higher than for conventional bonds was confirmed.

## ■ Foreign exchange management

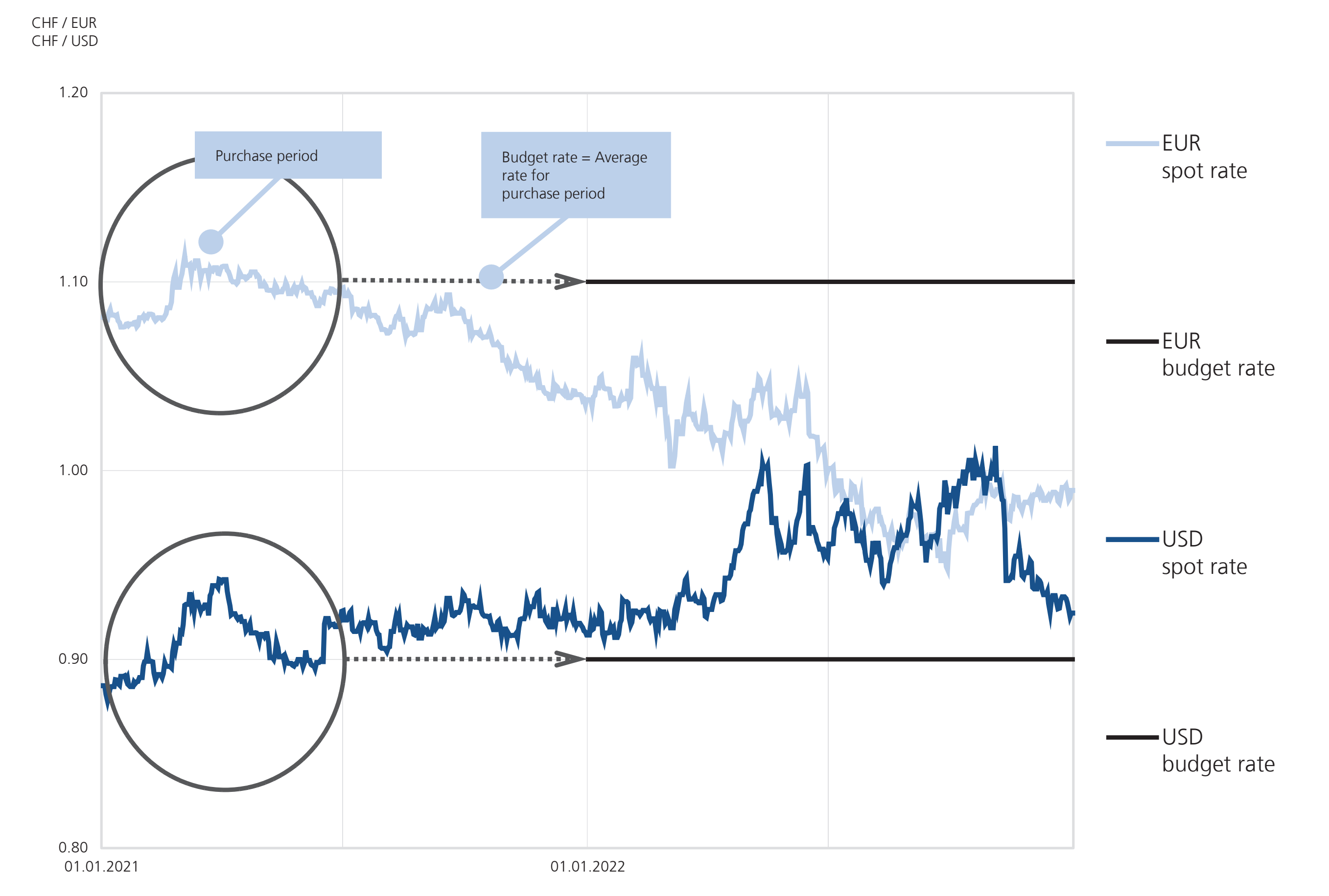
Since 1998, the Federal Treasury has been managing and systematically hedging the Federal Administration's foreign currency demand. From the FFA's perspective, exchange rate developments generally cannot be predicted. Accordingly, the Federal Treasury pursues a passive approach and does not apply active strategies involving changing exposure to rising or falling exchange rates. Hedging gives the administrative units planning certainty, and overruns of approved credits due to negative forex fluctuations can be avoided. The Federal Treasury distinguishes between budgetary transactions and special transactions.

### Budgetary transactions

In the case of budgetary transactions, the administrative units' budgeted euro (EUR) and US dollar (USD) requirements for the coming year are hedged. Foreign currencies are purchased forward in parallel with the budget process (February to July). The budgeted volumes are purchased on an ongoing basis in batches of 5 to 10 million. By following this approach, an average exchange rate that corresponds to market developments is achieved, i.e. the budget rate more or less corresponds to the average exchange rate for the first two quarters. The FFA makes the purchased foreign currencies available to the administrative units at the exchange rates fixed in the budget.

A total of 671 million euros and USD 1,012 million was purchased forward in 2021 for the 2022 budget year. The currencies were procured from February to July 2021 at average rates of 1.09 for CHF/EUR and 0.90 for CHF/USD, respectively. During the hedging phase, the euro reached a high of CHF 1.11 in March 2021, but depreciated continuously thereafter and ended the year at CHF 1.04. The average spot rate in 2022 was 1.01 for CHF/EUR, which was much lower than the purchase rate. In retrospect, hedging resulted in opportunity costs of just over CHF 64 million. During the 2021 procurement year, the USD reached a high of CHF 0.94 at the end of March, then depreciated sharply to

**Foreign exchange management**




Source: Bloomberg

CHF 0.89 as of mid-June, and thereafter mostly traded within a range of between CHF 0.91 and CHF 0.93. The average spot rate in 2022 was 0.96 for CHF/USD, which was clearly higher than the purchase rate. USD hedging thus resulted in opportunity gains of just over CHF 57 million.

The Confederation's measures for combating the pandemic had a major impact on budgetary transactions also in 2022. With regard to the euro, 52 million of the 671 million euros procured in 2021 for the budget year had to be sold at the end of the year, as vaccine payments budgeted in euros did not materialize. Regarding the USD, the hedged 1,012 million had to be significantly increased by 318 million, with additional vaccine procurements accounting for just over 200 million of that figure. The remaining additional requirement resulted from the reserve power plant in Birr (AG). The subsequent purchases in USD were 2.2 times higher than the average subsequent purchases for the budget years 2017 to 2019, and slightly lower than in the pandemic years (2020: 379 mn, 2021: 325 mn). Due to unexpected inflows at the end of the year, the USD closing balance stood at approximately 22 million, despite the gradual procurement strategy.

**The measures to combat the pandemic made forex planning more complicated**

Since the introduction of currency hedging in 1998, around CHF 31 billion in euros and USD has been purchased within the framework of budgetary transactions – in other words, the equivalent of 1.3 billion francs' worth of euros and USD on average each year. Hedging over this period resulted in opportunity costs for the Confederation of around CHF 182 million, or 0.6% of the hedged volume.

In the year under review, a total of 666 million euros and USD 964 million was purchased forward for the 2023 budget year, with budget rates of 1.05 for CHF/EUR and 0.95 for CHF/USD.

### Special transactions

Special transactions are predetermined payments in foreign currencies made over a period of several years within the framework of a credit line. Like the budget requirements, they are fully hedged in a bid not to exceed the CHF amount of the credit line due to negative forex fluctuations and to ensure planning certainty for the administrative units.

During the year under review, four USD special transactions amounting to around CHF 8 billion were carried out for the areas of defense and development cooperation. The two special transactions in the defense sector were particularly striking, with a hedged USD volume equivalent to around CHF 7 billion. These special transactions concerned the procurement of the new F-35A fighter jets and the Patriot ground-based air defense system. As usual, the Federal Treasury sought to hedge these large sums in a manner that minimized the impact on the market and was as resource-efficient as possible. This involved analyzing various hedging options both internally and with external partners. Following the parliamentary decision in September, the Federal Treasury successfully hedged the spot risks associated with the procurements, and it is now managing the outstanding forex swap portfolio with minimum impact on the market through to the end of the payment schedules. As of the end of 2022, a total of 28 special transactions with an aggregate value of CHF 9.3 billion (USD, euro and SEK) were open for hedging purposes, which was significantly more than a year earlier (CHF 2.3 bn).

Relative to a non-hedging strategy, opportunity costs of around CHF 188 million, or 1.4% of the hedged volume, have accrued for all payments arising from special transactions falling due (2000 to 2022).

# 10.2

years

is the average term to maturity of the Confederation's market debt.

# Presentation and evaluation of the risk situation

The Confederation's general risk policy is defined by the Federal Council. The Confederation is prepared to assume risks in a controlled and deliberate manner, provided that this is unavoidable for the achievement of objectives or the execution of tasks. Risks should be minimized (instructions on the Confederation's risk policy).

Aside from interest rate and refinancing risks, forex and counterparty risks must also be taken into account by the Federal Treasury when performing its main tasks.

## ■ Interest rate risk

The interest rate risk for the Federal Treasury is determined by the existing maturity profile and the planned new transactions. It is managed mainly through issuing activity. The debt strategy stipulated by the ALCO determines the issuing activity and thus the maturities of new transactions.

Dynamic simulation analyses are used to analyze the effects of various issuance strategies and different interest rate scenarios. A cost-at-risk approach is used to examine the development of interest payable and its fluctuations. Information is thus obtained to optimize the debt strategy from a cost and risk perspective. Moreover, the degree to which interest payable may fluctuate can be estimated, also with regard to the budget and financial plan.

The interest rate risk is closely linked to the refinancing risk. High short-term maturities entail high interest rate and refinancing risks, and long maturities dampen them.

A projection of interest rate costs shows the trend of interest payable under various interest rate scenarios with an unchanged issuance strategy. In the process, the development of debt in accordance with the budget and financial plan is factored in. The interest rate paths are generated using a stochastic interest rate model. The mean is derived from this, as are the 10% and 90% quantiles of the statistical distribution of interest payable.

**Analysis of the interest rate risk**

A prospective approach is used to simulate and analyze various issuance strategies with different interest rate trends over a period of up to ten years. On the one hand, selected deterministic interest rate scenarios are used. On the other, stochastic interest rate models are also used to generate a large number of interest rate paths. This enables a random distribution of potential interest payable to be calculated for different debt portfolios for a given planning period. This in turn makes it possible to establish average expected interest payable, as well as possible deviations and their probability (cost-at-risk approach). Based on this data, different issuance strategies can be compared with respect to the expected interest payable (cost dimension) and its future fluctuation ranges (risk dimension).

The baseline scenario (mean) is derived from the macroeconomic assumptions and corresponding interest rates of the federal government's economic forecasts expert group. It is assumed that interest rates will normalize, and rise slightly. This scenario serves as the baseline and is supplemented with the 10% and 90% quantiles of the distribution of interest rate costs for each month over the 10-year simulation horizon. The extreme scenarios include interest rates remaining at the current low level (constant interest rates), as well as an exceptionally sharp and rapid rise of 4 percentage points in interest rates (interest rate shock).

Interest payable is a form of expenditure that cannot be directly influenced by the Federal Council or Parliament. Accordingly, an increase has to be offset by either additional receipts or reduced expenditure in order to comply with the debt brake requirements. Based on the baseline scenario, the Federal Treasury expects interest payable to rise over the next four years, which should be sustainable despite the strained budgetary situation. In the event of an interest rate shock, however, interest payable would rise very rapidly and sharply, posing a major challenge to the federal budget. This scenario is unlikely at the moment. In such a case, the additional interest receipts from the investment of liquidity would partly offset the increase in interest payable.

Relative to the previous year, the utilization of the risk budget decreased by CHF 53 million on an annual average to CHF 358 million. This was mainly a consequence of the higher investment volumes and the return to positive interest rates, which together act as a natural hedge.

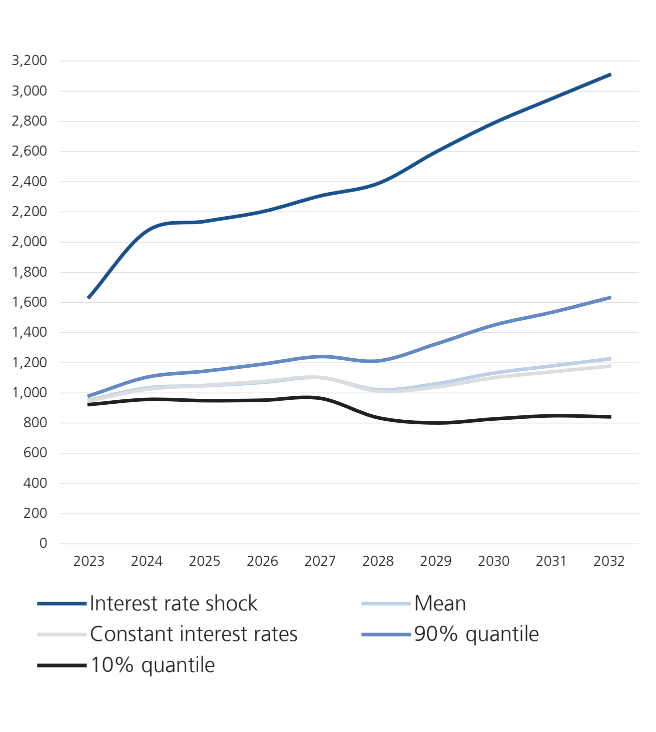
Since the start of the negative interest rate regime, the Federal Treasury has deviated from the optimal debt strategy and issued more long-dated bonds. The duration of newly issued bonds has been close to 20 years on average since 2015. The Asset & Liability Committee (ALCO) decided to maintain this tactical deviation until the interest rate environment returned to normal. This was the case when the SNB raised its policy rate above zero. Accordingly, the optimal debt strategy was reapplied and also reviewed once again. This means that the average duration of newly issued bonds will again be somewhat shorter and the maximum permissible interest rate risk will be exploited to a greater extent where possible.

**Highest interest rate risk permissible**

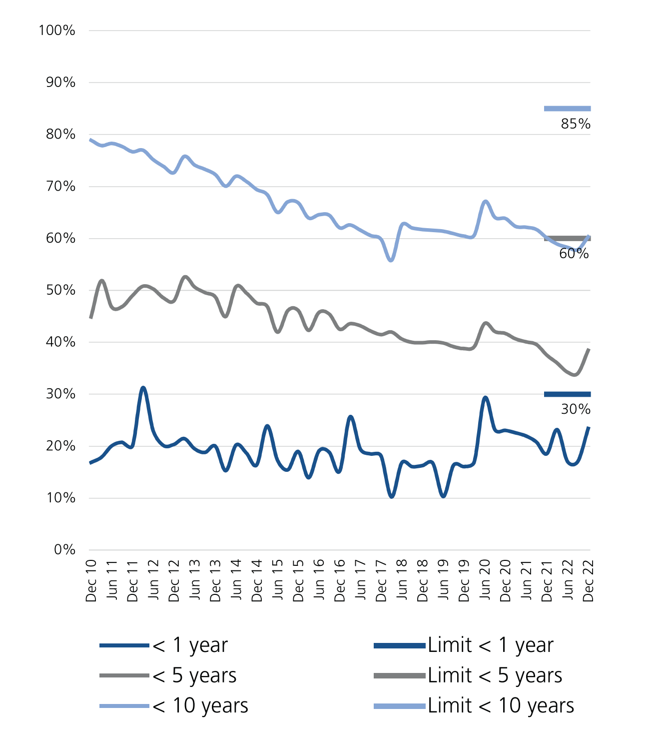
The cumulated risk budget for interest rate risks is CHF 500 million for four years. This takes into account the Confederation's fiscal policy risk capacity and risk tolerance, i.e. the extent to which an increase in interest expenditure can be offset in another way without radical measures. This means that the fluctuations in interest expense forecast for the budget and financial plan time horizon may deviate from the mean by a maximum of CHF 500 million on a cumulative basis (90% quantile less mean). In the worst case, the corresponding risk can also occur within a year. The annual average for the interest rate risk was CHF 358 million in 2022.

**The utilization of the risk budget decreased, but it is still not fully utilized**

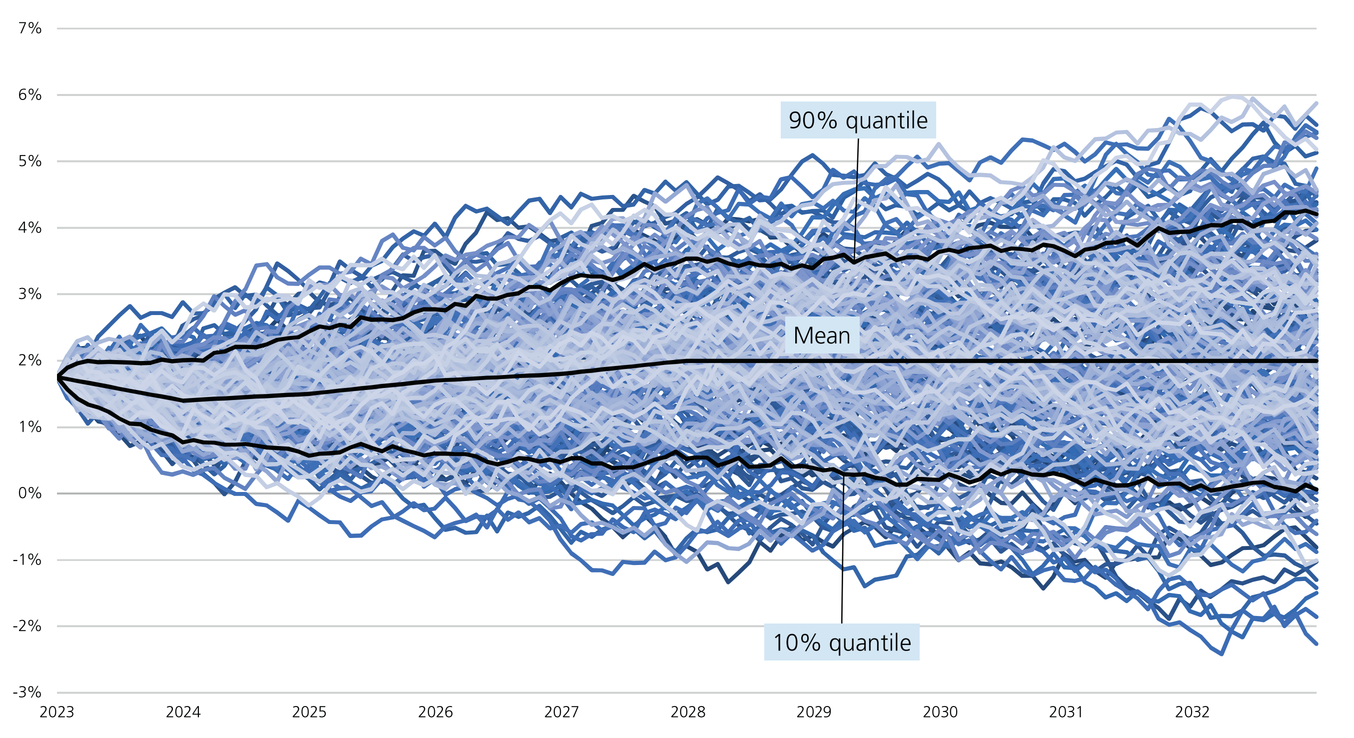
## Interest expense projection in mn




## Maturity profile of outstanding market debt




## Stochastically simulated interest rate paths (10-year swap rate)



## Refinancing risk

The maturity profile of outstanding market debt and the Confederation's rating are important refinancing risk indicators.

The current maturity profile of money and capital market debt shows a moderate refinancing risk overall. The refinancing share of the maturities <1 year rose by 5 percentage points year on year and thus amounted to 23% of the Confederation's market debt at the end of 2022. Despite this significant increase – which was attributable to the rise in the volume of money market debt register claims – the share of maturities remained well below the upper limit of 30%. The refinancing shares of the maturities < 5 years and < 10 years barely changed relative to the previous year: as of the end of 2022, they amounted to 38% and 60% of market debt, respectively, and were thus well below the upper limits of 60% and 85%. This is well below the targets (or maximum shares) set out in the service level agreement between the FDF and the FFA. The maturity structure of the debt portfolio could thus be shortened significantly within these specifications.

**The proportion of debt due to be refinanced within 12 months increased; refinancing risks remained moderate**

The average term to maturity of the debt portfolio remained virtually unchanged year on year, and fell from 10.3 years to 10.2 years in 2022. Consequently, the lengthening of the bond portfolio from 11.9 years to 12.4 years was offset by the volume of money market debt register claims being increased significantly from CHF 10.4 billion to CHF 14.9 billion. The volume of bonds outstanding rose from CHF 64.9 billion to CHF 68.3 billion over the same period.

The Confederation's creditworthiness is given the highest rating by all relevant rating agencies. Even under unfavorable market conditions, the Confederation is able to raise the necessary funds on the money and capital market.

## Forex risk

The Federal Treasury purchases foreign currencies for the administrative units. The foreign currency requirements for the budget year for the main currencies of euro and USD and the future payment obligations arising from special transactions that are already known are fully hedged. The primary objective when managing forex risks is to ensure adherence to the budget and the predictability of expenditure. Overruns of approved credits due to negative forex fluctuations are to be avoided. Since the Confederation constantly has certain foreign currency requirements, it is generally exposed to exchange rate developments.

**Forex risk**
Due to the uncertainty regarding future exchange rate trends, the procurement costs for covering administrative units' foreign currency requirements are uncertain and subject to risk. The value of existing, non-assigned foreign currency positions can change as a result of exchange rate fluctuations.

From the FFA's perspective, exchange rate developments essentially cannot be predicted. Accordingly, forex risks are systematically hedged using a passive approach. As a result, the Confederation is not exposed to any substantial forex risks for the budget and special transactions reported to the Federal Treasury.

**Overruns of approved credits due to negative forex fluctuations can be avoided with hedged forex risks**

In 2022, various factors made it challenging to procure foreign currencies and limit the corresponding risks. On the one hand, the foreign currency requirements last year sometimes resulted in high subsequent notifications from the administrative units (especially vaccines, reserve power plants), and on the other hand, the exact timing of payment obligations was often unclear. Overall in 2022, the hedged amounts exceeded the actual payment obligations by EUR 58 million in the case of the euro, while in the case of the dollar, USD 318 million had to be subsequently purchased last year.

With the two special defense transactions (F-35A, Patriot) that were hedged in the third quarter of 2022, both the volume and duration of hedging for the USD exchange rate risk are unusually high. The Federal Treasury hedged the required foreign currency using short-dated forwards and will roll them through to the individual payment dates using FX swaps. While this strategy enables the Confederation to protect itself against future exchange rate fluctuations, it also leads to an additional interest rate risk; in particular, the Confederation is exposed to the risk of a change in the interest rate differential between the United States and Switzerland.

### ■ Counterparty risk

Counterparty risks for the Confederation arise primarily as a result of short-term deposits (liquidity) and positive replacement values from outstanding currency and interest rate derivatives. These receivables are exposed to default risk. Treasury loans are granted to institutions affiliated with the Confederation and therefore are not part of the counterparty limit system; the amount of the loans is managed by means of treasury agreements. A credit limit concept forms the basis for avoiding losses and risk concentrations. The credit limits are established on the basis of predefined criteria, namely rating, equity, financial strength (in the case of cantons), diversification and instrument type. Risk Control regularly reviews the set counterparty limits and monitors compliance with the limits on a daily basis. The development of permitted counterparties' credit quality is continually reviewed (e.g. rating changes, interim financial statements and other reports). The limits were complied with at all times in 2022.

Liquidity amounted to CHF 16.3 billion at the end of 2022. It was placed almost entirely with the SNB (as fixed-term deposits or on the SNB sight deposit account), and thus carries no risk.

The positive replacement values from outstanding currency and interest rate derivatives fell from CHF 22 million last year to CHF 17 million at the end of December 2022. On the one hand, derivatives positions (e.g. currency and interest rate hedging instruments) are entered into with counterparties that have signed a Credit Support Annex, or CSA, with the FFA. On the other, such derivatives transactions are also conducted with cantonal banks which have a state guarantee without a CSA. New ISDA master agreements with CSAs were concluded with key counterparties over the course of 2022, resulting in a daily exchange of cash collateral and further mitigating the negative impact of the potential default of one or more counterparties.

**The Confederation's counterparty risks are minimized by means of daily margin calls**

# Outlook

For the Federal Treasury, 2023 is all about consolidation. Many projects were completed in 2022, and new ones were launched. After around three years of development and testing, the introduction of the new treasury management system (TMS) was successfully completed last year. This is an important step on the road to digitalizing the Federal Treasury, especially in the back office. Many manual checks have been simplified and automated. The relevant data for transactions concluded with the auction platform, the repo market, collateral management and the FX platform now flows automatically into the TMS via interfaces. The increased use of Swift messages facilitates processing in the back office, as fewer manual interventions are required. For example, thanks to these innovations, it is possible to collateralize outstanding derivatives on a daily basis by means of margin calls. In 2023, the aim is now to consolidate the new procedures and processes, and to ensure further optimization and efficiency gains.

Cash and liquidity management is also a challenge. When money market rates fell to zero or became negative just over ten years ago, one of the Federal Treasury's basic tasks – investing disposable funds – more or less disappeared altogether. At the same time, a trend that had begun during the financial and debt crisis intensified: taxpayers and the cantons increasingly used the Confederation as a "bank" to park surplus liquidity. Taxes were paid as quickly as possible and advance payments were made where feasible, while tax refund requests were postponed. With the turnaround in interest rates, the former practices are returning to the fore: taxes are being paid as late as possible, and refunds are being requested as quickly as possible; in addition, funds parked with the Confederation have been largely withdrawn again. These developments pose major challenges for liquidity management in 2023. The federal government's liquidity planning is essentially based on daily inflows and outflows in the past. On the one hand, the profile of these flows of funds has changed fundamentally within a short period of time, and on the other hand, reliable planning data from the recent past is not available. Accordingly, the Federal Treasury has to be able to react flexibly to unexpected events and regularly revise its liquidity planning. If additional and unplanned expenditure arises (e.g. pandemic, war in Ukraine), planning becomes even more complicated. With the weekly auctions of money market debt register claims, access to the secured repo market and the possibility to continue to operate in the unsecured money market, the federal government has a sufficient range of instruments to react to unplanned flows of funds at short notice.

Aside from liquidity planning, the tight budgetary situation will also affect the federal government's funding in the money and capital market. Based on current planning, the Confederation is reckoning on funding requirements of just under CHF 8 billion this year. The issuance program published in December 2022 envisages the issuance of bonds with a face value of CHF 8 billion. Taking account of bonds maturing in 2023, the volume of bonds outstanding will increase by CHF 3.4 billion. The remaining funding requirements will be covered by means of money market debt register claims: the volume of outstanding money market debt register claims will be kept in a range between CHF 12 billion and 18 billion. Money market debt register claims are auctioned on a weekly basis. Bond auctions take place monthly as usual, except during the August break.

Last October, the Federal Treasury issued the first green Confederation bond after about 10 months of preparatory work. This year, a so-called allocation and impact report has to be prepared on the use of the funds. Together with the administrative units concerned, the core working group, headed by the Federal Treasury, will report on the allocation of the CHF 766 million in issue proceeds to eligible green expenditure. At the same time, the report will indicate the environmental impact achieved with the allocated expenditure. The report is expected to be published in the spring. Green Confederation bonds are part of the Federal Treasury's issuance strategy. Accordingly, the outstanding bond will be reopened regularly and, if necessary, supplemented by further green bonds. Consequently, this reporting will be a recurring task in the future.

Another project launched last year involves hedging the foreign currency requirements for the purchase of the new fighter jets and ground-based air defense systems. It will continue to keep the Federal Treasury busy in 2023. This special transaction, by far the largest at around CHF 7 billion, has put the issue of interest rate risks arising from forex swaps on the agenda. This is to be analyzed and integrated into the existing risk reporting. In view of the increased volume of foreign currency transactions, the pool of counterparties with whom derivatives master agreements with bilateral Credit Support Annexes can be concluded should also be expanded.

In short, we have lots of work to do, and are looking forward to an exciting and challenging 2023.