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Debt and Financial Assets
Management Department

The Czech Republic

Government Debt Management

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Ministry of Finance

The Czech Republic Government Debt Management Annual Report for 2018

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List of Abbreviations

APEI	Aggregate Performance Evaluation Index
bn	Billion
CaR	Cost-at-Risk
CDCP	Central Securities Depository Prague
CNB	Czech National Bank
CZK	Czech koruna currency code
CZSO	Czech Statistical Office
DETS	Designated Electronic Trading System
EA19	Euro area (19 countries)
ESA 2010	European System of Accounts 2010
EU	European Union
EUR	Euro currency code
EURIBOR	Euro Interbank Offered Rate
FIX	Fixed-rate
FX	Foreign-exchange
GDP	Gross domestic product
ISIN	International Securities Identification Number
JCR	Japan Credit Rating Agency
MoF	Ministry of Finance
MTS	Mercato Telematico Secondario
OECD	Organization for Economic Co-operation and Development
p.a.	Per annum
p.p.	Percentage point
PRIBOR	Prague Interbank Offered Rate
R&I	Rating and Investment Information, Inc.
T-Bills	Treasury Bills
T-Bonds	Medium-term and long-term government bonds
VAR	Variable-rate

Published aggregate data in the tables and in the text may not correspond in the last decimal place to the sum of respective indicators due to rounding in some cases.

Summary

The Ministry of Finance (hereinafter the „Ministry" or „MoF") presents to the public in accordance with the calendar of published information The Czech Republic Government Debt Management Annual Report for 2018 (hereinafter the „Report") which contains a detailed summary of events related to the state debt and the state treasury liquidity management, an evaluation of the issuance activity of state and a development on financial markets in the context of financing of the Czech Republic, analysis of the state debt dynamics and related state budget expenditure and revenue on state debt service, the detailed evaluation of fulfilment of the specified strategic goals in the field of debt portfolio risk management and last but not least, the annual evaluation of the primary dealers of Czech republic government bonds. Part of the Report primarily dealing with events in 2018 is also a more detailed quantification of the prediction of interest expenditure on the state debt service in 2019 and in the medium-term horizon through Cost-at-Risk methodology.

The Czech Republic belongs among the exceptionally reliable issuers and enjoys a considerable domestic and foreign investors' interest. The positive perception of the Czech Republic on domestic and foreign financial markets has been repeatedly confirmed by the above-average rating of all the major international credit rating agencies. In 2018, Fitch Ratings, JCR and R&I improved the rating of long-term foreign currency liabilities from A+ to AA- level with a stable outlook. The rating agency Moody's improved the outlook from stable to positive and affirmed the A1 rating. All the rating agencies have positively assessed the excellent public finances in a form of surplus of government sector, the continuing fiscal consolidation allowing a steady decline in the indebtedness of the Czech Republic and the associated stable interest costs on state debt service, and finally the rapid and sustainable growth of the Czech economy together with a healthy banking sector.

In 2018 there was a slight decrease in the state debt by CZK 2.7 billion from CZK 1,624.7 billion to a final CZK 1,622.0 billion. The Ministry maintains the trend of stabilization or state debt reduction for the fifth year in both absolute and relative terms. In case of state debt expressed as a share of GDP, the year-on-year decrease was achieved, reaching 1.7 p.p. from 32.2% to 30.5% at the end of 2018.

The Czech Republic belongs among the least indebted European Union countries. The decline in debt is possible due to the more efficient state treasury liquidity management and related to involvement of its available resources in covering the state's financing needs, stable economic growth and also responsible budgetary policy in the form of a state budget surplus of CZK 2.9 billion. Significantly better state budget performance than the budgeted deficit of CZK 50.0 billion allowed a decrease in financing needs, which were CZK 304.4 billion in 2018 and thus were lower by CZK 47.3 billion compared to the planned financing needs in The Czech Republic Funding and Debt Management Strategy for 2018, published on 22 December 2017 (hereinafter the Strategy).

The financing of gross borrowing requirement, whose value in 2018 amounted to CZK 303.1 billion, was carried out mainly through the sale of government bonds on the domestic market. Gross issue of medium-term and long-term government bonds in 2018 amounted to CZK 259.2 billion, i.e. CZK 46.1 billion more than in the previous year. This historically highest issue demonstrates the relatively stable demand for medium-term and long-term government bonds of the Czech Republic over the entire yield curve and their high attractiveness to investors. In 2018, the Ministry issued two new fixed-rate issues of medium-term and long-term government bonds maturing in 2021 and 2029 in order to smooth out the maturity profile of state debt and bring coupon rates closer to market conditions in line with the Strategy.

Total gross issuance of state treasury bills, including roll-over, amounted to CZK 184.0 billion, and its major part did not primarily cover financing needs, or gross borrowing requirement, but used favourable conditions at the short end of the yield curve. The Ministry further invested obtained resources from the issue of state treasury bills on money market at higher yield than they were obtained for. This interest differential represents additional state budget revenue and the Ministry received CZK 227.4 million in accrual terms for the year 2018.

Tap sales of medium-term and long-term government bonds from own asset account were also realized through the MTS Czech Republic electronic trading platform in the course of 2018. Through these operations, the Ministry sold medium-term and long-term government bonds in a total nominal value of CZK 6.2 billion. Government bonds were also offered within exchange operations. The main objectives of these operations are to reduce the refinancing risk together with the management of the time to maturity of the state debt portfolio and to manage the interest expenditure of the state budget. During 2018, government bonds in a total nominal value of CZK 3.1 billion with an average residual time to maturity of 0.9 years were exchanged for government bonds in a total nominal value of CZK 2.5 billion with an average residual time to maturity of 13.2 years.

Net issue of medium-term and long-term government bonds issued on the domestic market amounted to CZK 71.7 billion. In 2018, there were redemptions of three medium-term and long-term government bonds with original time to maturity of 2, 4 and 15 years in a total nominal value of 184.4 CZK billion. There was also a redemption of a government bond issued on foreign markets with original time to maturity of 10 years in a total nominal value of EUR 2.0 billion, which the Ministry covered by short-term money market instruments in the form of deposit operations executed for negative yield.

The Czech government bond yields increased in 2018, especially at the shorter end of the yield curve, which responded to the monetary policy of the Czech National Bank in the form of an increase in key interest rates. Despite this fact, the Ministry placed medium-term and long-term government bonds on the primary and secondary markets with an average residual time to maturity of 9.1 years for an average yield to maturity of 1.88% p.a. Comparison with the Czech National Bank‘s two-week repo rate at level 1.75 % p.a. at the end of 2018 shows the benefit of financing of gross borrowing requirement on the domestic market, even in the context of historically highest gross issuance and the extension of the average time to maturity of the state debt portfolio, and the excellent reputation of the Czech government on the financial markets.

In 2018, the Ministry focused on fulfilling the target value of average time to maturity of the state debt portfolio, when the Ministry issued medium-term and long-term government bonds mainly in the segment of the residual time to maturity over 10 years and of 5 to 10 years, corresponding to 46.0% and 36.6% of total gross issuance respectively, under still relatively favourable market conditions. This issuance activity increased the average time to maturity of the state debt at the end of the year to 5.4 years, which is 0.5 year more than in the previous year. The Ministry is progressively approaching the stated target value of average time to maturity of the state debt portfolio defined in the Strategy for the medium-term horizon at 6.0 years.

The Ministry observed an increased interest of primary dealers in the medium-term and long-term government bond lending facilities with a positive impact on the liquidity of the secondary government bond market in the course of 2018, when government bonds in total nominal value of CZK 12.1 billion were provided from the Ministry‘s assets account through lending facilities in a form of repo operations, and government bonds in a total nominal value of CZK 39.6 billion were provided from the Ministry‘s asset accounts in the form of collateralized loans.

At the end of 2018, the Ministry resumed a successful project of government bonds sale directly to citizens which, was ended in 2014 due to a decline in the Czech government bond yields to historical minimum, in order to increase the share of households in state debt and to offer to the public a conservative and stable form of savings. From 3 December 2018, citizens had the opportunity to subscribe a new issue called "Dluhopis Republiky" issued symbolically on the 100th anniversary of the foundation of the Czechoslovak Republic. This has begun with a pilot phase, when these government bonds can be subscribed daily within subscription periods with issues being issued quarterly at specified intervals and it will last until the end of the first half of 2019.

In the context of rising yields of government bonds along the entire yield curve, in 2018, net interest expenditure on state debt service slightly increased by CZK 1.2 billion. In spite of this, the Ministry achieved savings in net interest expenditure on state debt service compared to the originally approved budget of CZK 4.5 billion due to the appropriate timing of issuance activity and a flexible response to financial market development. Thus, the total CZK 3.3 billion could be transferred to other budget chapters via budgetary transfers in the course of 2018. The total cumulated savings in interest expenditure on state debt service amounts to approximately CZK 39.0 billion from the beginning of 2014 to the end of 2018.

Net revenues from state treasury liquidity management operations amounted to CZK 2.2 billion in 2018, which is CZK 1.9 billion more than in the previous year. Investment operations within koruna state treasury liquidity management contributed mostly to this increase, as due to the increase in the Czech National Bank‘s key interest rates during the year the yields from operations using the medium-term and long-term government bonds, state treasury bills and Czech National Bank bills, and short-term investments in the form of deposit operations increased by CZK 1.8 billion compared to the previous year. The total state budget revenues from state treasury liquidity management operations, the lending of government bonds and selling government bonds with negative yield totalled CZK 2.3 billion in 2018, which is CZK 0.7 billion more than in 2017.

1 – Macroeconomic Framework and Financial Markets

Economic Development

In 2018, the real GDP growth of 2.8% is estimated. Economic growth was driven in the first place by domestic demand. Traditionally, the most significant component of the use was household consumption. Household final consumption expenditure was supported by the dynamic growth of wages and salaries, with a low unemployment rate and a sharp increase in pensions. To a lesser extent fixed capital investments and government consumption also contributed, while the contribution of foreign trade remained negative.

Table 1: Main Macroeconomic Indicators of the Czech Republic

	2012	2013	2014	2015	2016	2017	2018F
Real GDP growth (%)	-0.8	-0.5	2.7	5.3	2.5	4.4	2.8
Household consumption growth (%)	-1.3	0.5	1.8	3.7	3.6	4.3	3.5
Government consumption growth (%)	-2.0	2.5	1.1	1.9	2.7	1.3	3.8
Growth of gross fixed capital formation (%)	-3.1	-2.5	3.9	10.2	-3.1	3.7	8.8
Contribution of foreign trade to GDP growth (p.p.)	1.3	0.1	-0.5	-0.2	1.4	1.1	-0.6
Average inflation rate (%)	3.3	1.4	0.4	0.3	0.7	2.5	2.1[2]
Unemployment rate (%)[1]	7.0	7.0	6.1	5.0	4.0	2.9	2.2[2]
Nominal wage and salary growth (%)	2.6	0.5	3.6	4.8	5.7	8.3	9.6
Current account balance on GDP (%)	-1.6	-0.5	0.2	0.2	1.6	1.1	0.3
CZK/EUR exchange rate	25.1	26.0	27.5	27.3	27.0	26.3	25.6[2]
Real Eurozone GDP growth (%)[2]	-0.9	-0.2	1.4	2.1	2.0	2.4	1.9

[1] Average unemployment rate based on the method of Labour Force Survey.
[2] Officially published figure.
[3] EA19.
Source: MoF, CZSO

Since the end of 2016, year-on-year consumer price growth, with exceptions, was permanent in the upper half of the Czech National Bank's inflation target range. The average annual rate of inflation reached 2.1% in 2018.

The Czech Republic belongs to countries with the lowest unemployment rates in the last years. In 2018, the unemployment rate (according to the Labour Force Survey methodology) was only 2.2%. In December 2018, the unemployment rate rose slightly to 2.2% (after seasonal adjustment), which represented the lowest rate in the whole EU (the unemployment rate in the EU was 6.6%). The labour market has been showing signs of overheating for a long time. Lack of workers has been evident in all market sectors and almost in all regions, which is a significant barrier to economic growth.

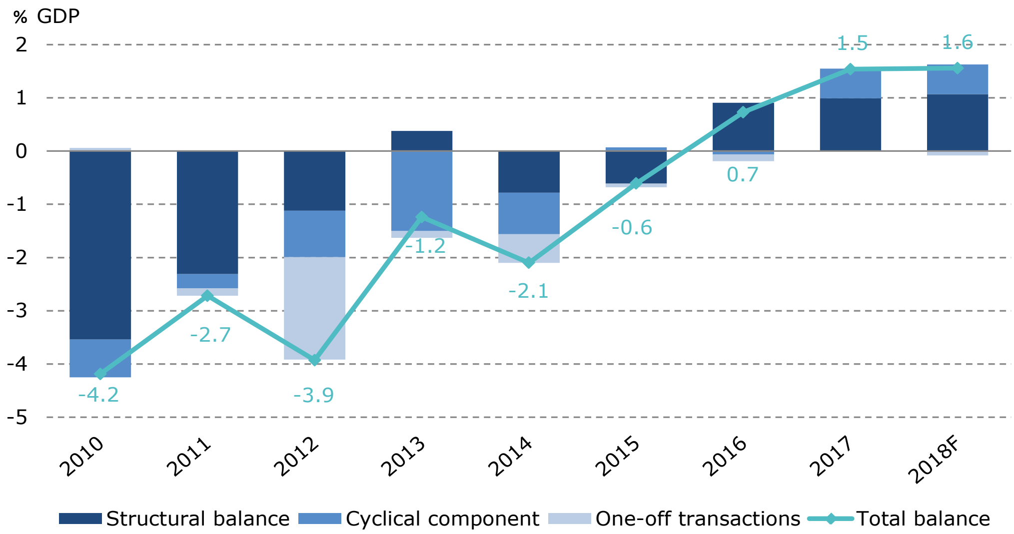
Since 2014, the current account of the balance of payments has been in a permanent surplus. In 2018 current account balance should reached a surplus of 0.3% of GDP. The positive balance of goods and services outperformed the deficit of primary incomes, which is most affected by the outflow of foreign direct investment in the form of dividends and reinvested earnings.

A significant advantage of the Czech Republic is the stable financial sector and credible fiscal policy. There is a sufficient disposable liquidity in the banking system. The profitability of banks has a positive impact on capital adequacy. The high volume of deposits by residents and sufficient liquidity in the banking system mean that the domestic banking sector is independent on foreign funding sources in the long term. Capital adequacy measured as Capital Adequacy Ratio Tier I reached 18.30% at the end of third quarter of 2018 and was highly above regulatory capital.

General Government Sector Finances

In response to the recession in years 2012 and 2013, the government has realized a fiscal policy supporting a revival of domestic aggregate demand and simultaneous increasing of the effectiveness both on revenue and expenditure side of the state budget. Ministry estimates that in 2018 total balance ended with a surplus of 1.6% of GDP. Given the steps on the revenue and expenditure side of the budget, the expected value of the general government structural balance is approximately 1% of GDP in 2018. Structural balance is thus expected to have been approximately 2 p.p. above the level of the medium-term budgetary objective of the Czech Republic, which corresponds to -1.0% of GDP, implying prudent management and long-term sustainability of public finances.

Figure 1: The Czech Republic Government Sector Balance (ESA 2010)



Note: Structural balance based on the European Commission method. The source of data is Macroeconomic Forecast of the Czech Republic – January 2019.
Source: MoF

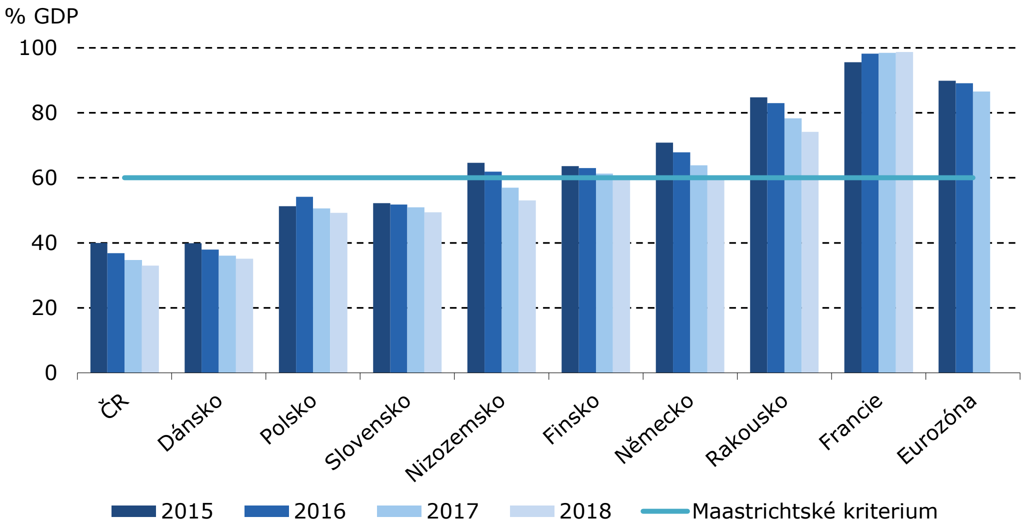
In the cash methodology, the state budget ended with a slight surplus of CZK 2.9 billion in 2018, which is the result better by CZK 9.1 billion compared to 2017. Compared to the result of 2017, when the deficit of CZK 6.2 billion was recorded, the improvement was mainly due to the overrun of the tax revenue, including social security contributions. In comparison with the amount stipulated by the State Budget Act of the Czech Republic for 2018, the economy was better by CZK 52.9 billion. This was the second best result of state budget performance since 1996.

Total revenue of the state budget in 2018 amounted to CZK 1,403.9 billion, which implies year-on-year increase by CZK 130.3 billion. Compared to revenues in the originally approved budget, actual revenues were higher by CZK 89.4 billion. Tax revenues, including social security contributions, which were higher approximately by CZK 20 billion, as well as other revenues (excluding revenues from the budget of European Union and financial mechanisms), significantly contributed to higher than planned revenues.

Total expenditure of the state budget amounted to CZK 1,401.0 billion in 2018, which represented a year-on-year increase of CZK 121.2 billion. Compared to expenditures in the originally approved budget, actual expenditures were higher by CZK 36.5 billion. Higher than planned expenditures also involved the utilization of so-called claims from unused expenditure from previous years, which was higher by CZK 30.4 billion compared to 2017. On the contrary, significant savings in interest costs on state debt service were reported in the amount of CZK 4.2 billion compared to the approved budget.

According to the October Notification, the general gross (consolidated) government debt decreased by 2.1 p.p. to 34.7% of GDP in 2017. Further decrease of the debt by 1.7 p.p. to 32.9% of GDP is expected in 2018. In terms of meeting the Maastricht criteria and rules of the Stability and Growth Pact, the indicator is safely below the limit of 60%, as well as below the limit of the national debt rule, which entered into force in February 2017 (Act No. 23/2017 Coll., on Budgetary Responsibility Rules).

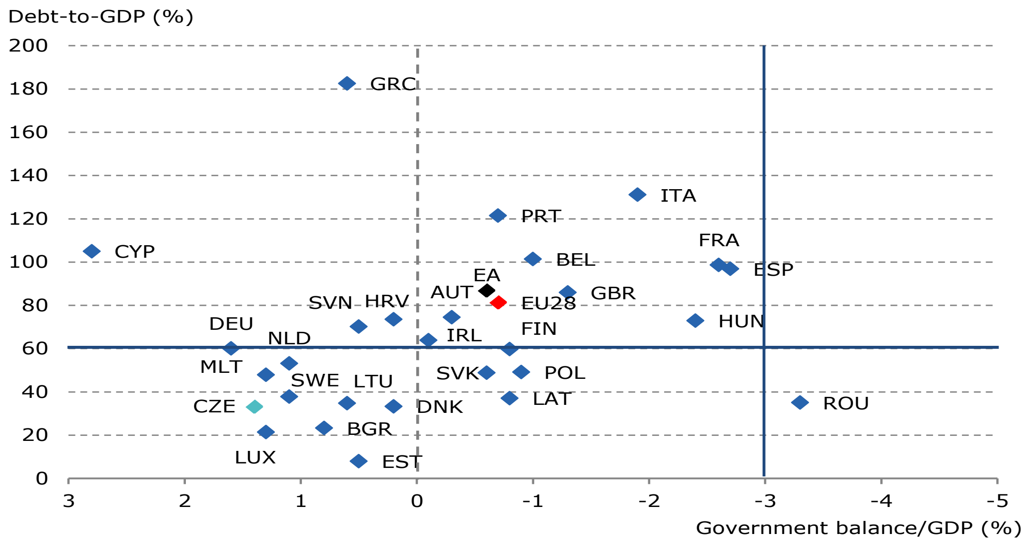
Figure 2: Government Sector Debt in Selected EU Countries (ESA 2010)



Note: The Maastricht criterion is a part of the condition for EU members to join the single currency union. The value of the share of government sector debt to GDP should not exceed 60%. Eurozone is stated in conception comprising 19 countries. Data from 2015 to 2018 are taken from Fiscal Outlook – November 2018. Data for the Czech Republic are taken from Macroeconomic Forecast of the Czech Republic - January 2019.
Source: MoF

According to the international comparison, the Czech Republic ranks among the best performing EU countries. Based on the actual forecast, the Czech Republic should report a general government balance of 1.6% of GDP in 2018. In case of general government debt, the Czech Republic shows the fourth lowest debt-to-GDP ratio in 2017 and 2018 as well. Lower relative debt recorded only for Estonia, Luxembourg and Bulgaria. A significant reduction in the government debt ratio from 44.9% of GDP in 2013 to the expected level of 32.9% of GDP in 2018 is positively contributed by the general government sector (especially central and local government) and nominal GDP growth.

Figure 3: Government Sector Deficit and Debt in EU Countries (ESA 2010)



Note: European Economic Forecast - Autumn 2018.
Source: European Commission

Financial Markets

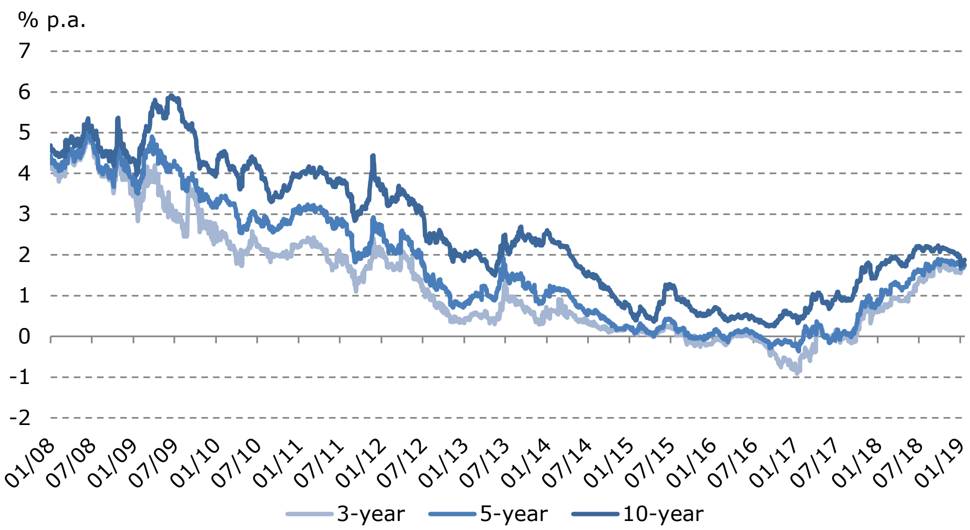
The Czech government bond yields during 2018 reflected gradual standardization on domestic financial market, when responding in particular to monetary policy decisions of the Czech National Bank in the form of increase key interest rates and to a lesser extent the development on foreign financial markets, which was influenced, for example, by the political and economic situation in the European Union, respectively in the Eurozone, impending trade wars, etc. In 2018, the Czech National Bank increased its rates five times in total. The two-week repo rate has been changed from 0.50% p.a. to 1.75% p.a. The last increase was at the beginning of November. In accordance with the change of monetary policy, there was an overall increase in government bond yields recorded, particularly at the shorter end of the yield curve, which responded more sensitively to rate growth than government bond yields with a longer residual time to maturity.

During January, the Czech 10-year government bond yields reached an average value of 1.7% p.a., which was on average approximately 1.1 p.p. more compared to the yield of the German 10-year "bunds". After the increase of two-week repo rate by 25 basis points to 0.75% p.a. in February, the Czech 10-year government bond yields have responded only by a slight increase or stagnation. The average yield of the Czech 10-year government bond was recorded at 1.9% p.a. in March 2018. The decline at the beginning of the second quarter, when yields reached below the January level, was replaced by a relatively rapid growth. Czech government bonds yields reflected inflation expectations and a further increase of two-week repo rate. In June 2018, the Czech 10-year government bond yields were at an average value of 2.1% p.a.

During 2018, the Czech government bonds' term premium was gradually reduced, when the yields at the short end of the yield curve grew relatively faster than yields at the long end. The Czech 3-year government bond yields, with the exception of a moderate decline at the beginning of the second quarter, responded to monetary policy by rising trend in the first half of 2018. The average value of the Czech 3-year government bond yields was in January at 0.5% p.a. and increased up to 1.1% p.a. in June, when the Czech National Bank decided to increase the two-week repo rate to 1.00 p.a. for the second time.

In the second half of the year, the yield curve was influenced by three increases of two-week repo rates by the Czech National Bank specifically in August, September and November. In the third quarter, the yields of the Czech 3-year and 5-year government bond gradually grew to 1.6% p.a., respectively 1.8% p.a. at the end of September 2018, while the yield of the Czech 10-year government bond stagnated at 2.1% p.a. This development reflects a more sensitive behaviour of yields at the short end of the yield curve and the gradual convergence of various tenors' yields, while the longer end of the yield curve of government bonds remained relatively stable during the year. At the end of 2018 the stagnation of Czech 3-year and 5-year government bonds and relatively significant decrease in Czech 10-year and 15-year government bonds yields could be observed. It was further amplified by the factor of the end of the year, when the yield of the Czech 10-year government bond reached the level of Czech 5-year government bond. As a result of this trend, the increased demand is significantly flattening the yield curve at its long end.

Figure 4: Development of Czech Government Bonds Yields



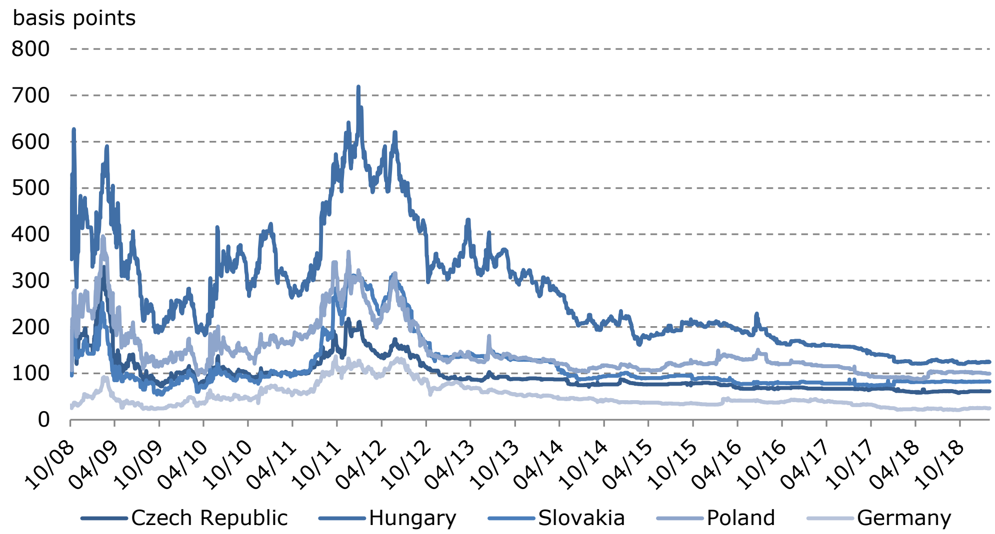
Source: Thomson Reuters

From a historical point of view yields on the Czech government bond still maintain a relatively low level, even in an international comparison with other member states of European Union. Reasons consist in healthy macroeconomic fundamentals of the Czech Republic and effective management of public finances and state treasury liquidity. The important long-term factor in the decrease of government bond yields is a credible fiscal policy of the government and a conservative approach to state debt management with a positive impact on investors' trust, which is reflected in a high demand for medium-term and long-term government bonds in auctions. The excellent reputation of the Czech Republic on the financial markets is also noted by rating agencies, which regularly confirm a very high rating of the government. The wide offer of both fixed-rate and variable-rate debt instruments in individual segments of risk-free yield curve creates a sufficient range for investors to diversify the debt portfolio without the necessity to use interest rate swaps to optimize their positions.

The perception of the Czech Republic on the international market as a credible issuer of government bonds is illustrated by the situation on the credit default swaps (CDS) markets, where market participants pay the lowest risk premium compared to Poland, Hungary and Slovakia.

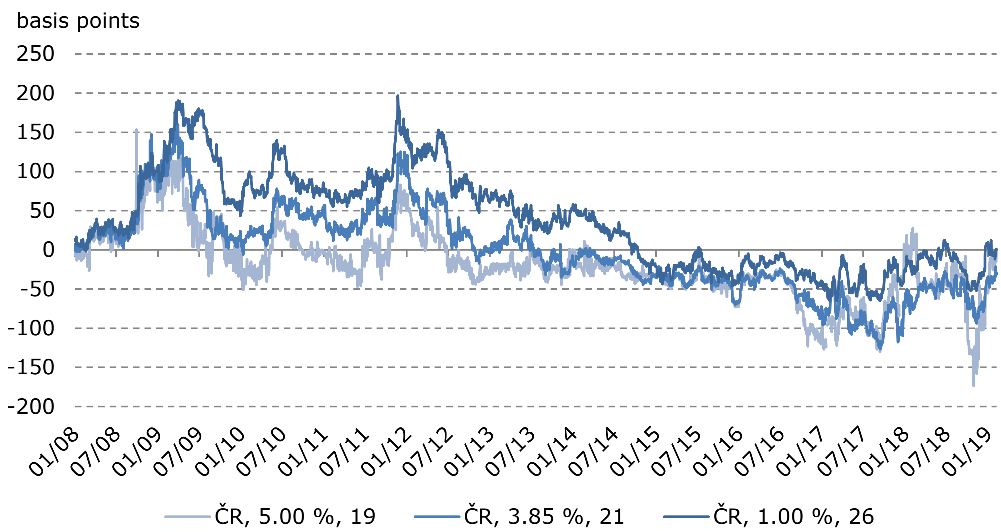
The development of the risk premium measured using the spread to comparable swap rates ("asset swap spread") indicates low risk premiums on Czech government bonds.

Figure 5: Premiums on Credit Default Swaps - Middle Europe (10-year)



Source: Thomson Reuters

Figure 6: "Asset Swap Spread" Risk Premium on Czech Government Bonds

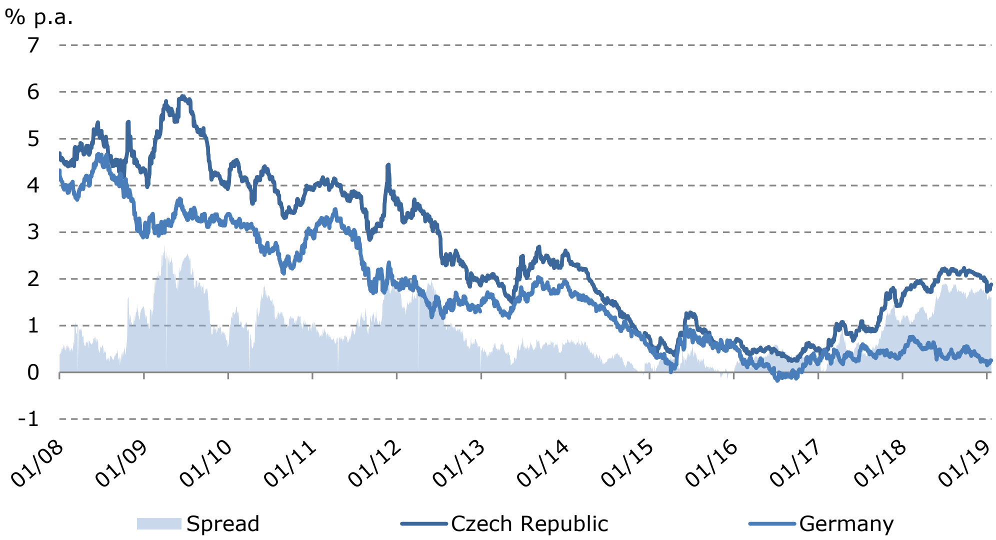


Source: Thomson Reuters

Since mid-2012, the low spread between Czech government bonds and German "bunds" has been monitored. In January 2017 the yield of a Czech 10-year government bonds was below German "bunds", the spread began to grow in the next months. During 2018 the development of the Czech government bonds often did not correlated with developments on the euro bond market. The main reason was the divergence of the Czech National Bank's monetary policy, which continued with the interest rate growth, while the European Central Bank´s monetary policy stance was still on the accommodative side. The current spread between the Czech 10-year government bond and German "bunds", which was around 1.7 p.p. at the end of the year, cannot be entirely explained by the size of the risk premium. The important role of this spread had the different phases of monetary policies of the Czech National Bank and European Central Bank which resulted in extension of the interest rate differential during 2018.

Even in 2018, the European Central Bank enforced a loose monetary policy by keeping the deposit facility interest rate at -0.40% p.a., in force since March 2016, and continued with the Asset purchase programme. Since January 2018, net purchases were reduced from average monthly pace of EUR 60 billion to EUR 30 billion and from October to December to average monthly pace of EUR 15 billion. Since January 2019, net purchases are zero and European Central Bank continues to reinvest the principal payments from maturing securities hold in portfolio.

Figure 7: Comparison of Yields of the Czech and German 10-year Government Bonds



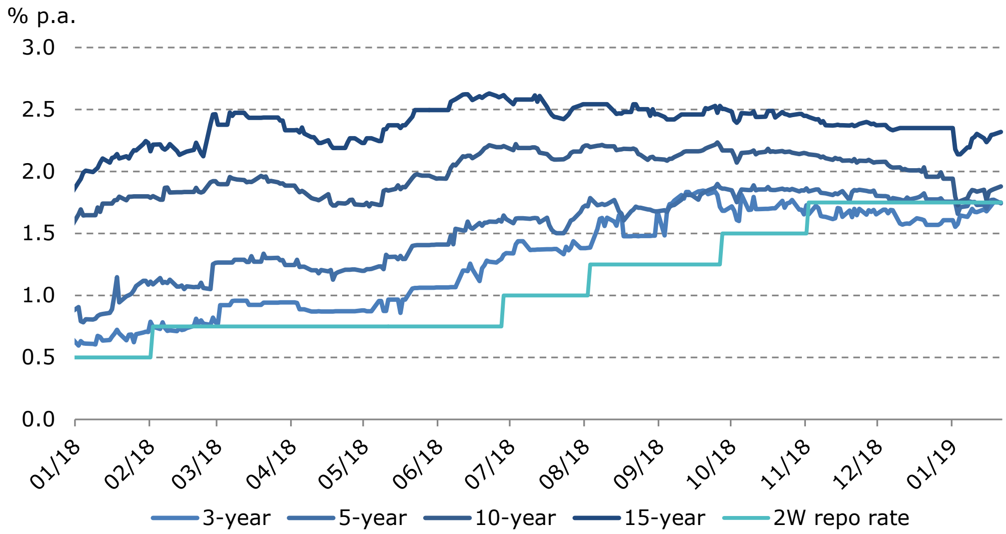
Source: Thomson Reuters

The decrease of government bond yields and attractiveness of government bonds for investors were also positively impacted by a reduction of the illiquidity premium, which is confirmed by the stable competitive spread particularly among bonds subjected to quoting obligation on the electronic trading platform MTS Czech Republic. Investors thus demand a lower illiquidity premium, if they can sell the government bonds on the functional secondary market without problems. This fact has positive impact on the reduction of the interest costs on state debt service.

In times of global surpluses of liquidity on the interbank markets, investors seek possibilities to valorise available liquidity or to avoid negative interest rates on the euro money market. Liquidity provided by the central banks on a long-term basis is illustrated in the flattening out of the whole risk-free yield curve. Government bonds provide an investment alternative at zero or negative interbank interest rates.

Yields development at the short end of the yield curve is influenced mostly by monetary policy decisions of the Czech National Bank, while the long end was not significantly affected by the growth of two-week repo rate. The stabilization or moderate decrease of government bond yields at the long end of the yield curve also encourages primary dealers interest and benchmark bonds with a residual time to maturity around ten years are demanded. The gradual shift of non-resident investors from the shorter end of the yield curve to government bonds with a residual time to maturity around five years also has a positive effect on the longer end of the yield curve. This means that non-resident investors, whose share in state debt has increased especially with the approaching exit from the exchange rate commitment by the Czech National Bank, have probably become longer-term investors in Czech government bonds with a holding-to-maturity strategy. This is confirmed by the structure of holders of Czech government bonds, as the share of non-residents in government bonds issued on the domestic market remained relatively stable during the whole year 2018 and fluctuated around 40%. In the context of the expected moderate appreciation of the Czech koruna and possible further persisting interest rate differential, foreign investors are not motivated to swiftly close their positions. It should continue to positively influence the demand for Czech government bonds.

Figure 8: Development of Czech Government Bonds Yields and CNB 2W Repo Rate



Source: Thomson Reuters

Czech Republic's Sovereign Credit Rating

The Czech Republic belongs among the exceptionally reliable issuers and enjoys a considerable interest from domestic and foreign investors, as confirmed by its high credit rating with a stable or positive outlook from all the major credit rating agencies. The Czech Republic has the highest total rating of all the countries in Central and Eastern Europe and has had a higher rating than the Eurozone countries average for several years. In 2018, Fitch Ratings, JCR and R&I improved the rating of long-term liabilities in foreign currencies from A+ to AA- level with a stable outlook. The rating agency Moody's improved the outlook from stable to positive and affirmed the A1 rating.

Table 2: Czech Republic's Credit Rating

Rating Agency	Local currency long-term liabilities	Outlook	Foreign currency long-term liabilities	Outlook	Affirmed
Moody's	A1	Positive	A1	Positive	20/4/2018
Standard & Poor's	AA	Stable	AA-	Stable	18/1/2019
Fitch Ratings	AA-	Stable	AA-	Stable	1/2/2019
JCR	AA	Stable	AA-	Stable	25/7/2018
R&I	AA-	Stable	AA-	Stable	5/11/2018
Scope Ratings	AA	Stable	AA	Stable	26/1/2018
Dagong Global Credit Rating	A+	Stable	A+	Stable	16/10/2018

Source: Moody's, Standard & Poor's, Fitch Ratings, JCR, R&I, Scope Ratings, Dagong Global Credit Rating

2 - Borrowing Requirement and Development of State Debt

The borrowing requirement represents a key quantity in the system of public finances of a national economy, which determines the amount of financial resources that the government needed to obtain over the course of the respective calendar year through borrowing operations primarily on financial markets, in order to ensure that the planned annual financing needs are covered as a necessary condition for a smooth realization expenditures of the state budget and government economy policy.

In addition to these borrowing operations which are the main determinant of the changes in the value of the state debt, the financing needs may also be covered by the operations with state financial assets or by the management of other state assets in extra-budgetary balance sheet operations, or through the involvement of available state treasury cash resources through refinancing mechanisms.

Financing Needs and Sources

The financing needs are determined by standard components, which are necessary to cover by cash resources in the given year, i.e. particularly the state budget cash deficit and all redemptions, and buy-backs and exchanges of nominal value (principals) of state debt, including related derivatives. Financing operations on the side of state financial assets and within state treasury single account are then carried out on the side of the cash financial resources which may be involved in covering the financing needs in parallel with the state's borrowing operations on the financial markets.

Table 3: Financing Needs and Sources

CZK bn	2012	2013	2014	2015	2016	2017	2018
Primary balance of state budget	59.6	30.4	29.3	17.5	-102.4	-33.6	-43.7
Net expenditure on state debt[1]	41.4	50.9	48.5	45.3	40.7	39.8	40.7
T-Bonds redemptions[2]	121.7	107.9	143.7	123.9	157.8	209.4	238.9
Redemptions and early redemptions on savings government bonds	9.6	7.7	11.9	11.9	30.2	16.9	16.4
T-Bills and other money market instruments redemptions[3]	162.6	189.1	120.9	110.2	86.6	4.2	44.0
Repayments on credits and loans[4]	5.3	2.8	11.1	2.5	1.7	5.1	8.0
Total financing needs	**400.2**	**388.8**	**365.3**	**311.2**	**214.5**	**241.7**	**304.4**
Gross T-Bills issue and other money market instruments[3,5]	189.1	120.9	110.2	86.6	4.2	44.0	43.7
Received collateral in cash	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gross issue of T-Bonds on domestic market[5]	164.6	145.6	153.3	180.4	211.6	213.1	259.2
Gross issue of T-Bonds on foreign markets[5]	69.0	0.0	0.0	0.0	0.0	0.0	0.0
Gross issue of savings government bonds[6]	45.4	39.1	2.1	1.0	1.0	0.6	0.1
Received credits and loans[4]	4.0	4.3	0.0	0.0	0.0	0.0	0.0
Financial asset and liquidity management	-71.8	78.9	99.7	43.2	-2.3	-16.1	1.3
Total financing sources	**400.2**	**388.8**	**365.3**	**311.2**	**214.5**	**241.7**	**304.4**
Gross borrowing requirement	**472.0**	**309.9**	**265.6**	**268.1**	**216.9**	**257.7**	**303.1**

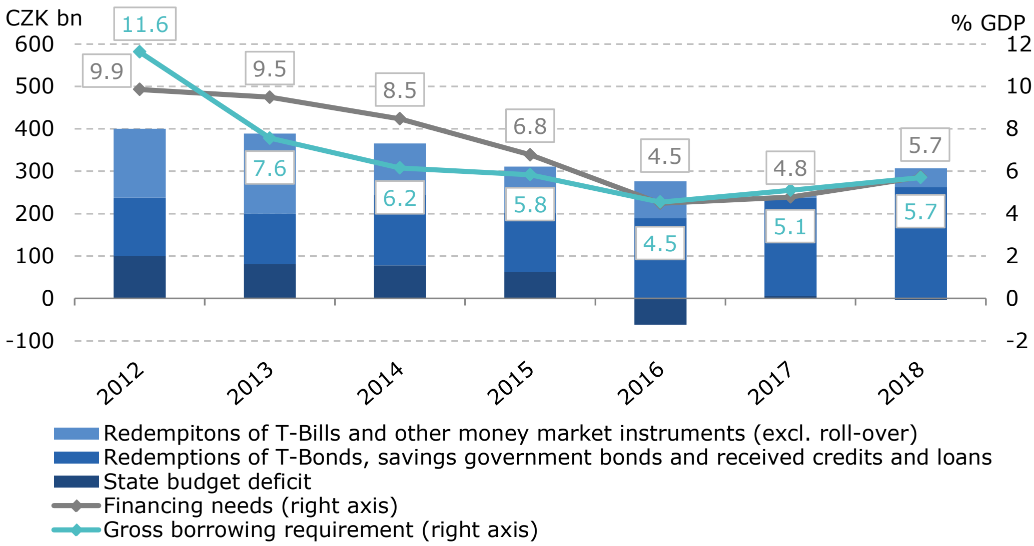
[1] Balance of the budgetary chapter 396 – State Debt.
[2] Incl. effect of buy-backs and exchanges.
[3] Excl. T-Bills issued and redeemed within respective year, and roll-over of other money market instruments.
[4] Credits and loans received from international financial institutions.
[5] Nominal value; premiums and discounts included in the net expenditure on state debt, i.e. they are included in the net borrowing requirement.
[6] Incl. the reinvestment of yields.
Source: MoF

In 2018, the financing needs decreased by CZK 47.3 billion compared with the original plan published in Strategy. The decrease in financing needs was caused mainly by significantly better state budget performance, which reached a surplus of CZK 2.9 billion. Compared to the approved deficit, it was better by CZK 52.9 billion. The savings on net expenditures on state debt service, which were lower by CZK 4.5 billion compared to the budgeted amount, also contributed to state budget performance.

Total financing needs are adjusted according to the recommended OECD international methodology for roll-over operations with state treasury bills and for refinancing operations with cash and other money market and deposit market instruments, which take place within a calendar year and thus do not affect the net change of these components relative to the end of each years in the course of the year. The total annual financing needs in the given year thus take into account only the balances of these short-term instruments at the end of the previous year.

The following figure shows the components of financing needs, including the state treasury bills and other cash and other money and deposit market instruments outstanding at the end of the prior period, which is also necessary to refinance in the current year, and the share of financing needs and gross borrowing requirement in GDP.

Figure 9: Financing Needs



Note: GDP in the ESA 2010 methodology. The source of data for 2012 – 2017 is CZSO, for 2018 the Macroeconomic Forecast of the Czech Republic – January 2019. T-Bonds redemptions including effect of buy-backs and exchanges. Credits and loans received from international financial institutions.
Source: MoF, CZSO

Financing of the Gross Borrowing Requirement

The gross borrowing requirement determines that part of the sources covering financing needs, which are ensured by the borrowing operations of the state, i.e. determines the total amount of financial resources the government must obtain, in particular through the issuance and sale of government bonds and the receiving of loans and credits.

Table 4: Financing of the Gross Borrowing Requirement

CZK bn	2012	2013	2014	2015	2016	2017	2018
Gross borrowing requirement	**472.0**	**309.9**	**265.6**	**268.1**	**216.9**	**257.7**	**303.1**
Gross T-Bills issue and other money market instruments[1,2]	189.1	120.9	110.2	86.6	4.2	44.0	43.7
Received collateral in cash	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gross issue of T-Bonds on domestic market[2]	164.6	145.6	153.3	180.4	211.6	213.1	259.2
Gross issue of T-Bonds on domestic market up to 5 years[2,3]	31.4	37.8	37.3	100.0	119.6	84.2	45.0
Gross issue of T-Bonds on domestic market from 5 to 10 years[2,3]	93.3	79.6	50.0	23.3	48.4	70.9	94.9
Gross issue of T-Bonds on domestic market over 10 years[2,3]	39.9	28.3	65.9	57.1	43.7	58.0	119.3
Gross issue of T-Bonds on foreign markets[2]	69.0	0.0	0.0	0.0	0.0	0.0	0.0
Gross issue of savings government bonds[4]	45.4	39.1	2.1	1.0	1.0	0.6	0.1
Received credits and loans[5]	4.0	4.3	0.0	0.0	0.0	0.0	0.0
Total financing of gross borrowing requirement	**472.0**	**309.9**	**265.6**	**268.1**	**216.9**	**257.7**	**303.1**

[1] Excl. T-Bills issued and redeemed within respective year, and roll-over of other money market instruments.
[2] Nominal value; premiums and discounts are included in net expenditure on state debt service, i.e. they are included in the net borrowing requirement.
[3] Remaining time to maturity at the transaction settlement date.
[4] Incl. reinvestment of yields.
[5] Credits and loans received from international financial institutions.
Source: MoF

The resulting gross borrowing requirement may be lower than the annual financing needs in the event that there is active involvement of financial assets or liquidity management operations as sources of funding, and may be higher if there is accumulation of financial assets through the borrowing operations of the state.

Net Borrowing Requirement, Change and Structure of State Debt

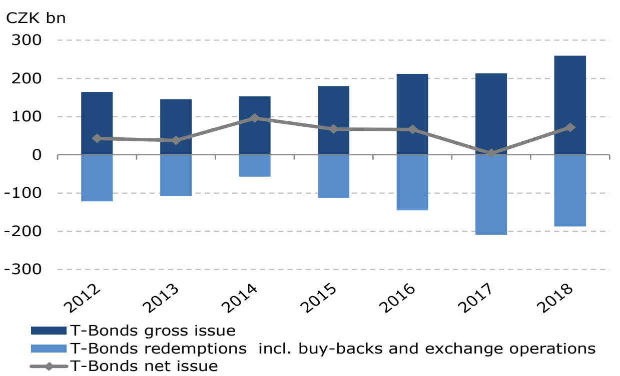
The net borrowing requirement is the main factor in the change in the nominal value of state debt and is determined by the difference in gross borrowing requirement and the total redemptions of nominal values (principals) of state debt, including related derivatives. In the case of zero net change in state financial assets, the net borrowing requirement corresponds to sum of state budget deficit and any extra-budgetary financing needs. The net borrowing requirement, therefore, shows the amount of financial resources the government will have to newly borrow above the already borrowed financial resources in previous years due in the current year.

Table 5: Net Borrowing Requirement

CZK bn	2012	2013	2014	2015	2016	2017	2018
Gross borrowing requirement	**472.0**	**309.9**	**265.6**	**268.1**	**216.9**	**257.7**	**303.1**
T-Bonds redemptions[1]	121.7	107.9	143.7	123.9	157.8	209.4	238.9
Redemptions and early redemptions on savings government bonds	9.6	7.7	11.9	11.9	30.2	16.9	16.4
T-Bills and other money market instrument redemptions[2]	162.6	189.1	120.9	110.2	86.6	4.2	44.0
Repayments on credits and loans[3]	5.3	2.8	11.1	2.5	1.7	5.1	8.0
Net borrowing requirement	**172.8**	**2.3**	**-21.9**	**19.6**	**-59.4**	**22.2**	**-4.2**

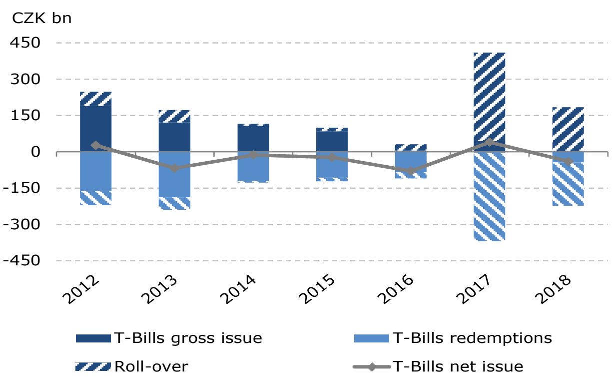
[1] Incl. effect of buy-backs and exchanges.
[2] Excl. T-Bills issued and redeemed within respective year, and roll-over of other money market instruments.
[3] Credits and loans received from international financial institutions.
Source: MoF

Figure 10: Net Issue of T-Bonds on Domestic Market



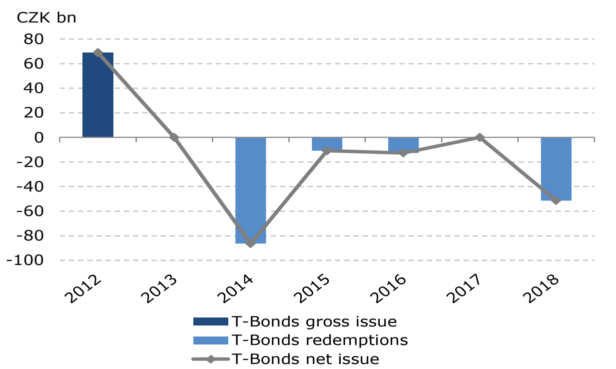
Source: MoF

Figure 12: Net Issue of T-Bills on Domestic Market



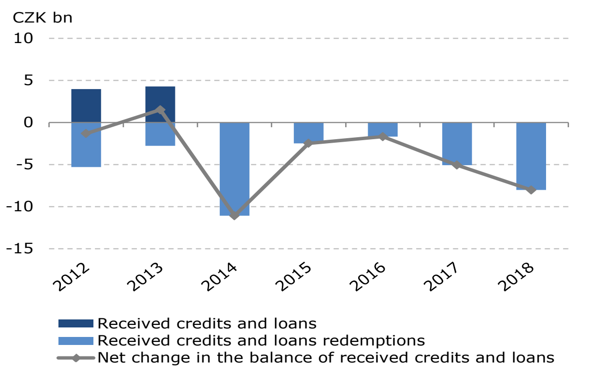
Source: MoF

Figure 11: Net Issue of T-Bonds on Foreign Markets



Source: MoF

Figure 13: Net Change in the Balance of Received Credits and Loans



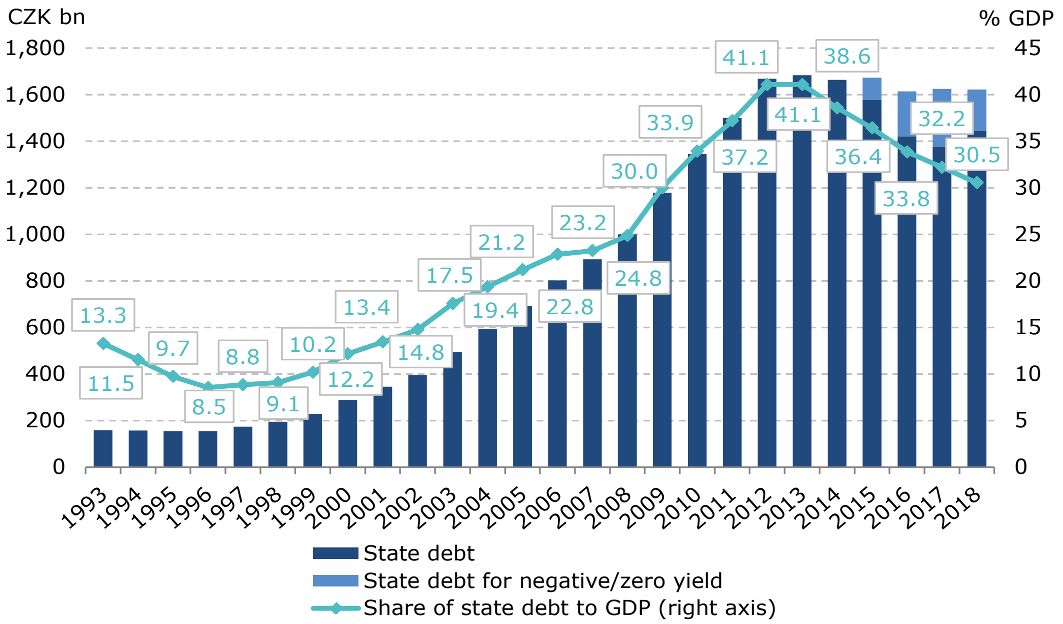
Note: Credits and loans received from international financial institutions.
Source: MoF

Table 6: Net Borrowing Requirement and Change in State Debt

CZK bn	2012	2013	2014	2015	2016	2017	2018
Gross state debt as at 1 January	**1,499.4**	**1,667.6**	**1,683.3**	**1,663.7**	**1,673.0**	**1,613.4**	**1,624.7**
Primary state budget balance	59.6	30.4	29.3	17.5	-102.4	-33.6	-43.7
Net expenditure on state debt service[1]	41.4	50.9	48.5	45.3	40.7	39.8	40.7
Financial asset and liquidity management operations	71.8	-78.9	-99.7	-43.2	2.3	16.1	-1.3
Net borrowing requirement	**172.8**	**2.3**	**-21.9**	**19.6**	**-59.4**	**22.2**	**-4.2**
T-Bills net issue and net change in the balance of other money market instruments	26.5	-68.2	-10.7	-23.5	-82.4	39.8	-0.3
T-Bonds net issue on domestic market	42.9	37.7	96.0	67.4	66.4	3.8	71.7
T-Bonds net issue on foreign markets	69.0	0.0	-86.4	-10.8	-12.6	0.0	-51.4
Savings government bonds net issue	35.8	31.4	-9.7	-10.9	-29.2	-16.3	-16.3
Net change in balance of received credits and loans[2]	-1.3	1.5	-11.1	-2.5	-1.7	-5.1	-8.0
Financing of net borrowing requirement	**172.8**	**2.3**	**-21.9**	**19.6**	**-59.4**	**22.2**	**-4.2**
Revaluation of state debt[3]	-4.4	13.4	2.3	-10.3	-0.2	-10.9	1.5
Promissory notes net change	-0.1	0.0	0.0	0.0	0.0	0.0	0.0
Gross state debt change	**168.3**	**15.7**	**-19.7**	**9.3**	**-59.6**	**11.3**	**-2.7**
Gross state debt as at 31 December	**1,667.6**	**1,683.3**	**1,663.7**	**1,673.0**	**1,613.4**	**1,624.7**	**1,622.0**
Share of GDP (%)[4]	**41.1**	**41.1**	**38.6**	**36.4**	**33.8**	**32.2**	**30.5**

[1] Balance of budgetary chapter 396 – State debt.
[2] Credits and loans received from international financial institutions.
[3] Incl. the revaluation of foreign currency denominated debt due to exchange rate differences and the consolidation of state debt from bonds that were initially recorded on the asset account maintained by the Ministry in the relevant records for as long as they are registered in the account as well own bonds acquired by the state as their issuer prior to their maturity date, and financial resources received or repaid under the lending facilities provided from the nuclear portfolio.
[4] GDP in the ESA 2010 methodology. The source of data for 2012 – 2017 is CZSO, for 2018 the Macroeconomic Forecast of the Czech Republic – January 2019.
Source: MoF, CZSO

Figure 14: Czech Republic's State Debt Development



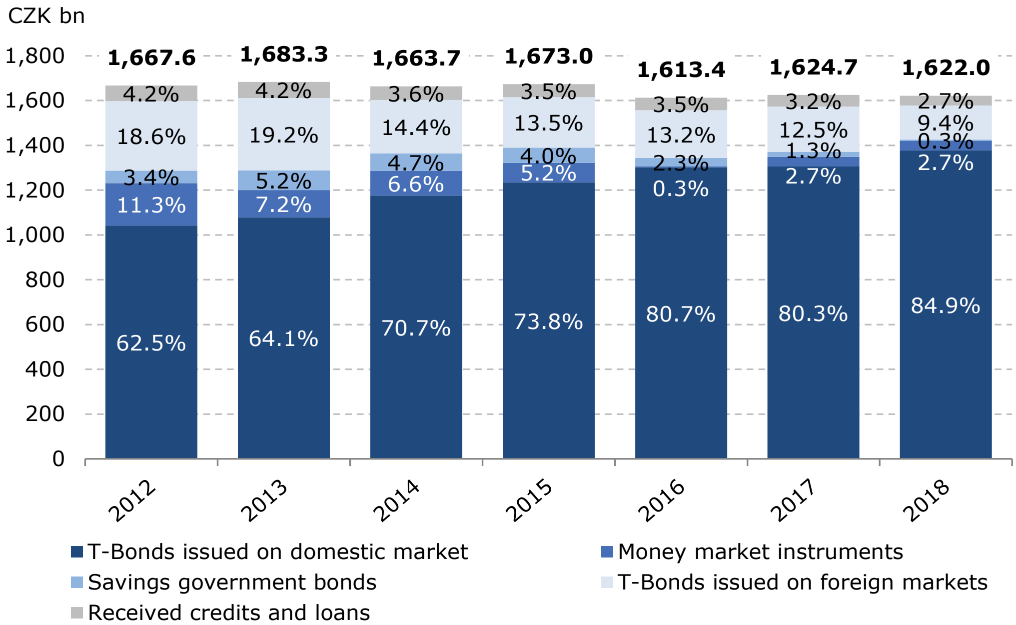
Note: GDP in the ESA 2010 methodology. The source of data for 1993 – 2017 is CZSO, for 2018 the Macroeconomic Forecast of the Czech Republic – January 2019.
Source: MoF, CZSO

Table 7: Balance and Structure of the Debt Portfolio

CZK bn	2012	2013	2014	2015	2016	2017	2018
Gross state debt	**1,667.6**	**1,683.3**	**1,663.7**	**1,673.0**	**1,613.4**	**1,624.7**	**1,622.0**
T-Bills and other money market instruments	189.1	120.9	110.2	87.3	4.2	44.0	43.6
Received collateral in cash	0.0	0.0	0.0	0.0	0.0	0.0	0.0
T-Bonds issued on domestic market	1,042.0	1,079.7	1,175.7	1,235.2	1,301.6	1,305.4	1,377.1
T-Bonds issued on foreign markets	310.3	323.7	239.6	225.6	213.5	202.6	152.9
Savings government bonds	56.2	87.6	77.8	66.9	37.8	21.5	5.2
Received credits and loans[1]	70.0	71.5	60.4	58.0	56.3	51.2	43.2
Promissory notes	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Liquid state financial assets	**191.5**	**116.7**	**67.8**	**77.1**	**62.2**	**60.5**	**61.9**
Nuclear portfolio	18.5	20.7	22.7	24.5	25.6	27.2	28.7
Pension portfolio	22.4	22.6	22.7	22.9	23.0	23.1	23.2
Special-purpose state financial assets accounts	10.6	10.7	10.9	11.1	10.7	10.1	9.8
On-lending over 1 year[2]	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cash reserve[3]	139.9	62.7	11.5	18.6	2.9	0.2	0.2
State financial assets	**193.2**	**116.7**	**67.8**	**77.1**	**62.2**	**60.5**	**61.9**
Liquid state financial assets	191.5	116.7	67.8	77.1	62.2	60.5	61.9
On-lending[4]	1.7	0.0	0.0	0.0	0.0	0.0	0.0
Net debt portfolio	**1,474.4**	**1,566.7**	**1,595.8**	**1,595.9**	**1,551.2**	**1,564.2**	**1,560.1**

[1] Credits and loans received from international financial institutions.
[2] Extra-budgetary loans with original maturity of over 1 year and the estimated remaining time to maturity shorter than 12 months granted to other countries and domestic legal entities.
[3] Available cash resources created according to Section 35(4) of Act No. 218/2000 Coll. incl. the impact of exchange rate difference of the CZK value of the part of the cash reserve in foreign currencies.
[4] Extra-budgetary loans with original maturity of over 1 year and the estimated remaining time to maturity longer than 12 months granted to other countries and domestic legal entities.
Source: MoF

Figure 15: Structure of the Debt Portfolio by Instrument



Note: Credits and loans received from international financial institutions.
Source: MoF

State Treasury Liquidity Management

In the environment of gradual interest rates growth, the Ministry continued in rationalize significantly the available state treasury liquidity in accordance with the most recent principles of the management of government finances. The cash reserve generated in previous years mainly by the issuance activity with correlative increase in the gross state debt is thus replaced by the available cash resources of the central system of treasury single accounts management.

On 10 February 2017 the nine-month transitional period ended during which new mandatory clients together with state contributory institutions had to establish their accounts in the Czech National Bank and transfer their funds from previous accounts in banks or other payment service providers. In this context, the treasury single accounts were extended by the accounts of these clients, on which the Ministry records the steady growth of the account balance, bringing an additional average increase of an account balance of CZK 49.3 billion in 2017 and CZK 20.1 billion more in 2018. State treasury is thus managed more effectively according to the actual state's needs and also better valorised by the investments within the state treasury liquidity management. Moreover, the position of the Czech Republic on financial market strengthened enabling additional streamlining of state's borrowing operations management and decrease in the interest expenditure of the state budget.

Table 8: State and Structure of Resources and Investment Position of the State Treasury

CZK bn, EUR bn	2016		2017		2018	
	CZK	EUR	CZK	EUR	CZK	EUR
Liquid state financial assets	**59.3**	**0.1**	**60.3**	**0.0**	**61.7**	**0.0**
Mandatory clients of state treasury[1]	156.6	0.1	194.6	0.8	208.5	0.1
Optional clients of state treasury	29.1	0.0	41.5	0.0	57.5	0.0
Liabilities to the state treasury (-)	-82.9	-0.1	-57.1	-0.6	-72.6	-0.1
Total liquidity position of the state treasury[2]	**162.2**	**0.1**	**239.4**	**0.2**	**255.1**	**0.0**
Reverse repo operations (T-Bills collateral)	0.0	0.0	0.0	0.0	0.0	0.0
Reverse repo operations (T-Bonds collateral)	0.0	0.0	0.0	0.0	0.0	0.0
Reverse repo operations (CNB bills collateral)	0.0	0.0	0.0	0.0	0.0	0.0
Reverse repo operations (foreign securities collateral)	0.0	0.0	0.0	0.0	0.0	0.0
Provided deposits and short-term borrowings and loans	0.0	0.0	0.0	0.0	9.0	0.0
On-lending[3]	0.0	0.0	0.0	0.0	0.0	0.0
Investment in securities	8.1	0.0	4.6	0.0	4.6	0.0
Provided collateral (in cash)	0.0	0.0	0.0	0.0	0.0	0.0
Cash resources in treasury single account	154.1	0.0	234.8	0.0	241.5	0.0
Ministry's cash resources in commercial banks accounts[4]	0.0	0.0	0.0	0.2	0.0	0.0
Total investment position of the state treasury	**162.2**	**0.1**	**239.4**	**0.2**	**255.1**	**0.0**

[1] Excl. quasi-clients of the state treasury (state debt and state financial assets).
[2] Available liquidity of the state treasury incl. investments outside state treasury liquidity management accounts.
[3] Extra-budgetary loans with maturity of over 1 year and the estimated remaining time to maturity shorter than 12 months granted to other countries and domestic legal entities.
[4] Incl. cash resources in transit.
Source: MoF

The Ministry took advantage of the current market situation, when the two-week repo rate was increased five times by the Czech National Bank during 2018, and reached CZK 1,776 million higher yields from the investment operations on the money market within the state treasury liquidity management in 2018 compared to 2017. The Ministry traded with 16 counterparties in 2018, which are both domestic and foreign banks and institutions.

Within the CZK-denominated state treasury liquidity management and the state financial assets investment operations in the nuclear portfolio, short-term investments with the use of the CNB bills, state treasury bills and medium-term and long-term government bonds as collateral in a total nominal value of CZK 7,050.2 billion were carried out in 2018. The average interest rate achieved when investing with the use of these collaterals recorded a significant increase over the previous year and reached 0.96% p.a. Short-term investments in form of deposit operations in a total nominal value of CZK 6,334.6 billion were carried out as well. The average interest rate achieved when investing in form of deposit operations was 0.40% p.a. Yields of CZK 2,069.4 million from operations within the CZK-denominated state treasury liquidity management were transferred to the state budget.

Within the EUR-denominated state treasury liquidity management, short-term investment in nominal value of EUR 45.0 million was carried out in 2018. The Ministry also executed foreign exchange swaps with maturities in the following year in total nominal value of EUR 67 million, and the average interest rate achieved in these operations was 1.4% p.a. Yields of CZK 157.9 million from these operations were transferred to the state budget.

The situation on the European deposit market is characterized by negative interest rates, particularly due to the monetary policy of the European Central Bank. The Ministry took advantage of this situation, when carrying out short-term borrowing operations in foreign currency maturing in 2018 and 2019. In 2018, the total revenue from these operations was CZK 49.9 million.

Table 9: Net State Budget Revenue from Operations within State Treasury Liquidity Management and Borrowing Operations with Negative Yields

CZK mil.	2016	2017	2018	2017/2016	2018/2017
CZK operations	59.7	293.5	2,069.6	4.9	7.1
EUR operations (in CZK)	16.9	0.0	0.0	0.0	1.6
Lending facilities	11.6	24.4	10.1	2.1	0.4
FX swaps	44.0	17.7	157.9	0.4	8.9
Issuance with negative yield[1]	803.2	1,204.7	1.6	1.5	0.0
Borrowing operations in foreign currency with a negative yield	-	1.0	49.9	-	50.8
Total	**935.3**	**1,541.3**	**2,289.2**	**1.6**	**1.5**

[1] Adjusted for future expenditure on coupon payments related to the bonds until their maturity, unless they were zero-coupon bonds.
Source: MoF

The Ministry is able to achieve other state budget savings through the purchase of euro funds on spot foreign exchange market, which are intended for payments of foreign currency expenditures of the state budget chapters (e.g. chapters of Ministry of Foreign Affairs, General Treasury Management, etc.). The Ministry is able to obtain more advantageous exchange rate on spot foreign exchange market than the Czech National Bank offers to mediate the transaction on the basis of its current exchange rate list. For the year 2018, the Ministry has saved CZK 41.4 million by providing operations amounted to EUR 407 million.

Table 10: FX Operations on Spot Market 2018

Counterparty	Nominal value (EUR)	Nominal value (CZK)	Savings (CZK)[1]	Share of savings (%)
Credit Agricole Corporate and Investment Bank	280,615,301	7,204,494,348	26,489,431	64.0
PPF banka a.s.	63,325,056	1,611,852,999	7,470,533	18.1
Société Générale / Komerční banka, a.s.	37,757,084	965,251,059	4,299,394	10.4
J.P. Morgan Securities plc	10,772,214	277,041,341	1,323,673	3.2
Erste Group Bank AG / Česká spořitelna, a.s.	7,179,299	186,604,332	883,054	2.1
UniCredit Bank Czech Republic and Slovakia, a.s.	3,467,957	89,438,609	378,007	0.9
Citibank Europe plc	2,625,991	66,763,195	322,997	0.8
KBC Bank NV / Československá obchodní banka, a. s.	1,253,161	31,723,773	190,480	0.5
Total	**406,996,064**	**10,433,169,657**	**41,357,568**	**100.0**

[1] State budget savings made through the intermediation of foreign currency payments from the state budget given by the exchange rate announced by the CNB and the exchange rate on spot market
Source: MoF

3 - Funding Program and Issuance Activity

The funding program for the given year defines the scope for the execution of borrowing operations and quantifies the value of cash resources acquired from borrowing operations on the financial markets or from the international financial institutions to cover the financing needs. The structure of funding program consists of debt sources, which are used for financing of the gross borrowing requirement, i.e. the issuance and sale of government bonds on domestic and foreign markets and receiving of loans and credits from international financial institutions.

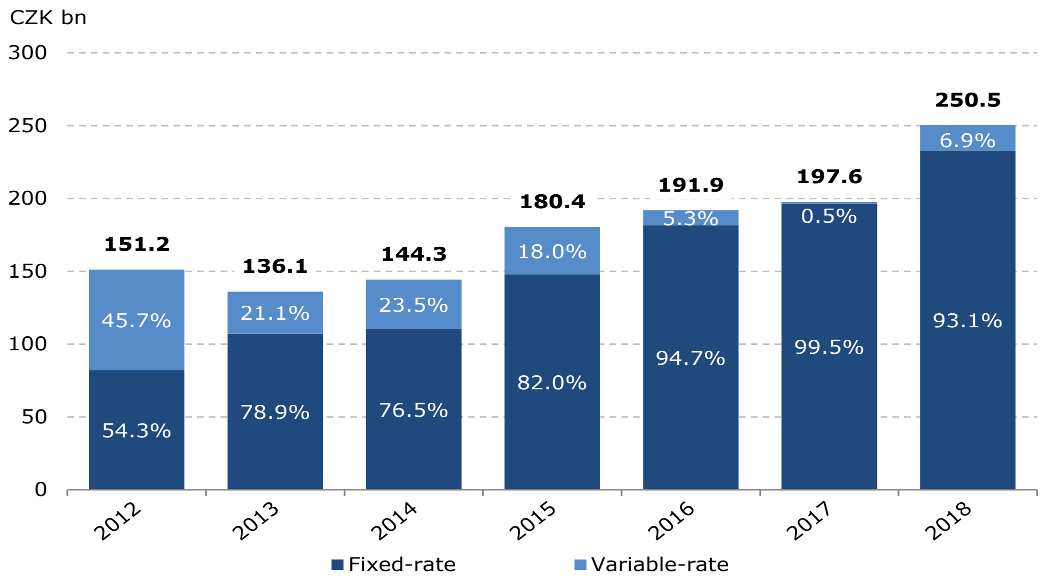
Implementation of the Funding Program

Regular quarterly evaluation of the actual debt portfolio structure in relation to the declared strategic targets and limits that constitute the key parameters of the publicly defined strategic benchmark portfolio communicated in particular through the Strategy and its possible revisions, and the quarterly update of gross borrowing requirement and funding program contained in the Debt Portfolio Management Quarterly Reports are the Ministry's main tools to support the credibility and transparency of the entire process of state debt and the related state financial assets management and the execution of borrowing operations on financial markets in accordance with best international practice and recommended standards.

Medium-Term and Long-Term Government Bonds

The medium-term and long-term government bonds issuance plan for 2018 was set at the minimum level of CZK 150 billion within the Strategy. The actual gross issue of medium-term and long-term government bonds on the primary and secondary markets amounted to CZK 259.2 billion in 2018. In the context of increasing key interest rates of the Czech National Bank and increasing government bonds yields along the entire yield curve, there was a significant recovery in demand for government bonds with a relatively longer time to maturity, in line with the Strategy, the Ministry focused on meeting the defined objectives and limits for the medium-term horizon, in particular the increase in the average time to maturity of the gross debt portfolio. On the domestic market of medium-term and long-term government bonds, a total of 55 primary auctions were held in 21 auction days in 2018. In one auction day, up to three different government bonds were offered. In line with the Strategy, the Ministry offered fixed-rate government bonds in auctions, which accounted for 93.1% and to a lesser extent variable-rate government bond, which accounted for 6.9%. Fixed-rate government bonds were preferred primarily with respect to demand for these bonds from primary dealers.

Figure 16: Interest Structure of T-Bonds Sold in Auctions on Primary Market



Source: MoF

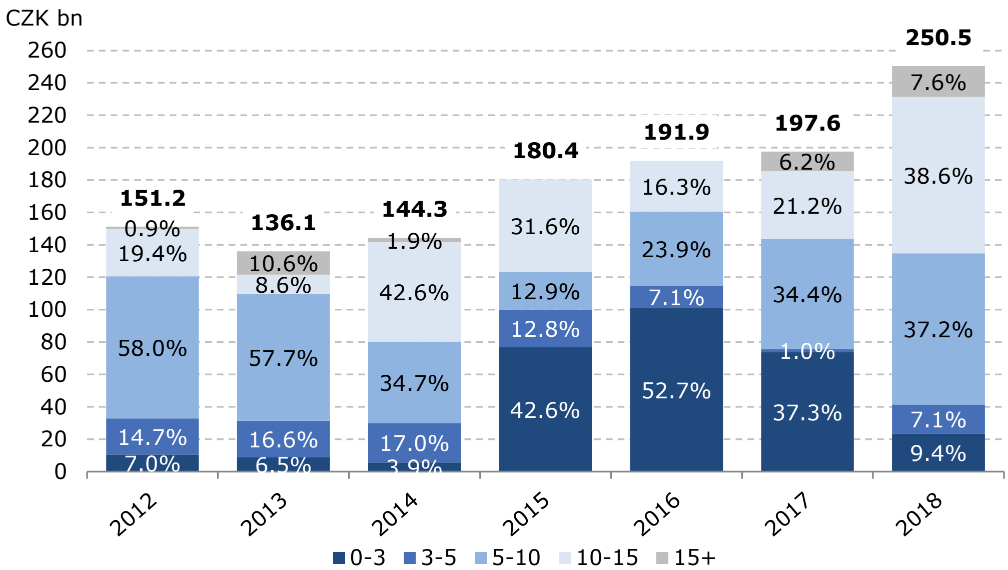
The Ministry issued two new fixed-rate issues on the primary market in 2018, Government Bond of the Czech Republic, 2018-2021, 0.75% in total nominal value of CZK 25.6 billion in six tranches, and Government Bond of the Czech Republic, 2018-2029, 2.75% in total nominal value of CZK 58.4 billion in nine tranches.

Also in 2018, the Ministry tried to utilize favourable conditions on the financial markets, especially for medium-term and long-term government bonds interest at the longer end of the yield curve. The Ministry sold more than one third of medium-term and long-term government bonds on the primary market in the segment of the residual time to maturity of 5 to 10 years, namely Czech Republic Government Bond, 2014-2025, 2.40% in total nominal value of CZK 33.4 billion, Government Bond of the Czech Republic, 2017-2027, 0.25% in total nominal value of CZK 21.9 billion, and Government Bond of the Czech Republic, 2015-2026, 1.00%, whose total nominal value amounted to CZK 19.2 billion. In total, CZK 93.2 billion was sold in this segment, which represents an increase of 2.8 p.p. to 37.2% in comparison with 2017.

The segment of residual maturity of 10 to 15 years reached a share of 38.6% in total gross issue on the primary market, i.e. 17.4 p.p. higher than in the previous year. Within this segment, Government Bond of the Czech Republic, 2018-2029, 2.75% was sold, Government Bond of the Czech Republic, 2015-2030, 0.95% in total nominal value of CZK 19.4 billion, and Czech Republic Government Bond, 2013-2028, 2.50% in total nominal value of CZK 16.8 billion.

In the segment of residual maturity over 15 years, the Ministry sold government bonds totaling CZK 19.1 billion, which corresponds to a share in the total gross issue of 7.6%. These are the Government Bond of the Czech Republic, 2017-2033, 2.00% with total nominal value of CZK 15.7 billion, and Czech Republic Treasury Bond, 2006-2036, 4.20% with total nominal value of CZK 3.4 billion. In total, CZK 250.5 billion of medium-term and long-term government bonds was sold on the primary market in 2018, which is CZK 52.8 billion, i.e. 26.7% more than in 2017. This increase is mainly due to higher financing needs to be covered by government bond issuance compared to 2017 and the Ministry's efforts to meet the demand of primary dealers and to make the most of the actual conditions on the domestic market of medium-term and long-term government bonds. The Ministry thus fulfilled the framework issuance plan defined in the Strategy and Updated strategy as well, and by increased issuance of medium-term and long-term government bonds at the longer end of the yield curve came closer to meeting the announced refinancing risk limits for the medium-term horizon.

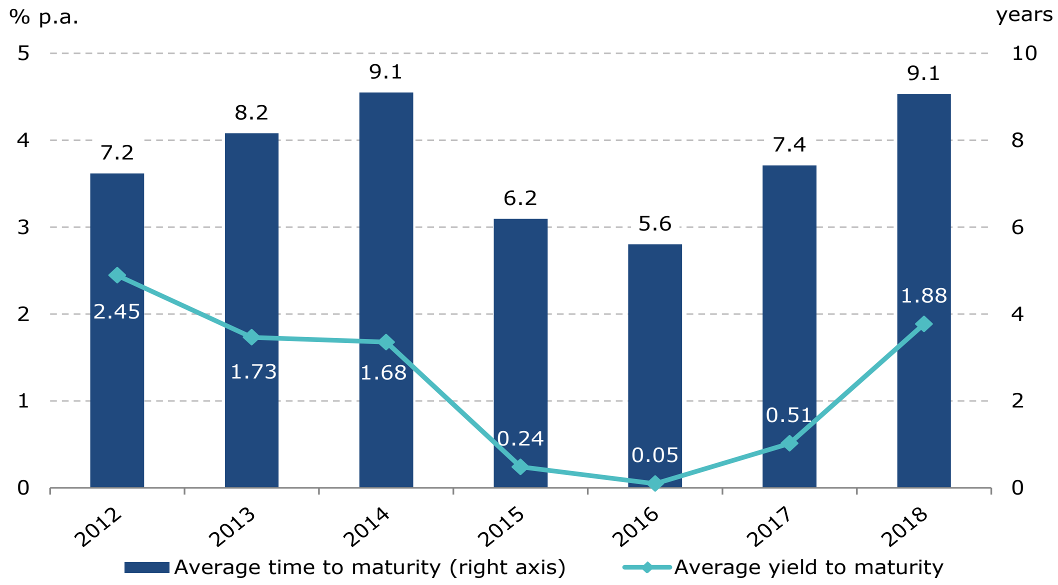
Figure 17: Maturity Structure of T-Bonds Sold in Auctions on Primary Market



Note:Residual time to maturity related to the issue date.
Source: MoF

The average yield of medium-term and long-term government bonds sold on the primary market in 2018 was 1.88% p.a. Compared to 2017, the increase is due to an extending of the residual time to maturity of sold government bonds, which increased by 1.6 years to the level of 9.1 years, and the implementation of the restrictive monetary policy by the Czech National Bank in the form of increasing key interest rates throughout the year 2018.

Figure 18: Average Yield and Time to Maturity of T-Bonds in Auctions on Primary Market



Note: Average residual time to maturity is related to the issue date.
Source: MoF

The Ministry continued in the exchange operations program on the secondary market through the MTS Czech Republic trading platform in 2018. As part of these operations, the Ministry usually buys back medium-term and long-term government bonds with a relatively short residual time to maturity or a relatively high coupon rate and sells bonds with longer residual time to maturity or a relatively lower coupon rate, which reduces future redemptions and hence refinancing risk. As a result of these operations, the average time to maturity of the debt portfolio is also increased. At the same time, these operations may have a positive effect on the state budget due to the savings resulting from the non-realization of future coupon payments. In the year 2018, the Ministry exchanged Czech Republic Treasury Bond, 2009-2019, 5.00% in total nominal value of CZK 1.3 billion, and Czech Republic Government Bond, 2013-2019, 1.50% in total nominal value of CZK 1.8 billion. In total, the Ministry exchanged government bonds in a total nominal value of CZK 3.1 billion with an average residual time to maturity of 0.9 years for government bonds in a total nominal value of CZK 2.5 billion with an average residual time to maturity of 13.2 years.

The Ministry realized tap sales of medium-term and long-term government bonds through MTS Czech Republic electronic trading platform, selling bonds in a total nominal value of CZK 6.2 billion with maturities between 2020 and 2057. The Ministry thus benefited from a wide range of operations on the primary and secondary markets in 2018 to meet the demand of primary dealers and at the same time to maximize the favourable market conditions with a positive impact on the debt portfolio risk and the state budget performance.

In 2018, three redemptions of medium-term and long-term government bonds issued on domestic market were carried out that were spread evenly throughout the year. It was Government Bond of the Czech Republic, 2016-2018, 0.00%, which was redeemed in January in total nominal value of CZK 60.0 billion, Czech Republic Government Bond, 2014-2018, 0.85%, which was redeemed in March in total nominal value of CZK 50.0 billion, and Czech Republic Treasury Bond, 2003-2018, 4.60%, which was redeemed in August in total nominal value of CZK 74.4 billion. In total, CZK-denominated medium-term and long-term government bonds in a total nominal value of CZK 187.5 billion were redeemed in 2018, including the operations on the secondary market. The total nominal value of the net issue of medium-term and long-term government bonds on the domestic market thus amounted to CZK 71.7 billion. No buy-backs of medium-term and long-term government bonds were carried out in 2018.

In 2018, there was a regular redemption of the medium-term and long-term government bonds denominated in euro in total nominal value of EUR 2.0 billion. Taking into account other factors such as the record high interest in government bonds issued on domestic market and higher expenditures associated with possible foreign issue compared to the comparable government bond issue on domestic market, taking into account the expenses for hedging currency risk, the Ministry did not carry out borrowing operations on foreign bonds markets.

Money Market Instruments

In 2018, the total nominal value of gross issue of money market instruments excl. roll-over amounted to CZK 43.7 billion. In 2018, the Ministry sold state treasury bills especially for the purpose of obtaining additional state budget revenues, while the financial resources obtained from the sale of these bonds were not primarily involved in covering the financing needs, but were further invested within the treasury single accounts liquidity management, which was completely in line with the Strategy and Updated strategy. The Ministry carried out 29 auctions in 29 auction days. The gross issue of state treasury bills, including roll-over, amounted to CZK 184.0 billion at the demand of primary dealers amounting CZK 371.5 billion, when the average auction yield of state treasury bills reached 0.36% in 2018.

Even in 2018, the primary dealers of Czech government bonds continued to use the lending facility in the form of repo operations, when medium-term and long-term government bonds in a total nominal value of CZK 12.1 billion were provided from the Ministry's asset accounts against financial resources of CZK 11.9 billion, which were further invested in the money market as part of state treasury liquidity management and as part of investment operations within nuclear portfolio state financial assets management. The average interest rate on lending facilities in the form of repo operations in the course of 2018 was -0.07% p.a.

As part of the further support of the secondary market for medium-term and long-term government bonds in 2018, the Ministry used a lending facility in the form of a collateralized loan, taking into account the demand of primary dealers, when the Ministry provides Czech government bonds from its own asset account against another government bond of the Czech Republic or CNB treasury bill for a short period of time for free. Collateralised loan can be used by primary dealers for a period of up to 90 days, the aim of these operations is to increase the liquidity of government bonds on the secondary market, especially in the event of a short-term excess of demand over supply of given government bond. In the course of 2018, the Ministry provided medium-term and long-term government bonds to primary dealers in a total nominal value of CZK 39.6 billion. The average fee achieved within the lending facility in the form of collateralised loan was -0.21% p.a.

Other Debt Instruments

No tranches of the loans from the European Investment Bank were drawn in 2018. In the course of the year, the repayments of European Investment Bank loans tranches in a total amount of CZK 8.0 billion were carried out.

In the area of savings government bonds, the total nominal value of the gross issue amounted to CZK 0.1 billion issued solely in the form of reinvestment of yields. In June 2018, a regular redemption of Reinvestment Savings Government Bond of the Czech Republic, 2013-2018, FIX% in a total nominal value of CZK 6.1 billion and regular redemption of Coupon Savings Government Bond of the Czech Republic, 2013-2018, FIX% in a total nominal value of CZK 0.8 billion was carried out. In December 2018, a regular redemption of Reinvestment Savings Bond of the Czech Republic, 2013-2018 II, FIX% in a total nominal value of CZK 8.0 billion and Coupon Savings Government Bond of the Czech Republic, 2013-2018 II, FIX% in a total nominal value of CZK 1.4 billion was carried out. The issuance terms and conditions of savings government bonds allow the owners to request their redemption before the specified maturity date. However, the actual development of early redemption in 2018 indicates that the share of early redemptions is not significant and the owners of savings government bonds rarely request this service. Within all periods for submitting requests for early redemption in 2018, such early redemption was requested for a total nominal value of CZK 22.3 million, which is 0.1% of the total nominal value of savings government bonds outstanding as at the end of 2017. The total nominal value of regular redemptions of savings government bonds and redemptions of savings government bonds before the maturity date amounted to CZK 16.4 billion in 2018.

At the end of 2018, the total nominal value of savings government bonds outstanding amounted to CZK 5.2 billion, representing a decrease of CZK 16.3 billion compared to the end of 2017. The share of savings government bonds in total state debt is 0.3% and the share in all CZK-denominated government bonds is 0.4%. The table representing the development of savings government bond issuance and redemptions is the part of Annex II.

4 - Risk Management and Portfolio Strategy

Public definition of the strategic benchmark debt portfolio through the declaration of strategic goals is the main tool for increasing the transparency of the Ministry's debt policy in line with the best international practice. The objectives are set up based on the requirements of a prudent approach to management of financial and credit risks while minimizing economic costs in the long run. The main risks to which the debt portfolio is exposed in the long term are refinancing, interest rate and currency risks. All the objectives and limits defined below are applied to the portfolio of the state debt as a whole, including derivative operations.

In connection with the sufficient liquidity of treasury single accounts and relatively stable balances of those account owners mandatorily included into single treasury accounts, streamlining and modernizing state treasury liquidity management, refinancing and interest risk strategic targets and limits are announced in medium-term horizon. This concept allows the Ministry a flexible response to a short-term market conditions and investors' interest in instruments in a certain segment of time to maturity or re-fixing.

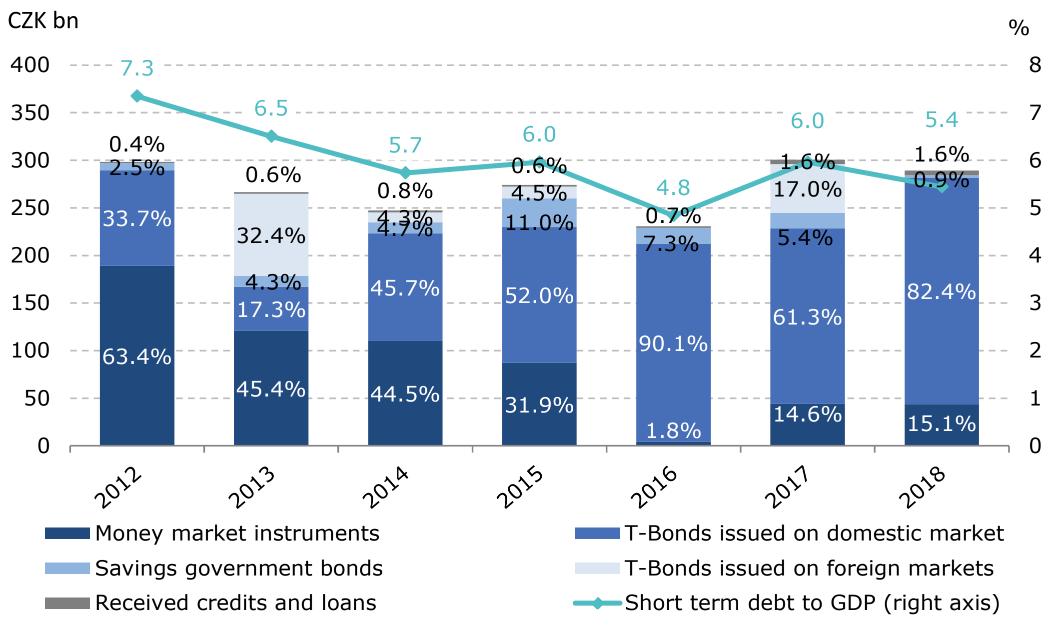
A short-term deviation from the set medium-term strategic limits and targets for the debt portfolio's risk parameters for refinancing and interest rate risk is possible but the medium-term issuance activity will be planned in such a way that the limits and targets defined in the Strategy are met in the medium term.

Refinancing Risk

Refinancing risk is managed by a system of four indicators: the share of short-term state debt, the share of medium-term state debt, average time to maturity and maturity profile. These four indicators are to be considered as a comprehensive system, focusing on only one of them may pose a potential risk.

The share of short-term state debt (i.e. the share of debt due within one year in total state debt) is a key indicator of the refinancing risk in the short-term horizon. For the medium-term horizon, the limit for the short-term state debt is set at 20.0%. The share of short-term state debt at the end of 2018 was 17.8% of the total state debt, representing a decrease of 0.7 p.p. compared to the end of 2017, but still below the limit for the medium-term horizon.

Figure 19: Structure of Short-Term State Debt by Instrument



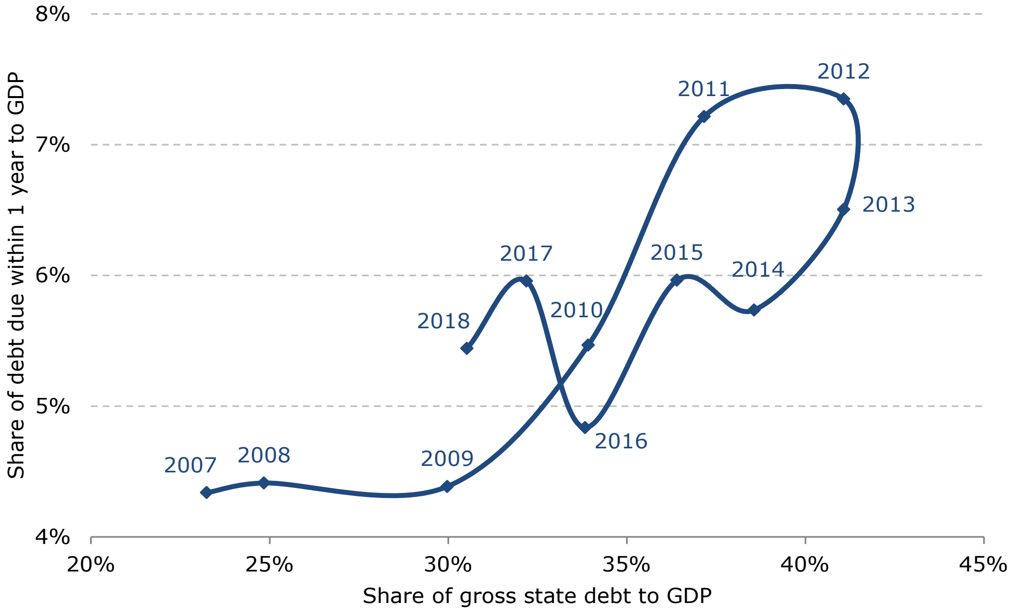
Note: As at the end of particular year. The source for GDP for 2012 to 2017 is the CZSO, for 2018 the Macroeconomic Forecast of the Czech Republic – January 2019. Credits and loans received from international financial institutions.
Source: MoF, CZSO

In the course of 2018, the absolute value of the short-term state debt decreased by CZK 11.6 billion to CZK 289.1 billion. Compared to the end of 2017 there has been a change in currency structure of short-term state debt connected to the medium-term and long-term government bonds while the share of other debt instruments did not change significantly year-on-year. In case of CZK-denominated medium-term and long-term government bonds maturing within one year, there was an increase by CZK 53.7 billion i.e. by 21.0 p.p., in case of government bonds issued on foreign markets maturing within one year, the year-on-year decrease was 17.0 p.p. since there will be no redemption in 2019 of these bonds. Regarding savings government bonds maturing within one year the year-on-year decrease was CZK 13.7 billion, i.e. 4.5 p.p. Lower repayments of European Investment Bank loans by CZK 0.2 billion in 2019 compared to 2018 did not affect the share of received credits and loans in short-term state debt significantly.

Money market instruments outstanding at the end of 2018 decreased by CZK 0.4 billion compared to the end of 2017, yet the share of money market instruments in total short-term state debt increased year-on-year by 0.5 p.p. to 15.1% of short-term state debt. The share of money market instruments in the total state debt at the end of 2018 was 2.7% and remained the same compared to the end of 2017. Even at the end of 2018, the medium-term and long-term government bonds issued on the domestic and foreign markets including savings government bonds maturing within one year exceed the balance of money market instruments outstanding.

The share of short-term state debt in GDP decreased by 0.5 p.p. compared to end of 2017 to 5.4% at the end of 2018. In total, the share of short-term state debt in GDP decreased by 1.9 p.p. in 2012 to 2018. Since 2012, the share of total state debt to GDP has also declined from 41.1% to 30.5% by the end of 2018. The decrease in this share amounted to 10.5 p.p. since 2012.

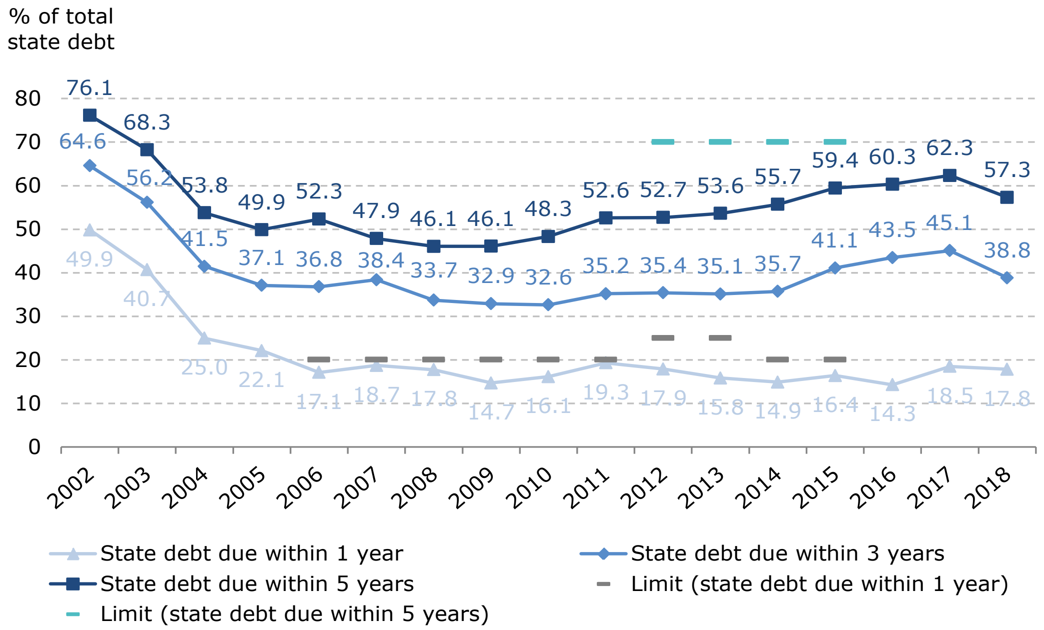
Figure 20: Gross State Debt and State Debt Due within One Year



Note: As at the end of each year. The source for GDP for 2007 to 2017 is the CZSO, for 2018 the Macroeconomic Forecast of the Czech Republic – January 2019.
Source: MoF, CZSO

In the area of medium-term refinancing risk, the Ministry monitors and manages the share of debt due within three and five years. The debt due within five years is managed by the share of the medium-term debt to the total state debt, for which the Ministry has set an explicit limit in the medium-term horizon of 70.0% of the total state debt. The value of the share of medium-term state debt in total sate debt at the end of 2018 is 57.3% decreasing by 5.0 p.p. compared to the end of 2017, thus the indicator still remains safely below the set limit for the medium-term horizon. The share of state debt maturing within three years amounts to 38.8%, representing a decrease of 6.2 p.p. compared to the end of 2017.

Figure 21: State Debt by Maturity Baskets

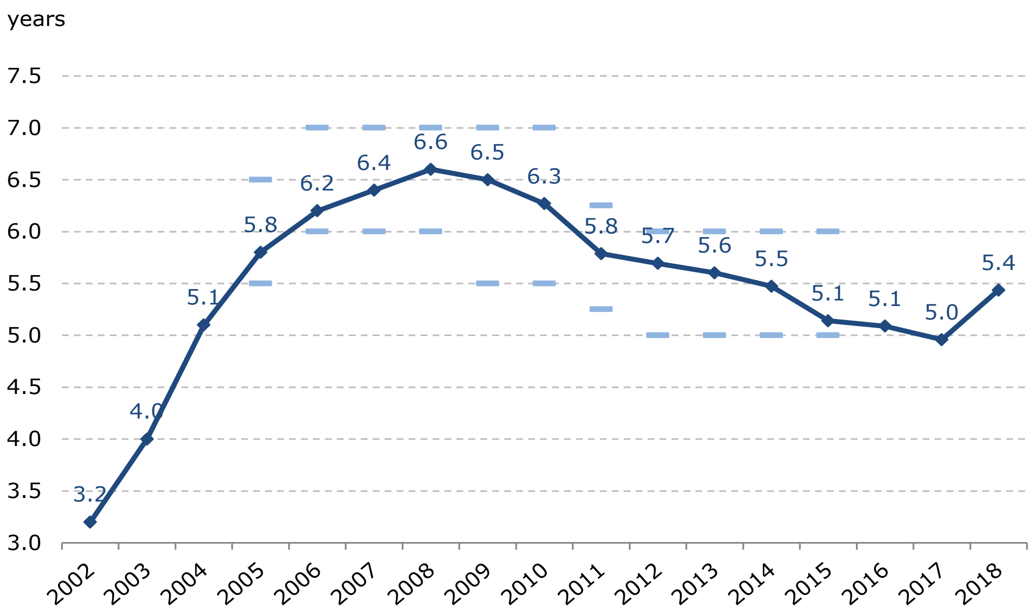


Note: As at the end of each year.
Source: MoF

Another indicator used in the management of refinancing risk is the average time to maturity of the state debt, for which the target value for the medium-term horizon is set at 6.0 years, with a possibility of deviation of 0.25 years. The average time to maturity as well as the smooth state debt portfolio maturity profile belongs among the fundamental indicators that determine the time and volume structure of government bond issues on domestic and foreign markets and the repayment schedules of European Investment Bank loans.

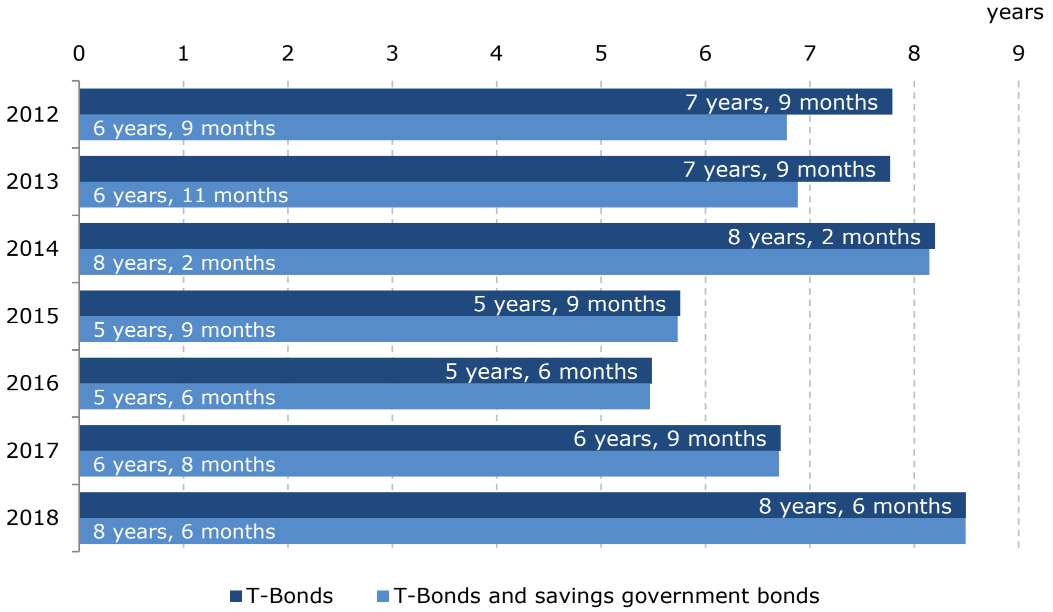
The average time to maturity of the state debt at the end of 2018 is 5.4 years and increased by 0.5 years compared to 2017. The significant increase was mainly due to the increase of the average time to maturity of gross issue of medium-term and long-term government bonds to 8 years and 6 months, i.e. 1 year and 9 months more compared to 2017 (at the end of the year) due to the reaction of the Ministry to market conditions, especially the gradual recovery of the demand for bonds with relatively longer time to maturity.

Figure 22: Average Maturity of State Debt and Declared Targets



Note: As at the end of each year.
Source: MoF

Figure 23: Average Time to Maturity of T-Bonds and Savings Government Bonds Issued on the Domestic Market



Note: Residual time to maturity of T-Bonds issued on domestic market and savings government bonds during the respective calendar year calculated relative to the end of the year.
Source: MoF

The Ministry monitors not only the average time to maturity of the total debt portfolio but also the average time to maturity of its individual components. The average time to maturity of CZK-denominated medium-term and long-term government bonds at the end of 2018 increased by 0.5 years to 5.8 years compared to the end of 2017. The average time to maturity of money market instruments has stabilized at 0.4 years since 2009; at the end of 2018 it amounts to 0.3 years. The average time to maturity of foreign issues at the end of 2018 remained at 3.2 years compared to the end of 2017, as the Ministry did not carry out any lending operations on foreign markets during the year 2018. The average time to maturity of savings government bonds did not change significantly compared to the end of 2017 and remained at the value of 1.1 years, when no new series of savings government bond issues were carried out in 2018, the gross issue of savings government bonds of CZK 0.1 billion was carried out only through reinvestment of the yields. The average time to maturity of received credit and loans declined by 0.4 years mainly due to the non-drawing of new tranches of European Investment Bank loans in 2018.

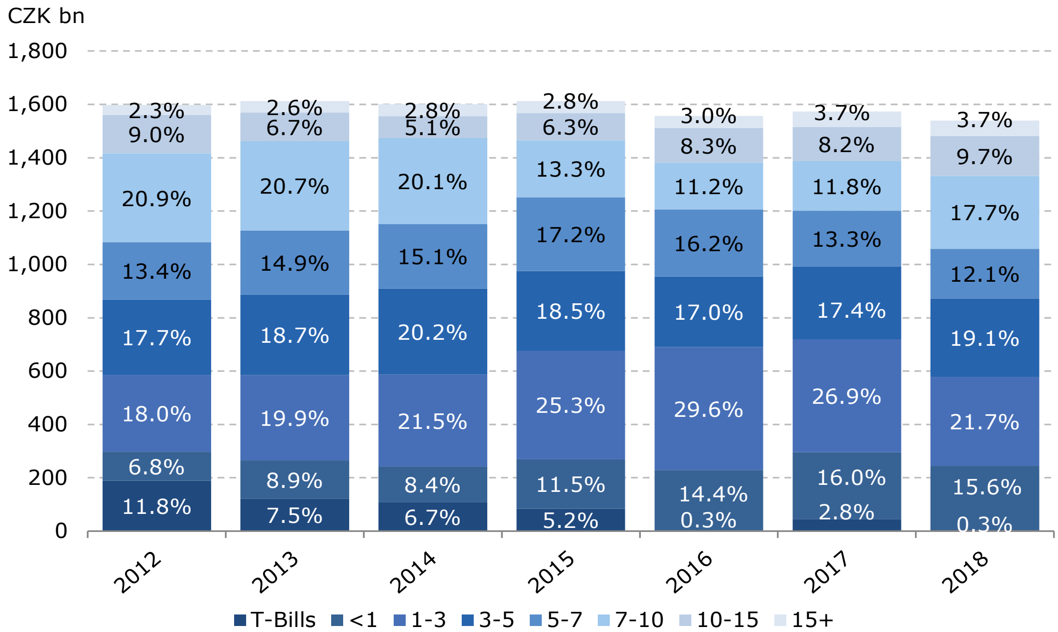
Table 11: Average Time to Maturity of Individual Components of the State Debt

years	2012	2013	2014	2015	2016	2017	2018
T-Bonds issued on domestic market	6.3	6.2	5.8	5.5	5.2	5.3	5.8
Savings government bonds	3.3	3.1	2.5	1.7	1.5	1.1	1.1
T-Bonds issued on foreign markets	6.1	5.1	5.8	5.0	4.3	3.2	3.2
Money market instruments	0.4	0.4	0.4	0.4	0.1	0.3	0.3
Received credits and loans, promissory notes	11.8	11.4	10.4	9.8	9.1	7.9	7.5

Note: Residual time to maturity as at the end of each year. Credits and loans received from international financial institutions.
Source: MoF

In 2018, the average maturity of government bonds increased, mainly due to a decline in the total nominal value of government bonds outstanding in the segment with a residual maturity of up to three years by CZK 140.6 billion. Its share in the total nominal value of all government bonds outstanding at the end of 2018 is 37.6% and thus decreased by 8.1 p.p. compared to the end of 2017. In addition, in the segment of residual maturity over 7 years, the total nominal value of government bonds outstanding increased by CZK 108.4 billion, and its share in the total nominal value of all government bonds outstanding at the end of 2018 reached 31.2% and thus grew by 7.6 p.p. compared to the end of 2017.

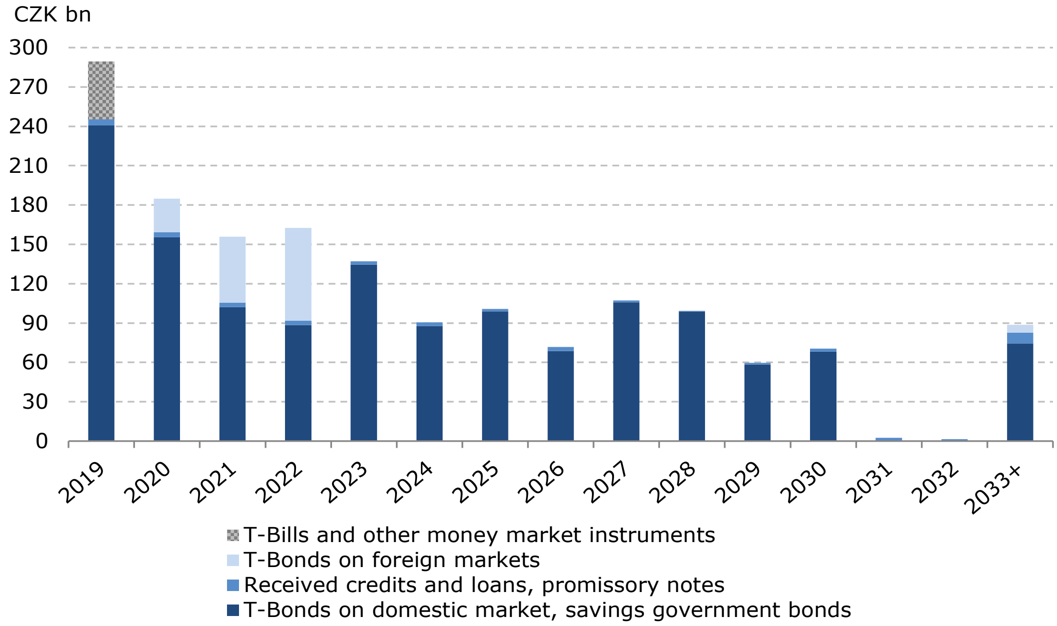
Figure 24: Structure of Government Bonds by Time to Maturity



Note: Residual time to maturity as at the end of each year. Includes T-Bonds issued on domestic and foreign markets, savings government bonds and T-Bills.
Source: MoF

The issuance calendars of government bonds, the sales of government bonds on the secondary market, the possible foreign issuance and the drawing of long-term loans from the European Investment Bank will continue to be managed in accordance with the fulfilment of another key objective in stabilizing and smoothing the state debt maturity profile over time. In the medium term, compared with 2019, a significant increase in financing needs is not expected, not considering the impact of planned buy-backs or exchanges of medium-term and long-term government bonds before maturity and redemptions of money market instruments.

Figure 25: Maturity Profile of State Debt



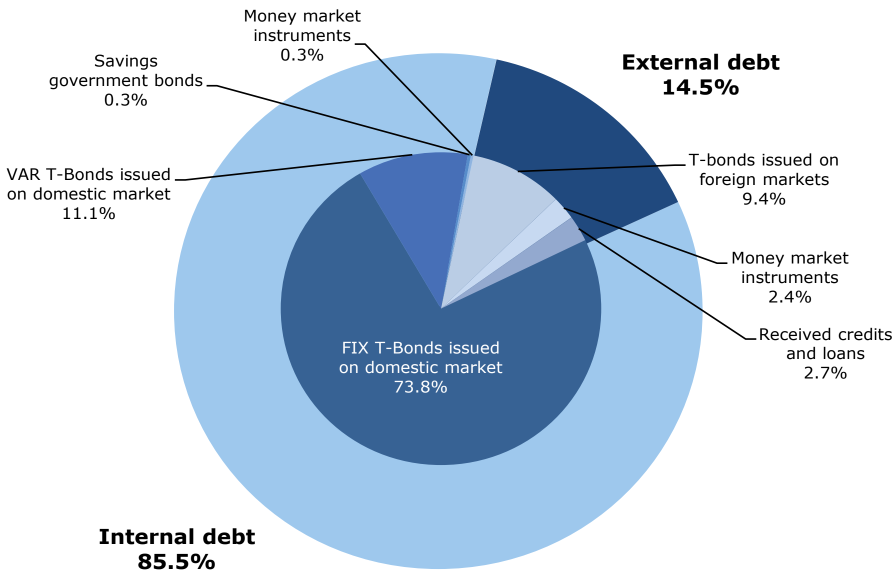
Note: As at the end of 2018. Credits and loans received from international financial institutions.
Source: MoF

With regard to refinancing risk, the Ministry monitors the debt portfolio structure by individual instruments. CZK-denominated fixed-rate medium-term and long-term government bonds, including medium-term zero-coupon government bonds cover the largest share in the long run, with a share of 73.8% of total state debt at the end of 2018, which represents an increase of 3.4 p.p.

compared to the end of 2017. The share of CZK-denominated variable-rate medium-term and long-term government bond in total state debt is 11.1% at the end of 2018, which represents an increase of 1.1 p.p. compared to the end of 2017 when the Ministry redeemed no government bonds of this type in 2018.

The share of the total nominal value of foreign issues in total state debt is 9.4% at the end of 2018, which represents a decrease of 3.0 p.p. compared to the end of 2017 due to the repayment of foreign issues in a total nominal value of EUR 2.0 billion in 2018. At the same time, the Ministry did not realize any foreign issue in 2018. The share of money market instruments in the total state debt at the end of 2018 as well as at the end of 2017 is 2.7%. The share of savings government bonds in the total state debt at the end of 2018 is 0.3%, which represents a decrease of 1.0 p.p. compared to the end of 2017. The share of European Investment Bank loans in total state debt decreased by 0.5 p.p. to 2.7%.

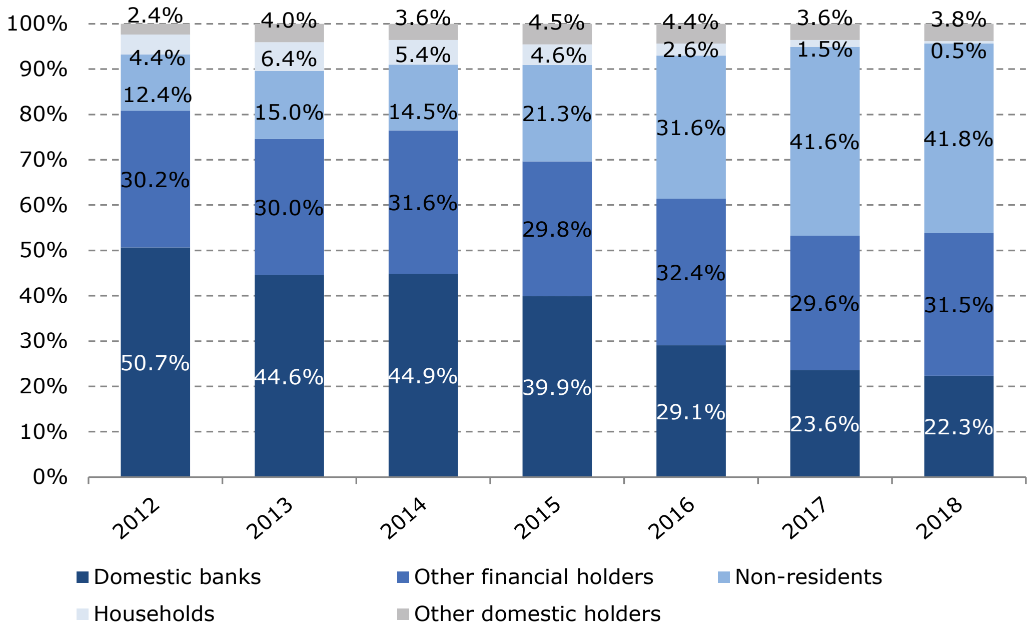
Figure 26: Structure of State Debt by Instrument



Note: As at the end of 2018. Credits and loans received from international financial institutions. FIX T-bonds issued on domestic market include medium-term zero-coupon T-bonds.
Source: MoF

The structure of holders of government bonds issued on domestic market remained relatively stable in comparison with 2017 when individual sector shares changed only marginally. The highest share of holdings of government bonds issued on the domestic market remains in the non-residents sector, but their shift from holding government bonds at the short end of the yield curve towards government bonds with average residual time to maturity of more than five years can be observed. This indicates a possible change in the holding motivation when short-term investors become long-term ones with the strategy of holding government bonds until maturity. The sector of other financial holders is relatively stable over time, holding more than 31% of government bonds issued on the domestic market, the domestic bank sector accounts for 22.3%. The decrease of the household sector to 0.5%, i.e. by 1.0 p.p. compared to the previous year, is mainly due to the non-realization of any new tranches or new issues (excluding reinvested of yields) of the savings state bonds and their four regular redemptions in June and December 2018 and early repayment with a total nominal value of CZK 16.4 billion. Due to the resumption of the project of direct sale of government bonds to citizens in December 2018, a slight increase in this share in the coming years may be expected, given the interest of households in this option of conservative investment.

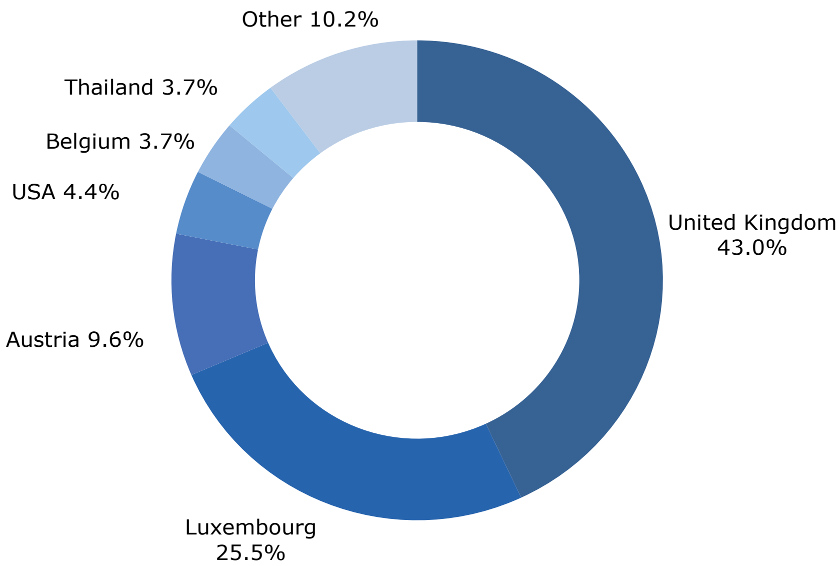
Figure 27: Structure of Government Bonds on Issued Domestic Market by Type of Holder



Note: As at the end of each year.
Source: MoF, CDCP, CNB

In terms of geographic structure of non-residents holding government bonds issued on the domestic market, investors from the UK and Luxembourg dominated, making up almost 70% of all non-resident holders at the end of 2018 roughly corresponding to the end of 2017. 90.3% of non-resident holders comes from the EU Member State, down by 2 p.p. compared to 2017. To a lesser extent, government bonds are held by investors based in North America and Southeast Asia.

Figure 28: Structure of Non-Resident Holders of Government Bonds Issued on Domestic Market



Note: As at the end of 2018. Excluding T-Bills.
Source: MoF, CDCP

Interest Rate Risk

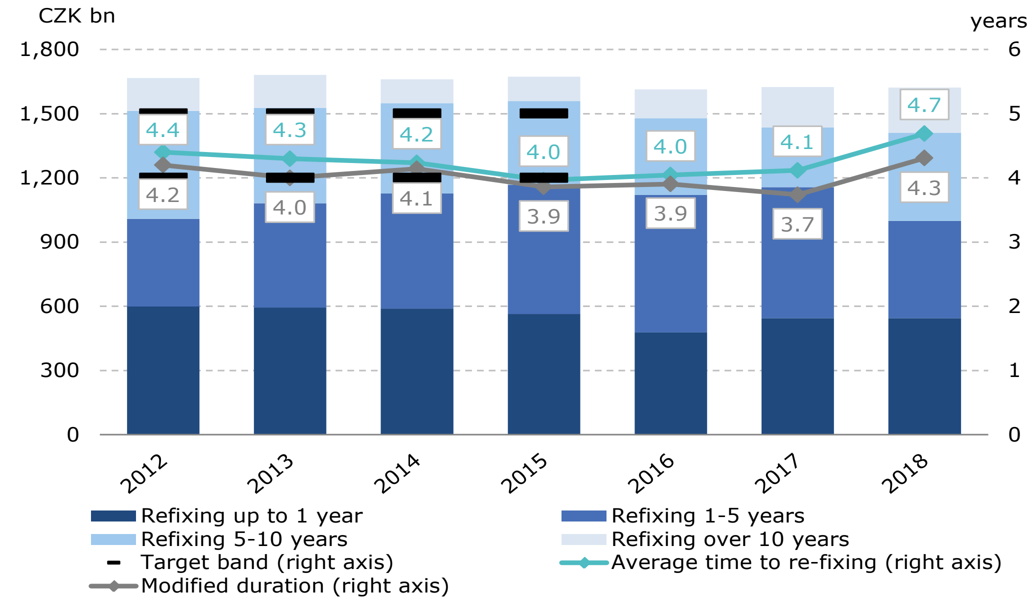
Interest rate risk remains the most important market risk of state debt management. The Ministry manages the interest rate risk by the strategic indicator the average time to re-fixing of state debt. Starting in 2016, the Ministry, in accordance with the new concept of interest rate risk management, sets a medium-term target value.

The average time to re-fixing of the state debt at the end of 2018 is 4.7 years and is thus above the target for the medium-term horizon set at the level of 4.0 years. Compared to the end of 2017 this indicator increased by 0.6 years. In connection with the further planned increase in the average time to maturity of the state debt portfolio towards the 6-year medium-term target value and the relatively limited gross issuance of variable-rate government bonds, the medium-term target value of the average time to re-fixing was increased to 5.0 years with the possibility of a deviation of 0.25 years.

In the segment of instruments bearing an interest at the short end of the yield curve, variable-rate medium-term and long-term government bonds in the total nominal value of CZK 18.0 billion were issued on primary and secondary market in 2018, which is 6.9% of the total gross issue of medium-term and long-term government bonds issued on domestic market in 2018. The share of newly issued variable-rate medium-term and long-term government bonds in gross issue of medium-term and long-term government bonds in 2018 increased by 5.6 p.p. compared to 2017 when it was 1.3%. In the segment of instruments bearing an interest at the short end of the yield curve, fixed-rate medium-term and long-term government bonds or zero-coupon medium-term government bonds maturing within three years were issued on primary and secondary markets in 2018 in a total nominal value of CZK 27.0 billion, representing 10.4% of the total gross issue of medium-term and long-term government bonds in 2018. The share of newly issued fixed-rate medium-term and long-term government bonds or zero-coupon medium-term government bonds maturing within three years on the total gross issue of medium-term and long-term government bonds in 2018 decreased by 27.6 p.p. compared to 2017, when this share was 38.0%. The share of money market instruments in total state debt at the end of 2018 is 2.7%, with the share of state treasury bills outstanding in total state debt at the end of 2018 amounting to 0.3%, thus declining by 2.5 p.p. compared to the end of 2017 from 2.7%.

The increase in the average time to re-fixing of the state debt means that state debt interest expenditure is generated at the longer end of the yield curve on average, which may represent higher interest expenditure over the medium term, but reduces the risk of higher expenditure in the event of a short-term increase in interest rates and yields. In the case of the issuance of variable-rate medium-term and long-term government bonds in 2008 to 2018, accrual savings on interest costs of more than CZK 27 billion were achieved. However, in order to express the realized savings, it is necessary to know the amount of all coupon payments, i.e. the realized savings due to the issue of a specific variable-rate government bond can be expressed only after the fixing of the last coupon rate. The realized savings on state budget expenditures can only be expressed in connection with already redeemed government bonds, if fixed-rate government bonds with the same maturity date were issued instead of these bonds. The total savings related to Czech Republic Treasury Bond, 2009-2012, VAR, reached about CZK 1.0 billion, the total savings related to the Czech Republic Treasury Bond, 2008-2016, VAR reached approximately CZK 12.1 billion, and the total savings related to Czech Republic Treasury Bond, 2012-2017, VAR reached approximately CZK 2.2 billion.

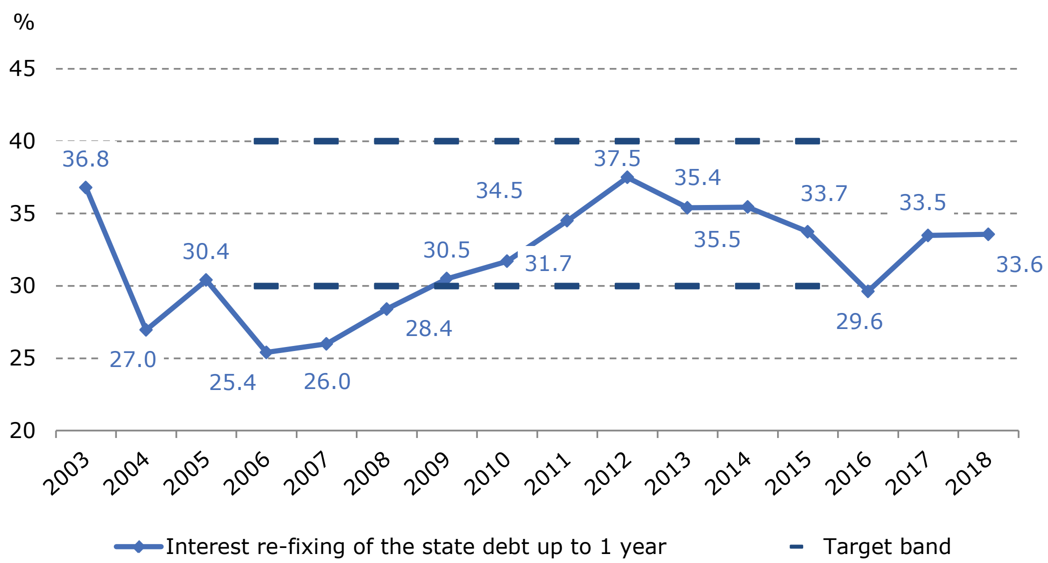
Figure 29: Interest Re-fixing of State Debt



Note: As at the end of each year.
Source: MoF

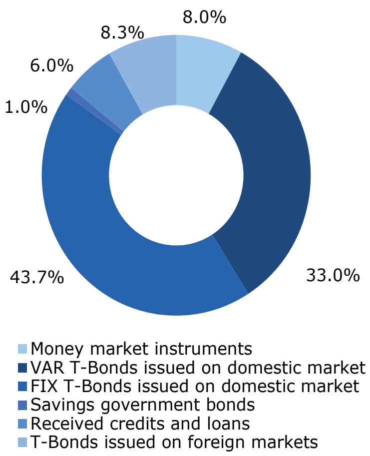
Another indicator monitored by the Ministry in relation to interest rate risk management and for which the Ministry sets a strategic goal is the interest rate re-fixing of the debt portfolio within one year, which is the proportion of state debt that is sensitive to fluctuations in financial market interest rates in the following year. For the medium-term horizon, the target band is set at 30.0% to 40.0% of the total state debt. At the end of 2018, this indicator increased by 0.1 p.p. compared to the end of 2017, and amounts to 33.6% thus remaining within the medium-term target band. The structure of interest rate re-fixing within one year is important not only for expressing short-term interest rate risk, but also affects the longer-term interest rate risk expressed by the average time to re-fixing indicator. The debt portfolio, which is sensitive to interest rate fluctuations in the financial market in 2019, consists mainly of fixed-rate medium-term and long-term government bonds or CZK-denominated zero-coupon medium-term government bonds (43.7%) and variable-rate medium-term and long-term government bonds (33.0%) issued on domestic market. Government bonds issued on foreign markets including the effects of derivative transactions account for 8.3% of this portfolio, state treasury bills and other money market instruments account for 8.0%, credits and loans received from international financial institutions account for 6.0%, and savings government bonds represent 1.0% of this portfolio.

Figure 30: Interest Re-fixing of State Debt within 1 Year



Note: As at the end of each year.
Source: MoF

Figure 31: Structure of Interest Re-fixing of State Debt within 1 Year

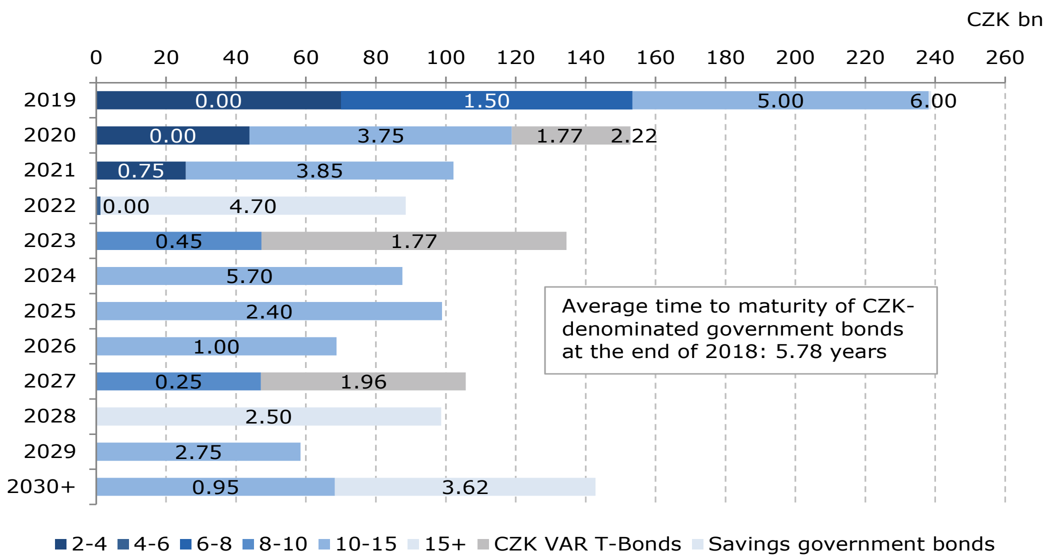


Note: As at the end of 2018. FIX T-bonds issued on domestic market include medium-term zero-coupon T-bonds. Credits and loans received from international financial institutions.
Source: MoF

Compared to 2017, there was a change in the structure of the interest rate re-fixing of the state debt within one year, especially for fixed-rate medium-term and long-term government bonds and zero-coupon medium-term government bonds issued on domestic market where the share increased by 9.9 p.p. due to higher redemption of these bonds in 2019 by CZK 53.7 billion compared to 2018. In case of variable-rate medium-term and long-term government bonds, the share in interest rate re-fixing of the state debt within one year increased by 3.3 p.p. compared to 2017 due to gross issue of these bonds on primary and secondary market amounting to CZK 18.0 billion in 2018. Regarding savings state bonds, there was a decrease of 2.9 p.p. due to higher regular redemptions of these bonds in 2018 compared to 2019. The decrease in the share of money market instruments amounts to 0.1 p.p. compared to the end of 2017. For bonds issued on foreign markets, the decrease was 8.8 p.p. mainly due to the redemptions of foreign issue in a total nominal value of EUR 2.0 billion in 2018 and no redemptions of foreign issues in 2019. The share of received credits and loans in interest rate re-fixing within one year decreased by 1.4 p.p., mainly due to regular and early repayments of tranches of the European Investment Bank loans in 2018.

The Ministry also monitors the structure of medium-term and long-term government bonds issued on domestic market according to current and original time to maturity and coupon rates. Such a constructed government bond structure allows for a detailed breakdown of interest expenditure on state debt service generated by fixed-rate medium-term and long-term government bonds and zero-coupon medium-term government bonds issued on domestic market. At the end of 2018, these bonds have an average coupon rate of 2.62% p.a.; bonds maturing in 2019 have an average coupon rate of 2.31% p.a. In the segment of 2 to 4 years of original time to maturity, these bonds have an average coupon rate of 0.14% p.a., in the segment of 4 to 6 years an average coupon rate is 0.00% p.a., in the segment of 6 to 8 years an average coupon rate is 1.50% p.a., in the segment of 8 to 10 an average coupon rate is 0.35% p.a.; in the segment of 10 to 15 years an average coupon rate is 3.28% p.a., and in the segment of over 15 years an average coupon rate is 3.56% p.a.

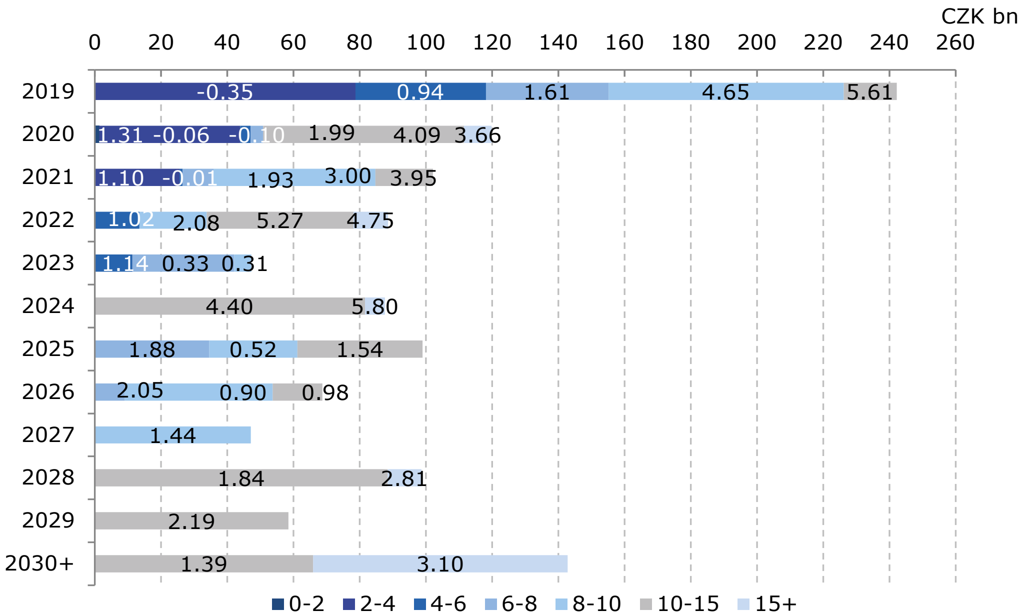
Figure 32: Maturity Profile of Government Bonds Issued on Domestic Market by Time to Maturity and Coupon Rate



Note: Maturity profile as at the end of 2018. Segments represent original maturity. Data in individual segments represents the average coupon rate in % p.a. Excl. inflation-linked savings government bonds and T-Bills.
Source: MoF

The Ministry also monitors the structure of fixed-rate medium-term and long-term government bonds and zero-coupon medium-term government bonds issued on domestic market according to the current time to maturity, time to maturity at the moment of sale and yield to maturity at the moment of sale. Such a constructed government bonds structure reflects the average annual cost of these bonds in individual segments of the current time to maturity and time to maturity at the moment of sale of the bonds. At the end of 2018, the average annual cost of fixed-rate medium-term and long-term government bonds and zero-coupon medium-term government bonds issued on domestic market is 2.26% p.a. and increased by 0.05 p.p. compared to the end of 2017. In 2019 bonds with an average annual cost of 2.02% p.a. are redeemed in the following structure: bonds sold as 2- to 4-year with an average annual cost of -0.35% p.a., bonds sold as 4- to 6-year with an average annual cost of 0.94% p.a. , bonds sold as 6- to 8-year with an average annual cost of 1.61% p.a. , bonds sold as 8- to 10-year with an average annual cost of 4.65% p.a. and bonds sold as 10- to 15-year with an average annual cost of 5.61% p.a.

Figure 33: Maturity Profile of T-Bonds Issued on Domestic Market By Achieved Yield to Maturity



Note: As at the end 2018. Maturity profile of fixed-rate T-Bonds issued on domestic market by time to maturity at the moment of sale. Data in the individual segments represents the average yield to maturity at the moment of the sale of the T-Bonds in % p.a.
Source: MoF

Table 12: Average Coupon Rates and Costs of T-Bonds Issued on Domestic Market by Year of Maturity

% p.a.	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030+	Average
Average coupon rate[1]	2.31	2.37	3.07	4.63	0.45	5.70	2.40	1.00	0.25	2.50	2.75	2.34	2.62
Average costs[1]	2.02	2.38	2.56	3.83	0.52	4.50	1.39	1.07	1.44	1.94	2.19	2.31	2.26

[1] Incl. only fixed-rate medium-term and long-term government bonds and medium-term zero-coupon government bonds.
Note: Balance as at the end of 2018.
Source: MoF

Currency Risk

In connection to currency risk, the Ministry monitors the development of the net foreign-currency exposure that measures the market risk to which the foreign-currency state debt is exposed in term of foreign-currency exchange rate movement after being adjusted for the foreign-currency exposure of state financial assets, where the foreign-currency debt represents the total nominal value of the debt portfolio denominated in the foreign currency. The value of net foreign-currency exposure of the state debt is affected also by derivative operations, which hedge a part of the foreign-currency debt against the unfavourable development of currency exchange rates. The key indicators introduced in relation to currency risk management are the share of net foreign-currency exposure of state debt with an impact on state debt level to the total state debt, for which a strategic limit of 15% + 2 p.p. was stipulated for 2018 and the share of net foreign-currency exposure of state debt with the impact on the level of interest expenditure on state debt service to the total state with a stipulated strategic limit of 15% + 2 p.p. for 2018. Long-term exceeding of the 15% limit is not possible; exceeding by 2 p.p. serves only for the short-term overcoming of unexpected deprecation of the domestic currency.

At the end of 2018, the share of net foreign-currency exposure with the impact on state debt is 10.3% of total state debt and is thus below its limit. Compared to the end of 2017 the indicator decreased by 0.6 p.p. The share of net foreign-currency exposure with an impact on the level of interest expenditure on state debt is 10.3% of total state debt at the end of 2018 and is below the limit. Compared to the end of 2017 this indicator decreased by 0.6 p.p.

The sensitivity of interest expenditure on state debt service to the change of the koruna's exchange rate is relatively low, even in comparison to the sensitivity of interest expenditure to the shift in the yield curve. At the end of 2018, the net foreign currency exposure with an impact on the interest expenditure on state debt service is denominated exclusively in the euro. The share of the foreign currency state debt in the total state debt at the end of 2018 is 11.9% when the indicator decreased by 0.6 p.p. compared to the end of 2017. In 2018, the Ministry did not issue any government bond issue on foreign markets due to high demand for domestic government bonds, and higher expenses associated with this issue compared to comparable government bond issues on the domestic market, taking into account costs to hedge the currency risk.

Benchmark Portfolio

In order to assess the structure of issuance calendars and the ability to profit on the development of government bond yields over the year and the shape of the yield curve, the Ministry has developed a so-called synthetic benchmark portfolio consisting only of fixed-rate government bonds issued on domestic market.

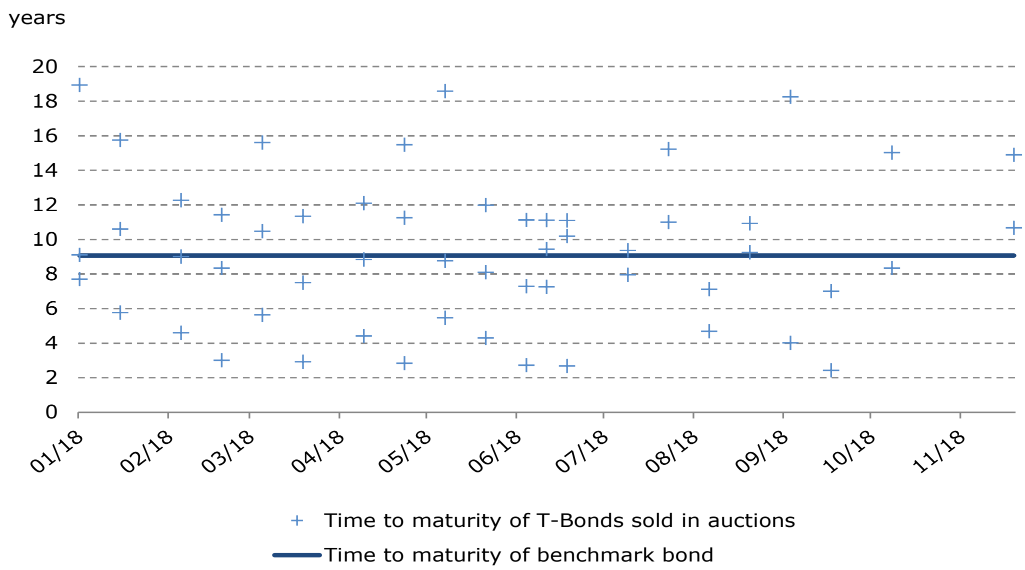
Bonds in the benchmark portfolio are issued on the auction day at the same nominal value as the bonds actually issued. All benchmark portfolio bond bonds are issued with the same residual time to maturity guaranteeing the same average time to maturity of the synthetic debt portfolio containing benchmark portfolio as the average time to maturity of the actual debt portfolio at the year-end. The average time to maturity of the state debt at the end of 2018 is 5.4 years. If the actual issues of medium-term and long-term government bonds issued on domestic market are replaced by fixed-rate bonds from benchmark portfolio with a time to maturity of 9.1 years at the time of the auction, the required average time maturity of the synthetic state debt portfolio will be 5.4 years at the end of 2018.

The weighted average yield of the portfolio of medium-term and long-term government bonds issued on domestic market sold in actual auctions during 2018 using the average yield to maturity of the auction for fixed-rate bonds and the average spread over the reference interest rate at auction and the relevant PRIBOR forward rate for variable-rate bonds is 1.88% p.a. The weighted average yield of the benchmark portfolio bonds derived from the theoretical yield curve modelled using the Svensson model reached 1.89% p.a. in 2018, i.e. it is 1 basis point higher than the actual portfolio yield.

To assess the actual savings achieved in 2018, it is necessary to express the accrued interest cost of each bond issued in both the actual and benchmark portfolios and then compare these total accrued costs in the individual portfolios. The total annual cost in accrual terms of all medium-term and long-term government bonds actually sold in auctions on domestic market during the year 2018 is CZK 4.7 billion. The total annual cost in accrual terms generated in the benchmark portfolio is also CZK 4.7 billion.

The above comparison shows that the actual adjustment of the issuance calendar after taking into account the development of the level and shape of the yield curve resulted in a comparable yield to maturity and accrual interest costs as in the synthetic benchmark portfolio, which is theoretical and cannot be achieved in practice due to the need to re-open previously issued government bond issues ideally across the whole yield curve to support their liquidity on the secondary market. It should also be noted that the saving is expressed on the basis of the forward values of the PRIBOR reference interest rate, so the actual savings can only be determined based on the actual future values of the PRIBOR reference interest rate.

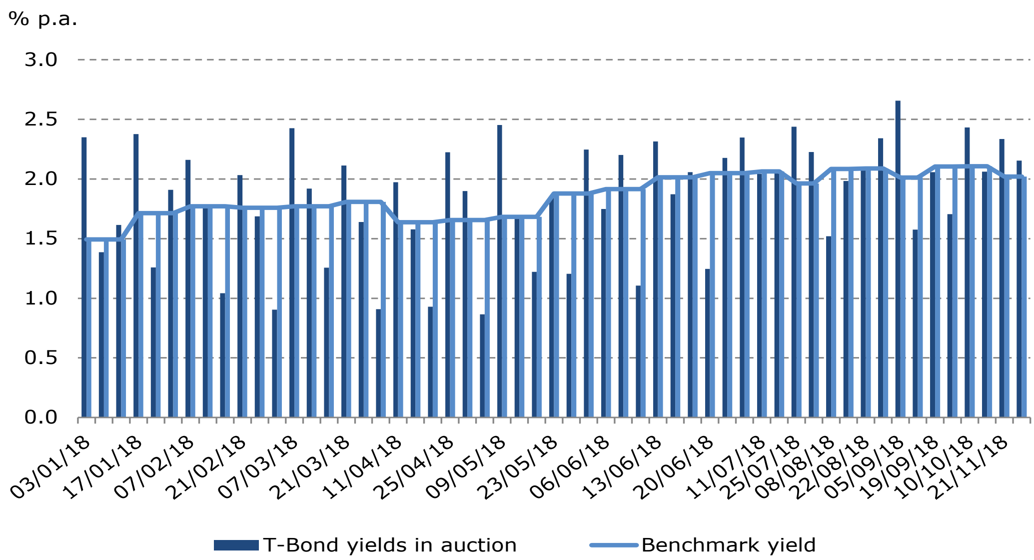
Figure 34: Time to Maturity of T-Bonds Sold in Auctions and Benchmark Bond



Source: MoF

Over the course of 2018, 51 auctions of fixed-rate medium-term and long-term government bonds in a total nominal value of CZK 233.1 billion and 4 auctions of variable-rate medium-term and long-term government bonds in a total nominal value of CZK 17.3 billion were carried out on domestic market. The weighted average time to maturity of all medium-term and long-term government bonds sold in auctions on the primary domestic market during the year 2018 is 9.1 years and is the same as the maturity of the benchmark bond.

Figure 35: Yields of T-Bonds Achieved in Auctions and Benchmark Bond



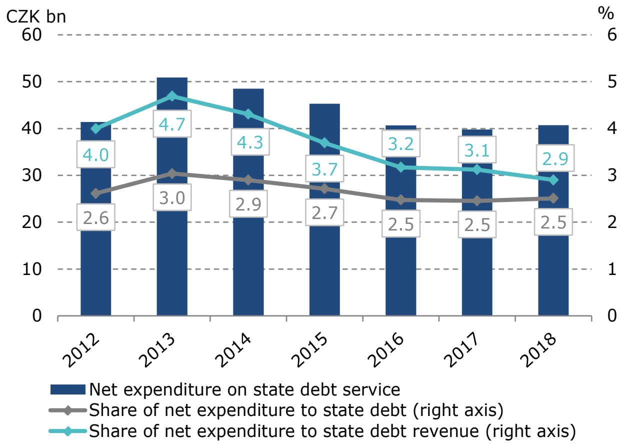
Source: MoF

5 – State Debt Service Expenditure

Cash and Accrued Expression

The net expenditure on state debt service are represented by the difference of gross expenditure on state debt service and revenue, which are cash-based (like the entire state budget); hence, it is not accrued according to the ESA2010 methodology, which takes place while preparing data for the notification. The share of net expenditure on state debt service in revenue of state budget, and also in the GDP shows a downward trend starting from 2014. The share of this expenditure in state debt is then stabilized at the level of 2.5% of state debt in recent years.

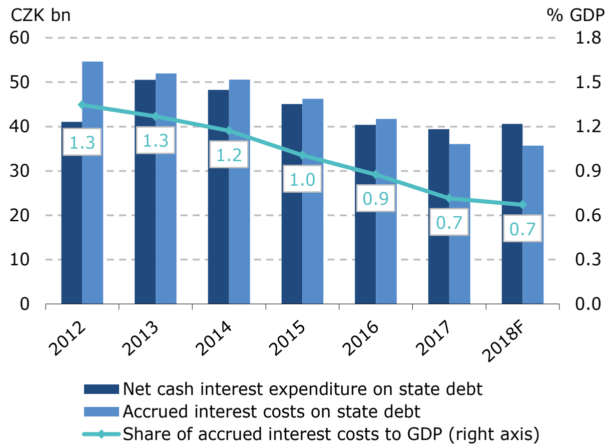
Figure 36: Net Expenditure on State Debt Service



Note: The revenue of state budget is adjusted of the revenue of chapter 396 – State Debt.
Source: MoF

Monitoring the development of revenue and expenditure, or net expenditure on state debt service, does not always provide accurate information on which costs are really associated with state debt in the given period. For these purposes, the accrued-based expression of costs, based on the accumulation of interest costs on a daily basis, is more appropriate. The development of accrued interest costs has a tendency to show much lower volatility than the development of interest on a cash basis, because it is not influenced by time disproportions between the time of creation of given interest costs and the date of realization of related expenditure or revenue. Until 2012, accrued costs grew continuously and their share in GDP developed similarly. The decrease of accrued costs in 2013 to 2018 is due to the concurrence of decrease in the state debt and a decrease of yields of government bonds.

Figure 37: Net Cash Expenditure and Accrued Costs on State Debt Service



Note: The source of GDP in the ESA 2010 methodology in 2012 to 2017 is the CZSO, for 2018 the Macroeconomic Forecast of the Czech Republic – January 2019.
Source: MoF, CZSO

The development of the balance of individual debt instruments is one of the factors affecting the relation between cash expenditure and accrued costs. When the balance increases, at first, the interest payments paid at the end of calculation period (i.e. mainly coupon of domestic and foreign medium-term and long-term government bonds, European Investment Bank loans interest, and swap interest) have an impact on costs on accrued basis, and then on cash basis at the end of this period. When the state debt increases, the accrued costs in the given period outweighs cash expenditure for this reason. On the contrary, for discounted instruments, interest is settled with the state budget on the issue date, i.e. at first, discounts have an impact on expenditure on cash basis, and then have gradual impact on costs on accrued basis throughout the duration of the instrument. A similar principle applies to discounts and premiums on medium-term and long-term government bonds.

A key role in the proportion between cash expenditure and accrued costs is also played by the development of interest rates. In case of their growth, there is a prevalence of accrued costs over cash expenditure for payments made at the end of the calculation period, and in the case of interest expenditure at the beginning of the instrument's duration, cash expenditure prevails over accrued costs. The similar principles apply in opposite sense in case of the interest rates decline.

Similarly, there may be a significant disproportion between cash expenditure and accrued costs in the given period, if an instrument with a high interest rate is due in the period, which is fully projected in cash interest but only partly in accrued interest, and is replaced with an instrument with a low interest rate, whose accrued costs starts being continually accounted from the issue or acceptance date, which may not be reflected in cash interest at all in the given period.

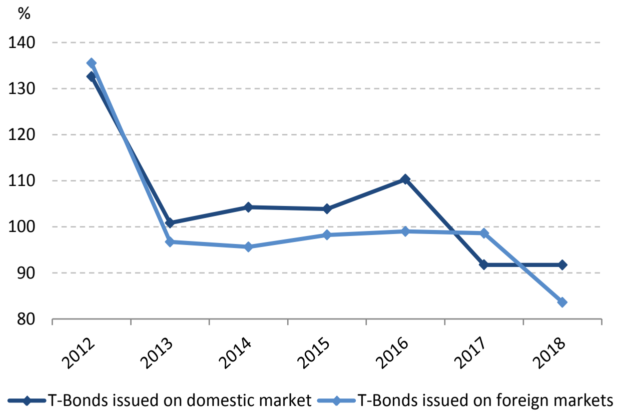
Table 13: Cash Premiums and Discounts and Difference Between Cash Expenditure and Accrued Costs of T-Bonds

CZK bn	2012	2013	2014	2015	2016	2017	2018
T-Bonds cash premiums	11.8	5.8	6.0	7.1	8.6	8.4	8.4
T-Bonds cash discounts	0.8	1.4	1.3	0.6	0.0	3.0	8.0
Difference between T-Bonds cash discounts and premiums	-11.0	-4.4	-4.7	-6.5	-8.6	-5.4	-0.4
Difference between T-Bonds cash expenditure and accrued costs	-9.7	-0.3	-1.5	-1.3	-2.8	2.4	2.7

Note: T-Bonds issued on the domestic market.
Source: MoF

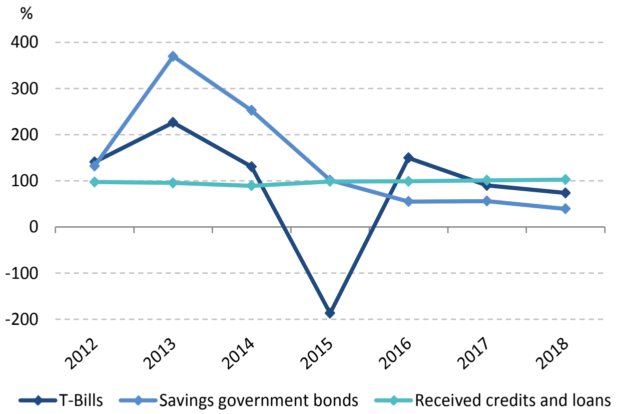
The basic development trends of cash expenditure and accrued costs is largely based on the development of these indicators for medium-term and long-term government bonds issued on the domestic market, which constitute a dominant part of the state debt, and in 2018 accounted for more than four fifths of the total accrued costs on the state debt. The cash expenditure on medium-term and long-term government bonds issued on the domestic market are higher than accrued costs in 2018. In the case of medium-term and long-term government bonds issued on the foreign market, which accounted for approximately one fifth of total accrued costs in 2018, the cash expenditure are higher than accrual costs. This applies to state treasury bills as well. With regard to the short maturity period of most provided loans in a form of lending facilities, the difference between cash and accrued interest is not very significant. The same applies to short-term loans received, and with regard to the usually short period of re-fixing, also to loans received from the European Investment Bank in most cases. Regarding the savings government bonds, the cash expenditure prevail over accrued costs.

Figure 38: Share of Accrued Costs in Net Cash Interest Expenditure of T-Bonds



Source: MoF

Figure 39: Share of Accrued Costs in Net Cash Interest Expenditure of Other Components of State Debt



Note: Credits and loans received from international financial institutions.
Source: MoF

Budget for the Chapter – State Debt

The budget for the Chapter 396 – State debt is composed annually based on Cost-at-Risk analysis. The expected net expenditure amounted to CZK 45.9 billion. The actual net expenditure on the Chapter in 2018 amounted to CZK 40.7 billion, i.e. around 0.8% of GDP and 2.9% of total state budget revenue excluding the revenue of the Chapter 396 – State debt. The difference between actual expenditure compared to the originally approved budget of CZK 45.2 billion was CZK 4.5 billion, which partially contributed to the better-than-expected state budget performance in 2018. The difference between the real and budgeted net expenditure is mainly due to the lower expenditure, while the revenue achieved slightly higher level than the approved budget. Compared to 2017, there was a increase in net interest expenditure of about 2.4%.

Table 14: Budget Expenditure and Revenue of the State Debt Chapter

CZK mil.	Actual 2017	Budget 2018 Approved	Budget 2018 After changes	Actual 2018	% Execution	2018/2017 (%)
1. Total interest expenditure and revenue	**39,812**	**44,843**	**41,513**	**40,615**	**97.8**	**102.0**
	(-) 384	**-**	**-**	**0**	**-**	**0.0**
Internal debt	32,117	34,611	31,947	31,272	97.9	97.4
	(-) 2,051	-	-	-	-	-
Money market instruments	(-) 674	(-) 135	(-) 1,907	(-) 2,013	105.5	298.8
	(-) 377	-	-	-	-	-
Savings government bonds	1,778	1,211	1,211	1,198	98.9	67.4
	17	-	-	-	-	-
T-Bonds on domestic market	31,013	33,535	32,642	32,086	98.3	103.5
	(-) 1,690	-	-	-	-	-
External debt	7,695	10,226	9,561	9,344	97.7	121.4
	1,667	-	-	-	-	-
T-Bonds on foreign markets	7,443	9,625	8,960	8,808	98.3	118.3
	1,590	-	-	-	-	-
Received credits and loans[1]	252	601	601	536	89.2	212.7
	77	-	-	-	-	-
Payment accounts	0	5	5	0	-4.2	834.6
	0	-	-	0	-	184.4
2. Fees	**339**	**400**	**400**	**114**	**28.5**	**33.7**
	0	**-**	**-**	**0**	**-**	**23.6**
Total chapter balance	**39,767**	**45,243**	**41,913**	**40,729**	**-**	**102.4**

[1] Credits and loans received from international financial institutions.
Note: (-) means revenue (gains).
Source: MoF

Table 15: Overview of Budgetary Transfers from the State Debt Chapter Realized in 2018

Chapter number	Chapter	Amount (CZK)
329	Ministry of Agriculture	1,800,000,000
306	Ministry of Foreign Affairs	100,000,000
322	Ministry of Industry and Trade	59,414,328
314	Ministry of Interior	265,000,000
343	The Office for Personal Data Protection	10,000,000
313	Ministry of Labour and Social Affairs	500,000,000
334	Ministry of Culture	23,200,000
304	The Office of the Government	50,000,000
398	General Treasury Management	522,000,000
	Total	**3,329,614,328**

Note: Detailed overview of realized budgetary transfers from the chapter State debt is part of the Appendix II.
Source: MoF

In the course of 2018, a total of CZK 3.3 billion was transferred to other budget chapters from the State debt chapter via budgetary transfers. The resulting difference in actual net expenditure adjusted for the budgetary transfers compared to the final budget was CZK 1.2 billion.

The difference between actual and budgeted expenditure is given by several factors. The main factor is particularly the character of chapter's budgeted expenditure construction. The budgeted expenditure represents a boundary of expenditure, which will be exceeded with certain probability. Thanks to higher budgeted expenditure compared to expected expenditure it is possible to hold a part of the state debt in the form of variable-rate instruments, which bear interest usually lower than fixed-interest government bonds on average, and thus achieve savings on state budget expenditure. The total savings on state budget due to the sales of variable-rate government bonds instead of selling fixed-rate government bonds with equal time to maturity, i.e. maintaining equal refinancing risk, between 2008 and 2018 amounted to more than CZK 27 billion. In order to express the realized savings, it is necessary to know the values of all coupon payments, i.e. the realized savings as a result of issuing particular variable-rate government bond is possible to express after the fixing of the last coupon rate. The realized savings on state budget expenditure so far can be expressed only in connection with already redeemed government bonds compared to situation, when the fixed-rated government bond with equal time to maturity would have been sold. The savings connected to issuance of Czech Republic Treasury Bond, 2009-2012, VAR amounted to approximately CZK 1.0 billion, savings connected to issuance of Czech Republic Treasury Bond, 2008-2016, VAR amounted to approx. CZK 12.1 billion and savings connected to issuance of Czech Republic Treasury Bond, 2012-2017, VAR amounted to approx. CZK 2.2 billion.

The interest costs on state debt service in 2018 in accrued expression reached CZK 35.7 billion, of which net interest costs for state debt issued in 2018 account for approximately CZK 3.0 billion. The total nominal value of state debt issued in 2018 is CZK 443.2 billion including state treasury bills roll-over. The increase in accrual costs associated with state debt issued in 2018 is due to the extension of the time to maturity of issued government bonds and the gradual increase of government bond yields across the whole yield curve.

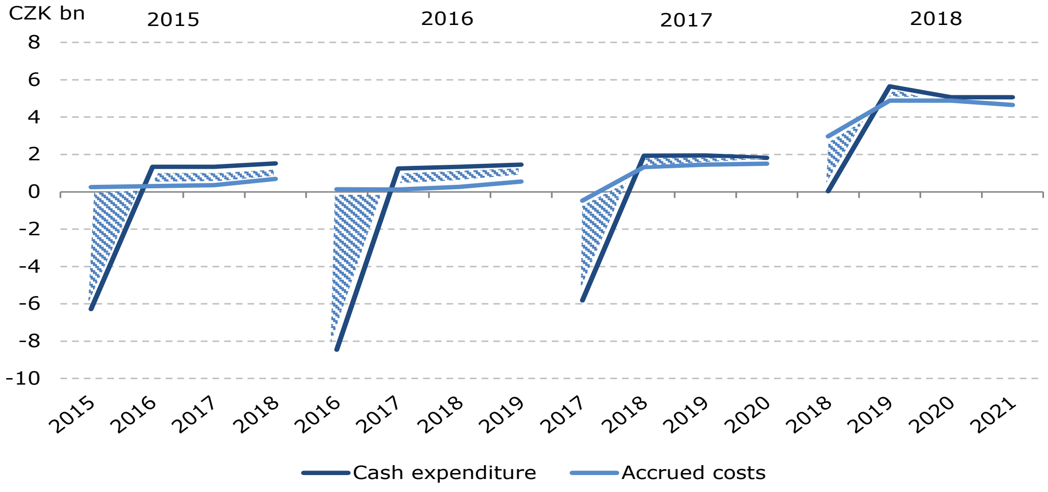
Table 16: Interest Expenditure and Accrued Costs of the Newly Issued State Debt

CZK bn	Nominal value	Net interest expenditure / accrued costs			
		2018	2019F	2020F	2021F
Cash basis expression	443.2	0.0	5.7	5.1	5.1
Accrued basis expression	443.2	3.0	4.9	4.9	4.6
Gross issuance of T-Bonds	259.2	2.7	4.9	4.9	4.6
Gross issuance of T-Bills	184.0	0.3	0.0	-	-

Source: MoF

Similar development of net expenditure on the same debt can be seen when expressed in cash basis, where the value of these expenditure in 2018 amounts to CZK 0.0 billion. In 2019 to 2021 the net interest expenditure on newly issued state debt are expected to amount to approx. CZK 5.7 billion, CZK 5.1 billion respectively. Newly issued state debt in 2018 brought almost zero state budget cash expenditure. This almost zero state budget expenditure from state debt issued in 2018 will be compensated in the following years by higher cash expenditure compared to accrued costs. It applies, that the net cash expenditure and accrued costs on the new state debt are equal for the whole existence of this debt. The following figure shows that in 2015 to 2017 the debt issued in each of those years generated cash revenue in the year of issue, which was mainly caused by the consistent decrease in market yields to historical lows by the end of 2016 followed by a gradual increase during virtually whole 2017 and 2018. If new issues of government bonds with market coupon rates were issued in each year and the coupon payments were made at the end of the year, the accrued costs and cash expenditure would be identical in the year of issue. For this reason, the accrued expression of costs on state debt is more accurate and revealing, since it is not affected by the re-opening of issues with other than market coupon rate, which, however, cannot be avoided in the real world, because small volumes of government bond issues cause illiquidity of these bonds and ultimately may cause an increase in costs due to the illiquidity premium. The figure below shows the further significant increase in accrued interest costs for newly issued state debt in 2018, which is related mainly to the increase in the total gross issue of debt instruments, extending time to their maturity and also lasting increase in yields of government bonds, which is already reflected in 2017 in the increase in accrual costs for the new state debt issued in this year.

Figure 40: Net Cash Interest Expenditure and Accrued Interest Costs of Newly Issued Debt

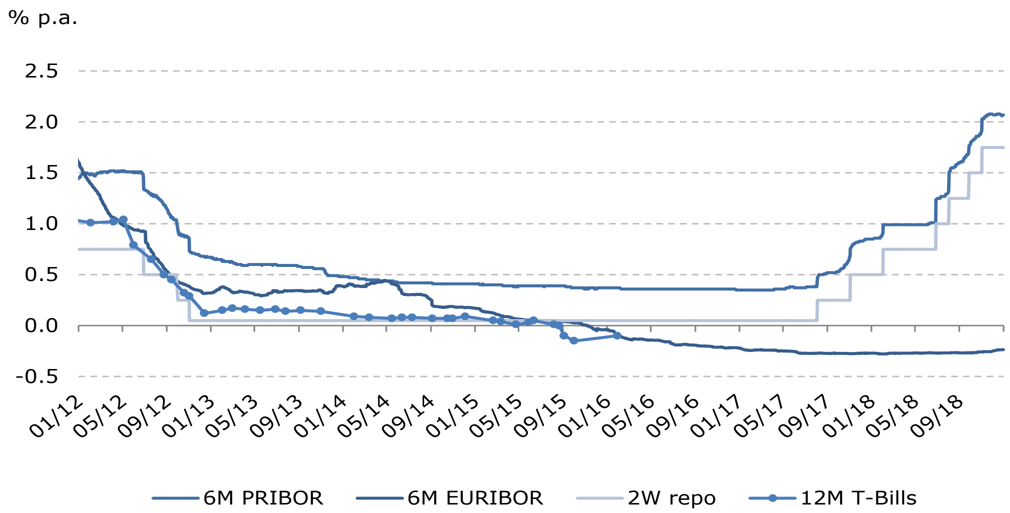


Source: MoF

In 2018, the euro money market yield curves remained at their historically lowest levels. The 6-month EURIBOR rate remained at almost constant level with very low volatility during 2018. The yield curves of the koruna money market developed oppositely, as they increased significantly during 2018 in connection with the monetary policy of the Czech National Bank.

In April 2017, the Czech National Bank terminated its use of the exchange rate as a monetary policy instrument and increased its key interest rate (two-week repo rate) by 0.25 percentage points four times to 1.75% p.a. during 2018. The 6-month PRIBOR rate continued in response to these steps even in the course of 2018, with significantly higher volatility.

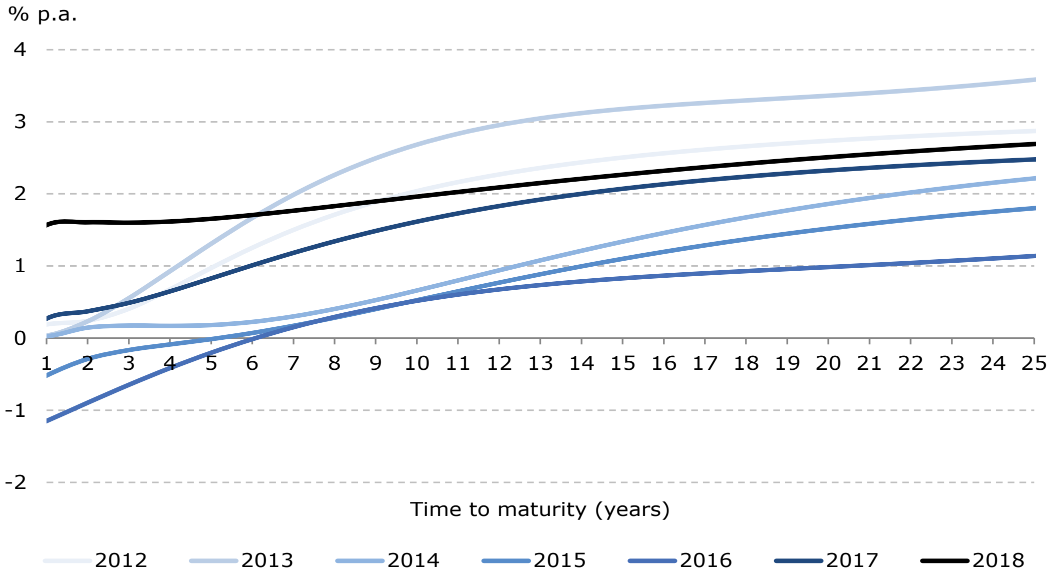
Figure 41: Development of Rates: 6M PRIBOR, 6M EURIBOR and 2W Repo and 12M T-Bills Yields



Source: Bloomberg, CNB

Yields of government bonds issued on domestic market bearing an interest on short end of the yield curve gradually increased throughout the first three quarters of 2018 in connection with the monetary policy decisions of the Czech National Bank regarding the level of key interest rates and in the last quarter of 2018 their growth stopped at the level where they last fluctuated in 2012. Yields of government bonds issued on domestic market bearing an interest on long end of the yield curve also increased slowly in the first half of 2018, however, with a significantly lower volatility compared to the short end of the yield curve. This led to a gradual flattening of the yield curve. In the second half of 2018, the yields at the long end of the yield curve slightly declined, further flattening the curve, and moved to the level of 2014.

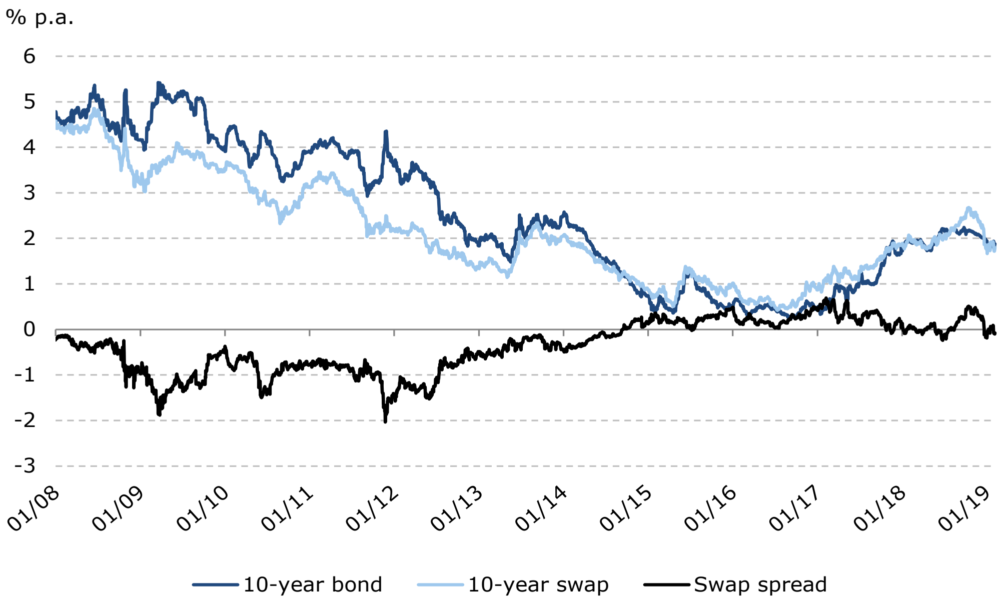
Figure 42: Yield Curve of CZK-Denominated Government Bonds



Note: "Par" yield curve of CZK-denominated fixed-rate government bonds is constructed on the basis the extended Nelson-Siegel model, called Svensson model.
Source: MoF, Bloomberg, MTS

The difference between the swap rate and the yield of the government bond, the so-called swap spread, was on average in low positive values for the 10-year maturity, which confirms the attractiveness of the Czech Republic as an issuer of government bonds among investors. The highest values were in the second half of the year, especially in October, when it was at approximately 50 basis points.

Figure 43: Swap Rate and Yield to Maturity of CZK-Denominated T-Bond



Source: MoF, Bloomberg

Cost-at-Risk of State Debt

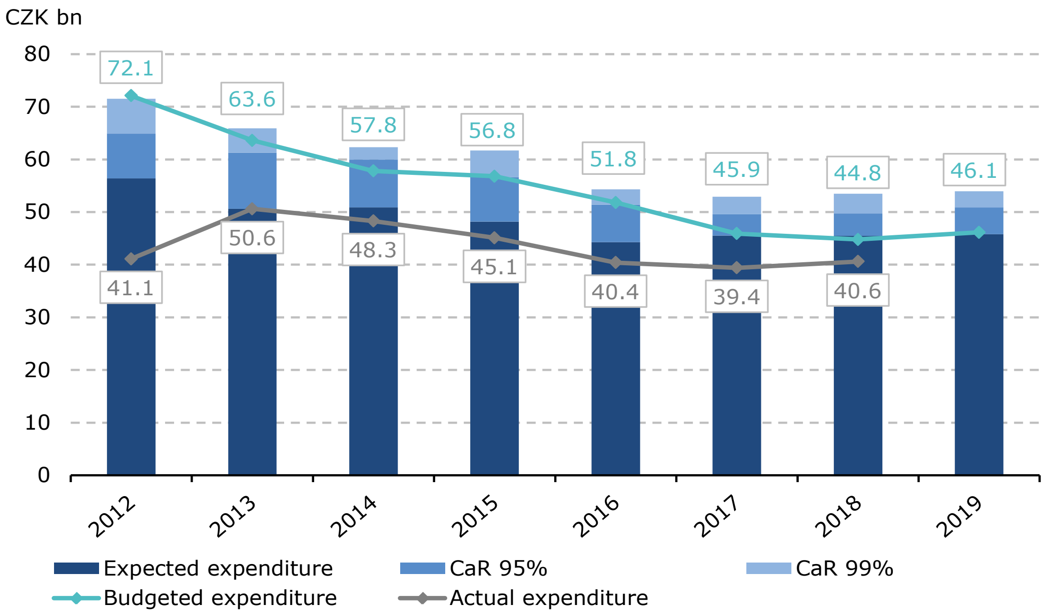
Since 2005, the Ministry has applied a model framework called Cost-at-Risk (CaR) based on the Value-at-Risk methodology, simulating future expected and maximum interest expenditure at a given degree of risk, which is derived from the volatility of the interest rate term structure. The stochastic element of the CaR model is the yield curve, the deterministic element is the dynamic structure of the state debt portfolio, which is based on the baseline scenario of the financing program respecting the stipulated strategic objectives of financial risk management.

The primary objective of the model is to determine the maximum interest expenditure on state debt, which with 95% or 99% probability will not be exceeded (CaR 95% and CaR 99%). The secondary objective of the model is to estimate the actual interest expenditure on state debt. The outcomes of the applied CaR analysis are not just the values of CaR 95% and CaR 99% percentiles, but also whole probabilistic distributions of interest expenditure in any moment of time, which makes this analysis a powerful tool for analysis of state budget expenditure in relation to the issuance and the financial market conditions.

The simulation framework operates separately with interest expenditure and interest revenue. The outcome of aggregation of interest expenditure and interest revenue is the net interest expenditure on state debt. Interest expenditure does not include fees related to state debt service, which are of a deterministic nature.

Over all the years in which the CaR methodology has been applied, the model has fulfilled the primary objective, since the predicted maximum interest expenditure was not exceeded in any of those years.

Figure 44: Net Interest Expenditure and Cost-at-Risk



Note: Original budgeted net interest expenditure.
Source: MoF

Table 17: Net Interest Expenditure and Cost-at-Risk

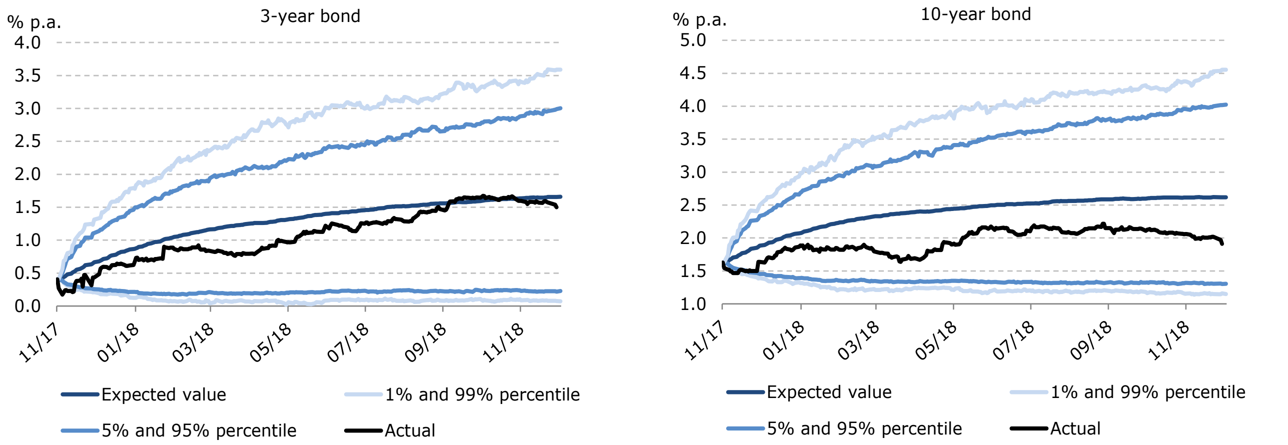
CZK bn	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Budgeted expenditure[1]	72.1	63.6	57.8	56.8	51.8	45.9	44.8	46.1	48.0	50.7
Actual expenditure	41.1	50.6	48.3	45.1	40.4	39.4	40.6	-	-	-
Expected expenditure	56.4	50.6	50.9	48.2	44.3	45.6	45.5	45.8	47.8	50.6
CaR 95%	64.9	61.3	60.0	56.6	51.4	49.6	49.7	50.9	54.0	60.7
CaR 99%	71.5	65.9	62.3	61.7	54.3	52.9	53.5	54.0	58.3	66.1

[1] In 2012 through 2019, the original budgeted net interest expenditure. In 2020 and 2021 medium-term outlook.
Source: MoF

Cost-at-Risk for 2018

In The Czech Republic Government Debt Management Annual Report 2017, the Cost-at-Risk of state debt for 2018 was published. Calculation of the CaR indicator is based on simulations of the time structure of interest rates as at 30 November 2017. A comparison of the real development of the three-year and ten-year government bonds interest rates with their simulations for the period from 30 November 2017 to 31 December 2018 is shown in the following figures.

Figure 45: Actual vs. Simulated of CZK-Denominated T-Bonds Yields in 2018



Source: MoF

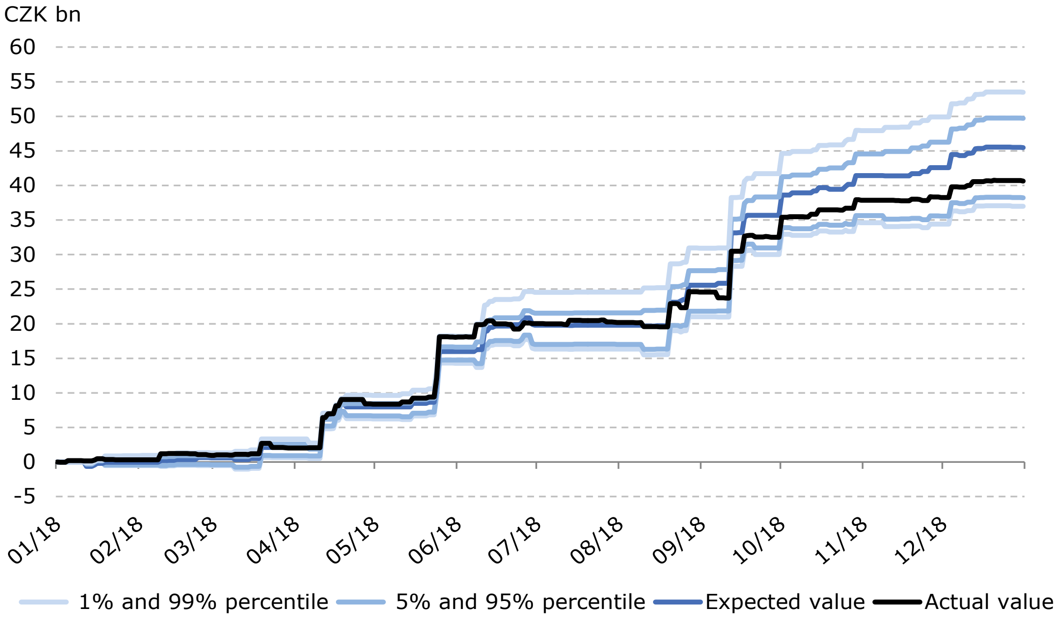
A comparison of the actual net interest expenditure on state debt service with the simulated values of expected expenditure (simulation average) and interest expenditure in CaR (95% and 99% percentile of simulations) in 2017 and 2018 is shown in the following table. In 2018 the net interest expenditure amounted to CZK 40.6 billion, the expected net interest expenditure in 2018 predicted by the model amounted to CZK 45.5 billion.

Table 18: Expected vs. Actual Net Interest Expenditure

CZK bn	2017	2018
Actual expenditure	39.4	40.6
Expected expenditure	45.6	45.5
CaR 95%	49.6	49.7
CaR 99%	52.9	53.5
Difference between expectation and reality	6.1	4.9

Source: MoF

Figure 46: Actual vs. Simulated Net Interest Expenditure in 2018



Note: Interest expenditure are calculated using the cash principle according to the current state budget methodology.
Source: MoF

The net interest expenditure in 2018 remained below the CaR 95% and CaR 99% level, having been estimated at CZK 49.7 billion and CZK 53.5 billion, respectively. The expected net interest expenditure predicted by the model is CZK 4.9 billion higher than in reality.

The difference in expected net interest expenditure is mainly due to lower yields of medium and long-term government bonds issued on domestic market compared to the expectations of the model, which lasted practically throughout the year 2018, during which the yield curve gradually flattened. The Ministry responded flexibly on this financial market situation from the beginning of 2018 and increased the issuance on the long end of the yield curve with a residual maturity of more than 10 years. The gross issue in this maturity segment accounted for almost half of the total gross issue of medium-term and long-term government bonds on the domestic market. This fact amounts to a total of CZK 2.4 billion of difference given mainly due to the change in the structure of the issuance calendar of medium-term and long-term government bonds. The difference of approximately CZK 1.9 billion is due to higher-than-expected state budget revenues from liquidity management operations in the context of rising key interest rates of the Czech National Bank. The Ministry continued to use the favourable conditions in the money market, where government bond yields at the shortest end of the yield curve were below the key interest rates of the Czech National Bank throughout the year and, to a larger extent, issued state treasury bills due in the course of 2018. Financial resources received from these operations then subsequently invested within CZK repo and depo operations with a positive impact on the state budget. The total additional state budget revenue from these operations amounted to CZK 0.2 billion. Another significant factor was the lower reference interest rates PRIBOR in the first half of 2018 and the reference interest rates EURIBOR. Due to lower-than-expected reference rates, the difference from expectation amounted to approximately CZK 0.5 billion.

Cost-at-Risk for 2019 to 2021

The net interest expenditure expected by the model in 2019 amounts to CZK 45.8 billion. Net interest expenditure at risk, i.e. CaR 99% amounts to CZK 54.0 billion (CaR 95% CZK 50.9 billion). The actual net interest expenditure in 2019 will not be more than CZK 8.2 billion higher compared to expected expenditure with 99% probability. The budgeted net interest expenditure of the state debt service in 2019 are CZK 46.1 billion and are thus CZK 0.4 billion above the expected net interest expenditure and CZK 4.7 billion below the 95% percentile of CaR indicator.

The following table shows in detail the development of cumulative net interest expenditure on state debt in 2019 predicted by the model always at the end of the month. It also contains the respective critical values of CaR 95% and CaR 99%.

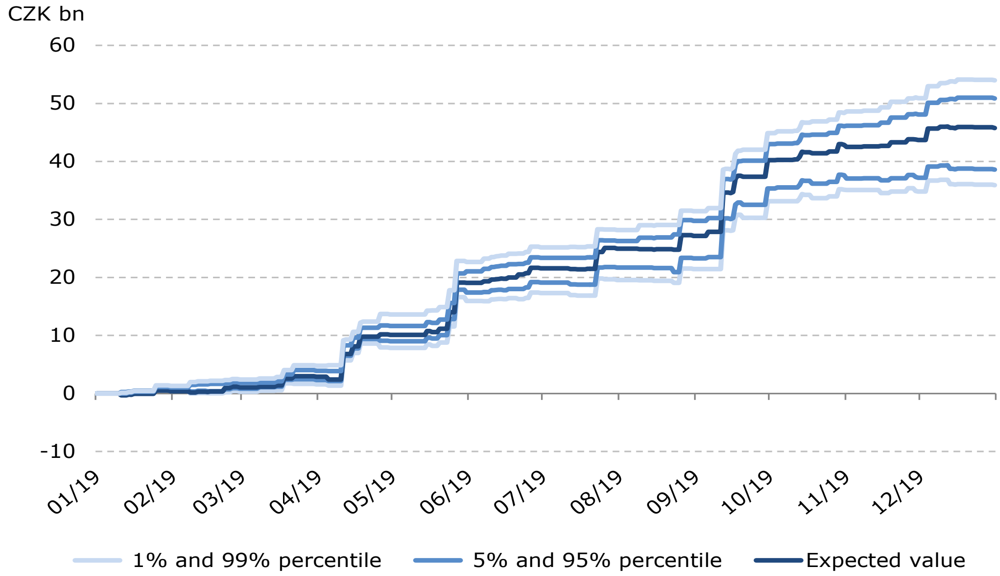
Table 19: Monthly Development of Cumulative Net Interest Expenditure in 2019

CZK bn	1	2	3	4	5	6	7	8	9	10	11	12
Expected expenditure	0.4	1.1	2.9	10.1	19.1	21.6	25.0	27.2	40.2	42.9	43.7	45.8
CaR 95%	1.0	1.9	3.9	11.6	21.0	23.4	26.3	29.8	43.0	46.1	48.1	50.9
CaR 99%	1.3	2.4	4.8	13.6	22.7	25.2	28.2	31.4	44.9	48.3	50.9	54.0

Source: MoF

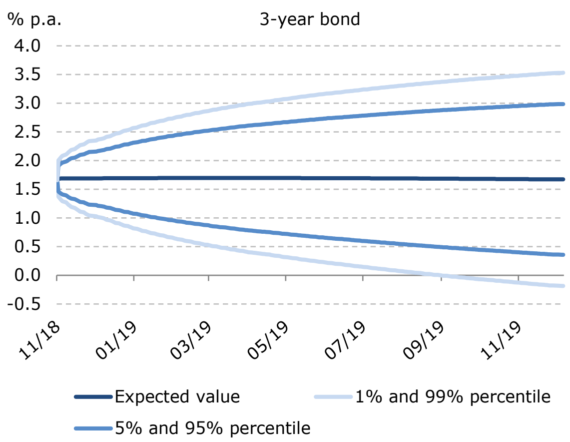
The graphic presentation of simulations of cumulative net interest expenditure on the state debt service in 2019 stipulated on a daily basis is shown in the following figure. The figure also shows the expected values of net expenditure and the respective 5% and 95%, 1% and 99% percentiles of simulated values.

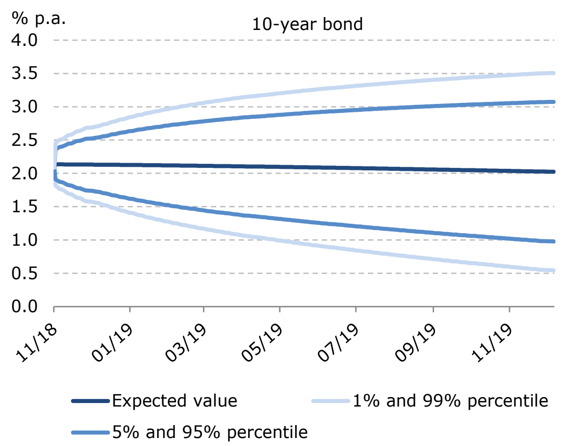
Figure 47: Simulation of Net Interest Expenditure of State Debt in 2019



Note: Development of net interest expenditure on a daily basis.
Source: MoF

Figure 48: Simulation of CZK-Denominated T-Bonds Yields in 2019





Source: MoF

The Ministry also deals with the problem of interest rates hikes, which could occur e.g. via a sharp increase in the Czech National Bank key interest rate, sudden deterioration of the economic situation in the euro area, a sharp increase of the risk premium of government bonds, etc. The Ministry strives to quantify the impact of these circumstances on net interest expenditure on the state debt service. Each economic event has an effect on a certain part of the yield curve, which is why it is important for the Ministry to observe the shift in the individual parts of the yield curves separately. The following table quantifies the consequences of a potential increase in interest rates at the short end of the yield curve, at the long end of the yield curve and along the entire curve evenly, all over the course of 2019. This analysis also enables the uneven shifting of the short and long end of the yield curve and arbitrary selection of the date of this shift.

Table 20: Development of Net Interest Expenditure in Case of Sudden Interest Rate Hikes

CZK bn	Current model	Shift of rates at the short end of the yield curve by 1 p.p.	Shift of rates at the long end of the yield curve by 1 p.p.	Shift of the whole yield curve by 1 p.p.
Expected expenditure	45.8	47.1	57.8	59.2
CaR 95%	50.9	52.2	61.9	63.2
CaR 99%	54.0	55.3	64.7	66.0

Note:The shock in the form of a one-time shift in the yield curve will occur at the beginning of 2019.
Source: MoF

Assuming the financing of the gross borrowing requirement under the unchanged issuance calendar the shift of the yield curve for government bonds issued on domestic market at the short end by 1 p.p. upwards in 2019 would bring an increase in the expected net interest expenditure by CZK 1.3 billion. If the rates increased at the long end of the yield curve by 1 p.p., the expected net interest expenditure would increase by CZK 12.1 billion. The shift of the entire yield curve of government bonds issued on domestic market by 1 p.p. upwards would result in an increase in expected net interest expenditure by approximately CZK 13.4 billion.

The Ministry also quantifies the sensitivity of net interest expenditure on the state debt service in connection with the change of FX rate of Czech crown. This sensitivity is relatively low even in comparison with the sensitivity of interest expenditure in connection with the shift of the yield curve. As at the end of 2018, the net foreign-currency exposure of the state debt with the impact on the state debt service is denominated solely in EUR.

Table 21: The Increase of Net Interest Expenditure in Case of EURCZK FX Rate Hike

CZK bn	EURCZK FX rate shift	
	by 1%	by 10%
Expected expenditure	0.065	0.653
CaR 95%	0.068	0.681
CaR 99%	0.070	0.701

Note: The shock in form of a one-off depreciation of CZK FX rate will occur at the beginning of 2019.
Source: MoF

If the EURCZK FX rate depreciated by 1% at the beginning of 2019 compared to the level as at the end of 2018, i.e. from 25.725 to 25.982 and remained unchanged during the whole 2019, then the expected net interest expenditure on state debt service would increase approx. by CZK 65 million.

The Ministry also quantifies the impact of an unplanned increase of the state budget deficit on the interest expenditure on the state debt service. If the state budget deficit of the Czech Republic were to increase by CZK 10.0 billion in 2019, and assuming the financing of this increase by means of the equal increase of nominal values of medium-term and long-term government bonds sold in auctions according to the current issue calendar, this change would result in an increase of expected net interest expenditure on the state debt service by CZK 0.2 billion. The impact on the state budget on a cash basis is very sensitive to selected methods of financing the deficit increase. If a bond with a premium is issued, the increased gross issue may not be reflected in a growth of net expenditure with regard to the cash principle, and will cause a reduction of net interest expenditure, the expense will be apparent only in later years in the form of increased coupon payments. If the accrued approach is applied, the increase of the gross issue would be apparent immediately.

Within three-year simulation horizon, the Ministry also constructs CaR indicators for 2020 and 2021. The expected value of net interest expenditure is CZK 47.8 billion in 2020 and CZK 50.6 billion in 2021, which is due primarily to the use of a less conservative model for the risk premium of government bonds and current relatively low yields of government bonds.

In the medium-term outlook of the Czech Republic's budget for 2020 and 2021, the expenditure frameworks for the Chapter 396 - State debt are under CaR 95% percentile. For 2020, the expenditure framework is CZK 48.0 billion and is CZK 6.0 billion below 95% percentile of interest expenditure. For 2021, the expenditure framework is CZK 50.7 billion and is CZK 10.0 billion below 95% percentile of interest expenditure. The rising trend of medium-term outlook for both budgeted and predicted interest expenditure is mainly due to volatility of interest rates, which increases with the increasing horizon of the prediction. Given that the state budget is always compiled only for the following year, the prediction horizon of interest rates when compiling the budget for the following year will be shorter, and assuming that market conditions remain unchanged, it can be expected that the value of CaR 95% and CaR 99% indicators will decrease due to the lower volatility of the interest rate prediction.

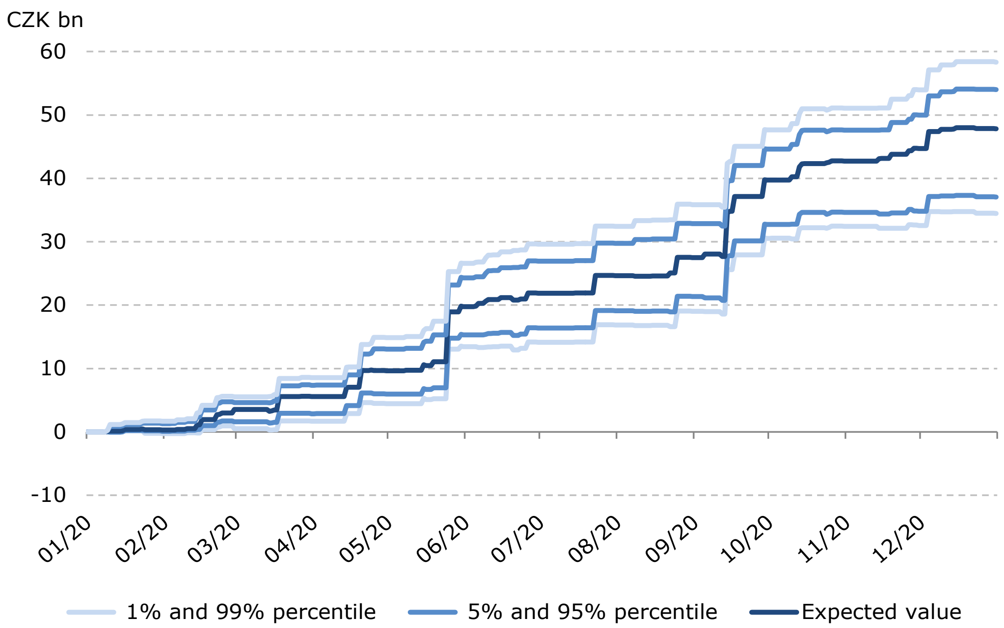
The expected net interest expenditure on state debt in 2020 predicted by the model amounts to CZK 47.8 billion. The following table shows in detail the development of cumulative net interest expenditure on state debt in 2020 predicted by the model always at the end of the month. It also contains the respective critical values of CaR 95% and CaR 99% indicators. The difference between the CaR 99% indicator and expected costs in 2020 is higher than the same difference in 2019. The reason for this difference is higher uncertainty over the longer horizon of yield curve prediction, which increases the volatility of rates.

Table 22: Monthly Development of Cumulative Net Interest Expenditure in 2020

CZK bn	1	2	3	4	5	6	7	8	9	10	11	12
Expected expenditure	0.3	3.5	5.6	9.6	19.8	21.9	24.6	27.5	39.7	42.7	44.7	47.8
CaR 95%	1.3	4.6	7.4	13.0	24.3	26.9	29.7	32.9	44.6	47.6	50.0	54.0
CaR 99%	1.7	5.5	8.6	14.9	26.6	29.6	32.4	35.9	47.6	51.0	54.0	58.3

Source: MoF

Figure 49: Simulation of Net Interest Expenditure on State Debt in 2020



Note: Development of net interest expenditure on a daily basis.
Source: MoF

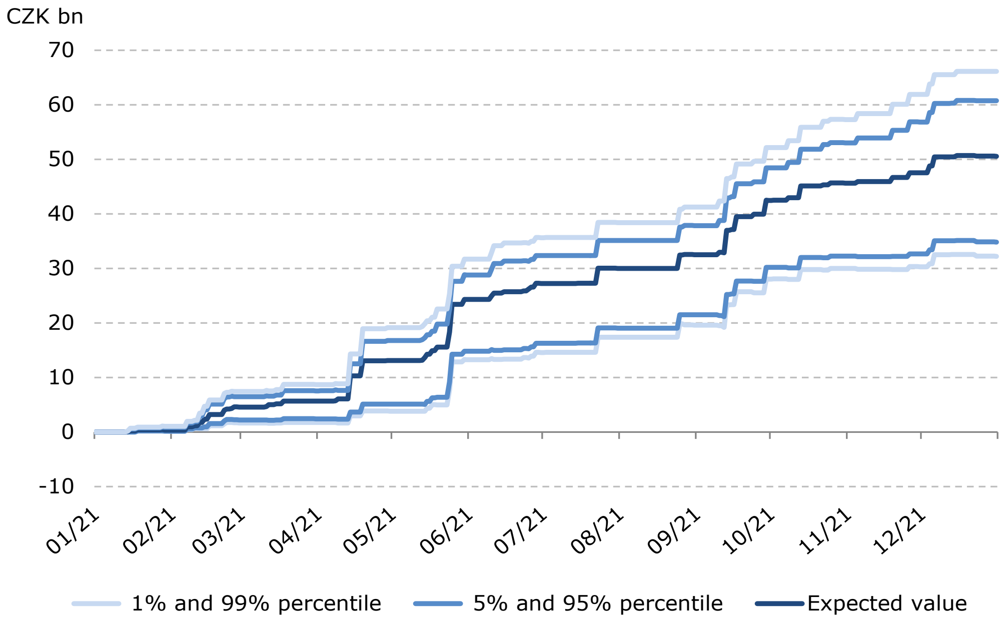
Expected net interest expenditure on state debt in 2021 predicted by the model amount to CZK 50.6 billion. The following table shows in detail the development of cumulative net interest expenditure on state debt in 2021 predicted by the model always at the end of the month. It also contains the respective critical values of CaR 95% and CaR 99%. The difference between the CaR 99% indicator and expected expenditure in 2021 is higher than the same difference in 2019 and 2020. The reason for this difference is higher uncertainty over the longer horizon of yield curve prediction, which increases the volatility of rates.

Table 23: Monthly Development of Cumulative Net Interest Expenditure in 2021

CZK bn	1	2	3	4	5	6	7	8	9	10	11	12
Expected expenditure	0.3	4.6	5.7	13.1	24.3	27.2	30.0	32.5	42.5	45.6	47.5	50.6
CaR 95%	0.9	6.5	7.6	16.8	28.8	32.3	35.1	37.9	48.4	53.0	56.9	60.7
CaR 99%	1.1	7.4	8.7	19.1	31.7	35.6	38.4	41.3	52.2	57.3	61.9	66.1

Source: MoF

Figure 50: Simulation of Net Interest Expenditure on State Debt in 2021



Note: Development of net interest expenditure on a daily basis.
Source: MoF

Efficient Frontier and Alternative Debt Portfolios

The Ministry's primary goal is always the problem-free financing of the gross borrowing requirement at minimal costs related to the specific level of risk. Due to the fact that the gross borrowing requirement in 2019 consists mainly of government bonds, it is crucial to issue bonds with parameters that will satisfy investors' demand. Another important factor that the Ministry must monitor is the liquidity of the secondary bond market. To maintain a certain level of liquidity of the secondary government bond market, it is necessary to ensure a relatively high total nominal value outstanding for every bond issue. According to the portfolio theory, situations may occur where the issuance of bonds according to the issuance calendar so as to satisfy investor demands and guarantee the liquidity of the secondary government bond market may create certain inefficiency in the management of the debt portfolio. This inefficiency may theoretically be eliminated by concluding swap operations, but this involves additional costs and the need to manage credit risk. To compare the real funding strategy with other alternative strategies in terms of costs and risks, the Ministry has conducted an analysis based on the CaR method as from 2012, the aim of which is the construction of an efficient frontier.

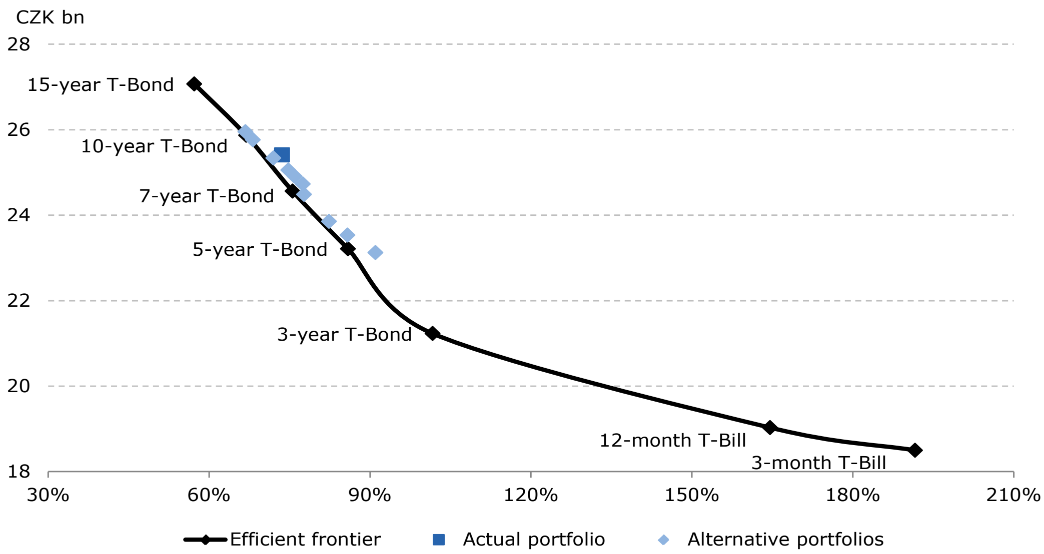
In classic portfolio management, the yields and risks of individual potential investments within the given portfolio are compared directly among each other. On the contrary, the main factor influencing the portfolio structure in debt portfolio management is the time to maturity of the individual instruments. Fluctuations in yield curves and the need for refinancing (re-fixing) cause every refinancing (re-fixing) bear the risk of increased costs. Portfolios with a higher share of instruments bearing an interest at the short end of the yield curve are exposed to the risk of higher costs compared to portfolios with a higher share of instruments that bear an interest at the long end of the yield curve.

The efficient frontier depicts a curve that combines the risk and expected costs of alternative debt portfolios, which contain only bonds with one specific constant time to maturity. The bonds in this portfolio are issued always with a constant time to maturity, i.e. re-openings are not considered, and on its maturity date it is replaced with a bond with the same constant time to maturity. The efficient frontier represents a frontier of risk and expected costs combinations, which cannot be exceeded by any alternative debt portfolio. Hence, there is no debt portfolio that would enable the reduction of risk and simultaneously expected costs below the risk and expected costs of the portfolios containing only bonds with a constant time to maturity.

For all alternative debt portfolios in the conducted analysis, all financing of gross borrowing requirement in following years is carried out on the dates of actually planned auctions using only the bonds according to the definition of alternative portfolio (without considered reopening of the issue). The efficient frontier consists of seven alternative debt portfolios containing only newly issued bonds with a constant time until maturity. These bonds are: 3-month and 12-month state treasury bills and 3-year, 5-year, 7-year, 10-year and 15-year medium-term and long-term government bonds. Compared to the efficient frontier constructed in the previous year, there is an evident impact of a decrease of gross borrowing requirement in three-year simulation horizon, which is reflected in the decrease of expected costs in coming years. Furthermore, further significant flattening of the yield curve and relatively low yields at the long end of the yield curve are apparent, as the difference between expected costs in the case of the issue of 15-year government bonds and state treasury bills is lower compared to the previous year.

In addition to the seven alternative portfolios lying on the efficient frontier, the Ministry also analysed ten more alternative portfolios with instruments, which correspond more to the real demand of investors. These ten alternative portfolios are created analogically as portfolios lying on the efficient frontier, a mix of government bonds with various maturities, through which the gross borrowing requirement in forthcoming years is funded.

Figure 51: Efficient Frontier and Alternative Debt Portfolios



Source: MoF

Two alternative portfolios consider zero net issue of state treasury bills in all years, whereas in the first portfolio government bonds with a maturity of 3, 5, 7, 10 and 15 years are equally issued. In the second portfolio, bonds with various times to maturity are also issued, whereas the average time to maturity of the entire debt portfolio is secured at 6.0 years in medium-term horizon. A third to sixth alternative portfolios finance the gross borrowing requirement with on fifth of state treasury bills and four fifths of medium-term and long-term government bonds; these are 15- year government bonds and 3-month state treasury bills; 10-year government bonds and 12-month state treasury bills; 10-year government bonds and 3-month treasury bills; 5-year government bonds and 12-month state treasury bills. The seventh and eighth alternative portfolios consider issuing one fifth of state treasury bills with a maturity of 3 and 12 months and four fifths of government bonds with a maturity of 10 and 15 years, whereas the chosen instruments are issued equally in case of the former alternative portfolio and the time to maturity of 8.5 year of the whole newly issued debt is maintained at the end of each year in the latter alternative portfolio. The ninth and tenth alternative portfolios consider issuing 3-, 5-, 7-, 10- and 15-year government bonds and 3- and 12-month state treasury bills, whereas the debt instruments are issued equally in one strategy and in the other one, one fifth consists of state treasury bills and the other four fifths consist of issuing medium-term and long-term government bonds, whereas the proportion of maturities within the individual groups is equal. The expected costs of the individual debt portfolios are represented by the cumulated expected costs of state debt service in 2019 to 2021. In all cases, the costs are expressed on an accrued basis. Thereby the comparable position of each alternative portfolio is achieved. In the case of the real portfolio, this results in the clearing of impacts of reopened issues, which in the short-term simulation scope lead to over-valuation of the risk and expected cost. To determine the degree of risk of the individual debt portfolios, the cumulative CaR 99% indicator is used in 2019 to 2021; particularly, the horizontal axis shows the maximum possible percentage change of expected costs, at which the cumulative CaR 99% indicator is achieved.

The figure shows that no alternative or actual debt portfolio, which includes the mix of government bonds with various times to maturity, lies on the efficient frontier. The actual debt portfolio containing the current actual gross borrowing requirement funding strategy and alternative portfolios are very close to the efficient frontier. The actual debt portfolio lies near a cluster of alternative portfolios, which consist of the mix of government bonds with similar average time to maturity. The cumulated expected accrued costs of newly issued debt according to the actual issue calendars amount to CZK 25.4 billion with a risk of approximately 74%. There is therefore a risk that the actual realized costs for next three years will exceed the expected costs by 74%, or in absolute terms by CZK 18.7 billion. Compared to the previous year expected costs decreased significantly and the risk slightly decreased. If the average time to maturity of the newly issued actual debt decreased, the position of the real portfolio would be closer to the x-axis and move away from y-axis, i.e. the expected interest costs would decrease and the risk that they would be exceeded, would increase.

In the context of the efficient frontier analysis, it should be noted that there is no optimal portfolio that can be obtained by quantitative optimization. In the real world, where it’s not possible to issue only new issues of government bonds in each auction and not take into account the needs of investors, only the portfolios approaching the efficient frontier can be chosen. The choice of the part of the efficient frontier, where this approach of the portfolio to the efficient frontier occurs, primarily depends on the risk preference or aversion of the management.

6 - Evaluation of Primary Dealers and Secondary Government Bond Market

Primary Dealers and Recognized Dealers in Czech Government Securities

The status of a primary dealer in Czech government securities was contractually formalized on 1 October 2011, when the Primary Dealer Agreement for Czech Government Securities (hereinafter the Agreement), became valid. According to best international practice, the Agreement specifies the rights and obligations of individual members of the group of primary dealers, and provides an institutional framework for cooperation between the Ministry and financial institutions in funding and state debt management. A primary dealer who has concluded this Agreement with the Ministry has the right as of 1 January 2012 to participate in auctions according to the currently valid Rules for the Primary Sale of Government Securities Organized by the Czech National Bank (official notification of CNB as of 7 January 2019 regarding 3rd version of the Primary Sale of Government Securities Organized by the Czech National Bank).

A new two-stage institutional framework of cooperation was established starting from 1 January 2019. The Ministry implemented complementary status of Recognized Dealer in Czech Government Securities. Thus, Ministry had responded flexibly to increasing regulatory costs and changes of market makers business strategies of foreign market makers in Czech government securities. During the period 2013 - 2017 all privileges and rights of Primary Dealer had been terminated to The Royal Bank of Scotland plc (1 November 2013), Barclays Bank plc (1 January 2016), Deutsche Bank AG and Morgan Stanley & Co International PLC (1 January 2017). Recognized Dealer in Czech Government Securities has limited rights and obligation compared to Primary Dealer, clearly specified in Recognized Dealer Agreement for Czech Government Securities.

Only Primary Dealer together with Recognized Dealer is granted access to primary auctions of government bonds according to valid Rules for the Primary Sale of Government Securities organized by the Czech National Bank. Recognized Dealer has right to be participant only in the competitive part of the primary auction of Czech government securities. Compared to Primary Dealer, there is no access to the non-competitive part of the primary auctions for Recognized Dealer.

Primary dealers and recognized dealers may participate in the Ministry‵s operations on the secondary market, such as buybacks and exchanges of government bonds, tap sales, lending facilities (in the form of repo operations and since December 2015 also in the form of collateralized loans of medium-term and long-term government bonds) or reverse repo operations.

Primary dealers are also the Ministry’s counterparts for foreign issues, private placements and other state’s financial operations. Primary dealers also have an exclusive right to participate in regular meetings with the representatives of the Ministry, at least twice a year, and to be involved among others in the preparation of issuance calendars for government bonds as well as to propose alternative instruments for financing the borrowing requirement, including follow-up operations for risk management.

A primary dealer’s obligation is to purchase at least 3% of the total nominal value of medium-term and long-term government bonds sold in the primary auctions (including non-competitive parts) during four consecutive quarters. Another important obligation is for the participant to fulfil the quoting obligations on a secondary market through the Designated Electronic Trading System (DETS) with the aim of achieving a highly liquid secondary market of government bonds. For 2018 and 2019, MTS Czech Republic was chosen as such platform once again based on the decision taken by the Primary Dealers Committee on 20 December 2017. The system of notifications sent in the case of failure to meet one of the two basic obligations has proven to be useful also during 2018 and the Ministry will continue to apply this practice.

Recognized dealer is not compulsory to fulfill quoting obligation on the secondary market and does not have the obligation to purchase not less than 3% of the total nominal amount of government bonds in primary auctions. The main obligation of recognized dealer is to be active market participant on the DETS, act in accordance with its market rules and contribute on best effort basis to liquidity of secondary market trading of the government bonds.

The group of primary dealers and recognized dealers in Czech government securities is confirmed by the Ministry for every calendar year. In 2018, the Czech Republic had a total of 10 primary dealers. Compared to 2017 there had been no change in the group of primary dealers. All privileges and obligations of Goldman Sachs International and HSBC Bank plc arising from the Agreement are not in force as of 1 January 2019. On the other side, Goldman Sachs International acquired status of Recognized Dealer as of 1 January 2019. System of primary dealership ran smoothly in 2018 and Ministry did not receive any proposals to amend the current institutional arrangement of the market.

Table 24: List of Primary Dealers in Czech Government Securities

Year 2018	
Citibank Europe plc	ING Bank N. V.
Erste Group Bank AG / Česká spořitelna, a.s.	J.P. Morgan Securities plc
KBC Bank NV / Československá obchodní banka, a. s.	PPF banka, a.s.
Goldman Sachs International	Société Générale / Komerční banka, a.s.
HSBC Bank plc	UniCredit Bank Czech Republic and Slovakia, a.s.

Source: MoF

Evaluation Results of the Primary Dealers

The modification of evaluation of the primary dealers maintains two primary evaluation criteria and their weights; one is focused on the primary market another on the secondary market. The importance of a functional and liquid secondary market is demonstrated by the allocation of high weight to the latter criterion, which allows the appraisal of active market-makers in relation to their performance in government bond auctions on the primary market. The maximum evaluation of each primary dealer is 100 points, calculated on a relative basis.

The method of evaluating primary dealers is described in more detail in the Appendix I to this document. The activity of the primary dealers is thus evaluated every quarter based on the Aggregate Performance Evaluation Index (APEI) defined in Annex I to the Agreement, always for four consecutive evaluation periods. The evaluation period according to Article 1 of the Agreement is every calendar quarter. Quarterly evaluation is transparently released in Debt Portfolio Management Quarterly Report. Overall evaluation for the last year is released in The Czech Republic Government Debt Management Annual Report.

Table 25: Overall Evaluation of Primary Dealers

Ranking	Primary Dealer	Points
1.	**PPF banka a.s.**	**67.3**
2.	Erste Group Bank AG / Česká spořitelna, a.s.	65.5
3.	KBC Bank NV / Československá obchodní banka, a. s.	63.1
4.	Société Générale / Komerční banka, a.s.	44.7
5.	Citibank Europe plc	43.3
6.	J.P. Morgan Securities plc	27.0
7.	HSBC Bank plc	25.6

Note: Maximum possible number of points in overall evaluation is 100.
Source: MoF

Table 26: Primary Market

Ranking	Primary Dealer	Points
1.	**Erste Group Bank AG / Česká spořitelna, a.s.**	**45.6**
2.	PPF banka a.s.	34.4
3.	KBC Bank NV / Československá obchodní banka, a. s.	28.9
4.	Société Générale / Komerční banka, a.s.	26.3
5.	Citibank Europe plc	14.9
6.	HSBC Bank plc	11.6
7.	Goldman Sachs International	11.2

Note: Maximum possible number of points in this criterion is 55.
Source: MoF

Table 27: Secondary Market

Ranking	Primary Dealer	Points
1.	**KBC Bank NV / Československá obchodní banka, a. s.**	**34.2**
2.	PPF banka a.s.	32.9
3.	Citibank Europe plc	28.4
4.	Erste Group Bank AG / Česká spořitelna, a.s.	19.8
5.	Société Générale / Komerční banka, a.s.	18.4
6.	J.P. Morgan Securities plc	16.5
7.	HSBC Bank plc	14.1

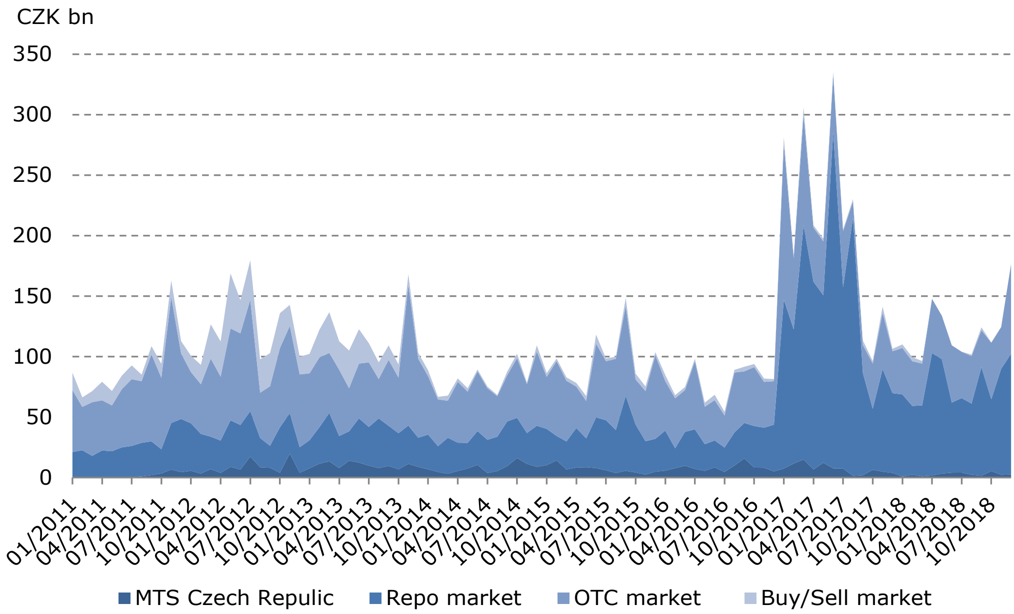
Note: Maximum possible number of points in this criterion is 45.
Source: MoF

MTS Czech Republic and Secondary Government Bond Market

One of the long-term objectives for state debt management is to support the maximum possible liquidity of issues of Czech government bonds on the secondary market, which the Czech Republic aimed to fulfil through the implementation of the MTS Czech Republic electronic trading platform for the secondary market of CZK-denominated government bonds. Pilot operation was launched on 11 July 2011, continuing with live operation after three months. To support the secondary market liquidity the Ministry may consider executing secondary market operations such as tap sales, exchanges of illiquid short term bonds for benchmark bonds with longer time to maturity and buybacks of illiquid bonds with short time to maturity.

The MTS Czech Republic electronic trading platform also enables monitoring of the behaviour of market participants and compliance with the set rules in real time as a basis for the subsequent evaluation of their performance and point awarding. Implementation of this platform also enabled expansion of the group of primary dealers by new foreign market-makers of the domestic market. The MTS Czech Republic electronic trading platform became an integrated part of the whole secondary market for CZK-denominated Czech government bonds. Market participants are provided with transparent information on price development of the Czech government bonds and with the continual access to the offer of Czech government bonds.

Figure 52: Nominal Value of Trades Carried out on Secondary Market



Note: Expressed in nominal value of traded government bonds in individual segments of secondary market; repo market and buy/sell market adjusted for double-counting of transactions. Including Ministry's operations on MTS Czech Republic and repo market. Custody transactions are not included. OTC market consists of outright purchases out of MTS Czech Republic.
Source: MoF, CDCP, MTS

Since January 2017, unusually high trading activity has been recorded on the secondary government bond market. Realized nominal value in January reached CZK 281.3 billion, in February CZK 183.6 billion, and in March, even CZK 306.1 billion. The reason for the historically highest trading activity on the overall secondary market was the expectation that the Czech National Bank would quit the exchange rate commitment. Total trading activity on the secondary market peaked in June, when the nominal value reached CZK 335.5 billion.

During 2018, there was another period of normalization of trading activity on the secondary market towards an average historical level. Relatively high trading activity was reported in April CZK 147.9 billion and May CZK 133.7 billion. Highest trading activity was reached in December CZK 176.5 billion.

An effective secondary market in terms of minimizing transaction costs and maintaining market depth and price stability is a necessary condition for the issuance activity of the state and smooth and cost-effective funding over the long term. Liquid and deep secondary market also helps to absorb potential shocks on financial markets. In order to meet this task, the Ministry gradually expanded the list of benchmark issues from 1 January 2019, based on a previous discussion with primary dealers at the Primary Dealer Committee, as well as the MTS Czech Republic Committee (composed of the representatives of the Ministry and the primary dealers), by the government bonds newly issued in 2018 with maturity in 2021 and 2029, whose nominal value outstanding was sufficient to allow the fulfilment of quoting obligations of the market maker. These issues will be also reopened, which will have another positive impact on the liquidity of new benchmark bonds. Furthermore, the issue maturing in 2033 was also included into the benchmark list, based on the previous agreement with the primary dealers. Expected increase of outstanding amount of new benchmark bonds during next period allows primary dealers to fulfil quoting obligation effectively. In fact, including government bond due in 2033 going to intensify quoting obligation on the long term end of the yield curve and contributes to more accurate estimates of benchmark yield curve. Due to persisting low outstanding amount, high ratio in portfolios holding to maturity and long term to maturity, the minimum nominal traded volume of Czech Republic Treasury Bond, 2006-2036, 4.20% was retained to CZK 10 million. The government bond with maturity in 2036 enables the Ministry to estimate the long end of the benchmark curve more accurately.

From 1 January 2019, Government Bond of the Czech Republic, 2013-2019, 1.50% was removed from the list of benchmark issues due to the time to maturity of less than 1.25 years in accordance with the Agreement. The Government Bond of the Czech Republic, 2014-2020, VAR was excluded as well. As a result of the changes in benchmark issues, the total number of bonds in 2019 subjected to quoting increased by 1 to 13 benchmark bonds.

Table 28: Benchmark Issues of Government Bonds as at 1 January 2019

Issue No.	Issue	ISIN	Coupon	Maturity Date	Maturity Basket
104[1]	**ČR, 0.75 %, 21**	**CZ0001005367**	**0.75%**	**23/2/2021**	**A**
61	ČR, 3.85 %, 21	CZ0001002851	3.75%	29/9/2021	A
52	ČR, 4.70 %, 22	CZ0001001945	4.70%	12/9/2022	B
97	ČR, 0.45 %, 23	CZ0001004600	0.45%	25/10/2023	B
58	ČR, 5.70 %, 24	CZ0001002547	5.70%	25/5/2024	B
89	ČR, 2.40 %, 25	CZ0001004253	2.40%	17/9/2025	C
95	ČR, 1.00 %, 26	CZ0001004469	1.00%	26/6/2026	C
100	ČR, 0.25 %, 27	CZ0001005037	0.25%	10/2/2027	C
78	ČR, 2.50 %, 28	CZ0001003859	2.50%	25/8/2028	C
105[1]	**ČR, 2.75 %, 29**	**CZ0001005375**	**2.75%**	**23/7/2029**	**C**
94	ČR, 0.95 %, 30	CZ0001004477	0.95%	15/5/2030	C
103[1]	**ČR, 2.00 %, 33**	**CZ0001005243**	**2.00%**	**13/10/2033**	**D**
49	ČR, 4.20 %, 36	CZ0001001796	4.20%	4/12/2036	D

[1] Issue was included among benchmark issues from 1 January 2019.
Notice: Minimum traded volume of government bond ČR, 4.20 %, 36 was reduced at CZK 10 mil., based on agreement with primary dealers.
Source: MoF

The primary dealer who fulfils the role of market-maker on the secondary market quotes the bid and offer prices for all bonds subject to quoting obligations in the minimum quoted total nominal value, which varies depending on the time to maturity, and at least 5 hours during a single trading day.

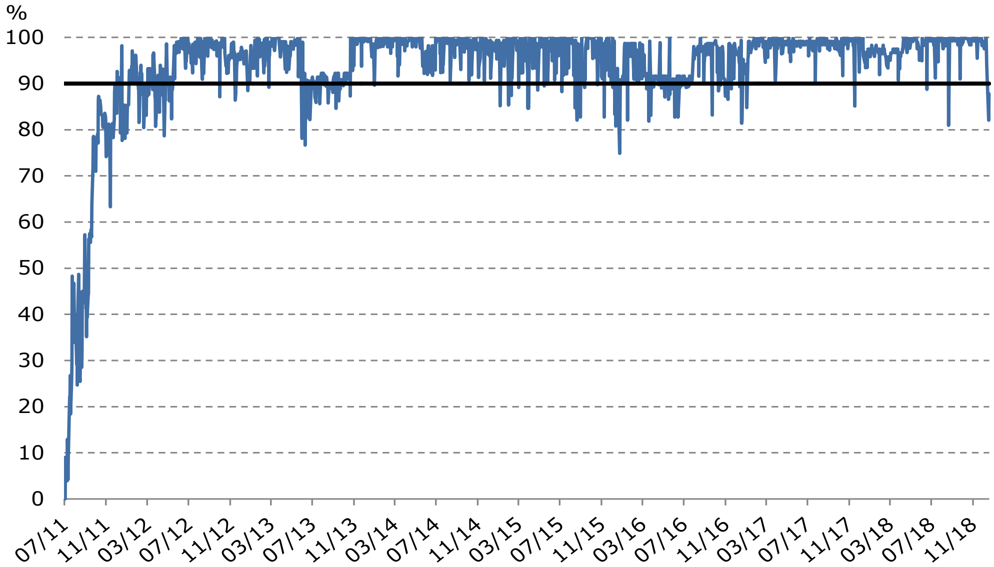
Table 29: Maturity Baskets Based on the Minimum Traded Volume on the MTS Czech Republic

A	**Bonds maturing within 1.25 to 3.5 years**	CZK 50 million
B	**Bonds maturing within 3.5 to 6.5 years**	CZK 50 million
C	**Bonds maturing within 6.5 to 13.5 years**	CZK 40 million
D	**Bonds maturing within 13.5 years and more**	CZK 30 million

Source: MoF

However, the quoted prices must be within the competitive spread, which is set on a daily basis for each government bond subject to quoting obligations as the weighted average of the quoted spreads of all primary dealers multiplied by the coefficient of k = 1.5. This method and the quantitative criteria were set up following mutual discussion in the MTS Czech Republic Committee, and the respective calculations are available to all participants in the system. The Ministry monitors compliance with quoting obligation on a daily basis, the evaluation of the performance and activity of participants takes place on a monthly basis. In 2018, primary dealers successfully managed to fulfil their quoting obligations on average, especially because of flexible approach to competitive spread, which allows better adjustment to underlying financial conditions on the secondary market. In the course of 2018, daily compliace ratio limit (90%) was met on average with the exception of 4 days in year and average performance ratio was significantly stabilized.

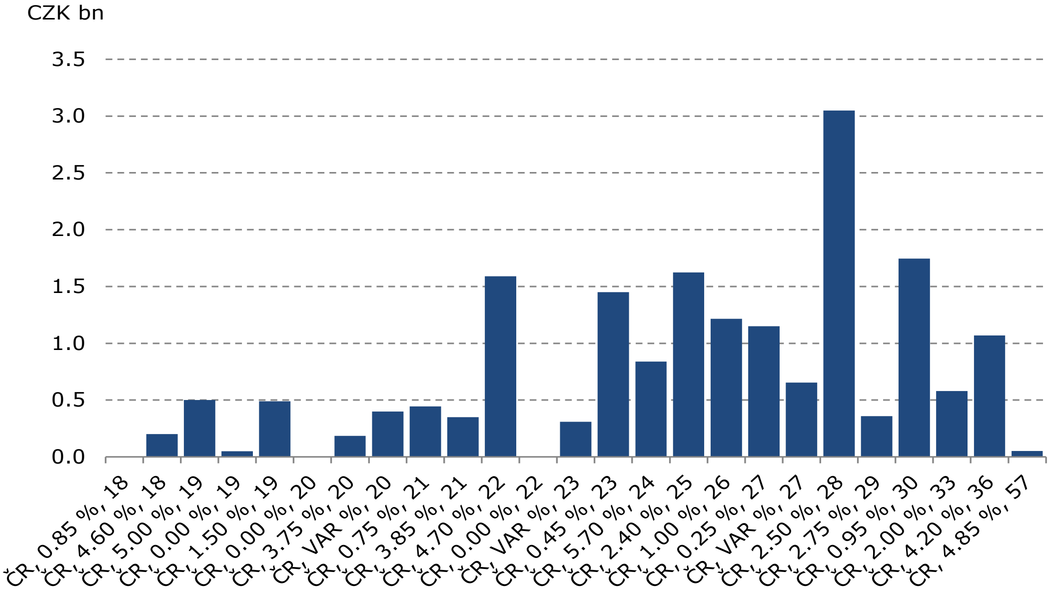
Figure 53: Average Daily Compliance Ratio on MTS Czech Republic



Source: MoF, MTS

In 2018, the monthly average traded nominal value on the MTS Czech Republic was only CZK 1.5 billion. It was the lowest trading activity since the formation of the official inter-dealer market. Obviously, two factors stand for the decrease of inter-dealer activity: fewer primary dealers and historically high gross borrowing requirement. Sufficient, permanent and diversified supply of Czech government bonds in primary auctions might create less incentives and needs for active trading on the official secondary market. Total trading activity was relatively evenly distributed over the course of the year. Low levels were recorded in January (CZK 0.8 billion), August (CZK 0.8 billion) and September (CZK 0.9 billion). Contrary, highest trading activity was reached in May (CZK 2.1 billion), June (CZK 2.7 billion) and October (CZK 2.7 billion). According to particular issues of government bonds, the highest trading volume recorded: Government Bond of the Czech Republic, 2013-2028, 2.50% (CZK 3.1 billion), Government Bond of the Czech Republic, 2015-2030, 0.95% (CZK 1.7 billion) and Government Bond of the Czech Republic, 2014-2025, 2.40% (CZK 1.6 billion).

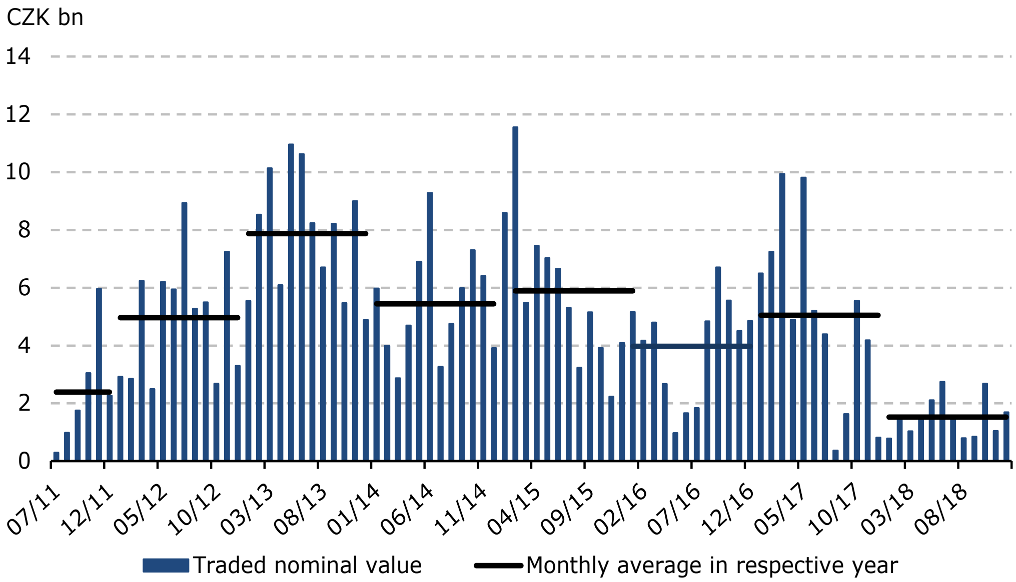
Figure 54: Traded Nominal Value on MTS Czech Republic by T-Bonds in 2018



Note: Excl. trades of the Ministry on the secondary market.
Source: MoF, MTS

One of the reasons for the entrance of Ministry to exchange operations and taps sales on the MTS Czech Republic was the active support of the liquidity of the Czech government bonds and the activity of primary dealers. In 2017, traded nominal value including Ministry's operations on the MTS Czech Republic reached monthly average of CZK 6.7 billion and in 2018 reached CZK 2.5 billion.

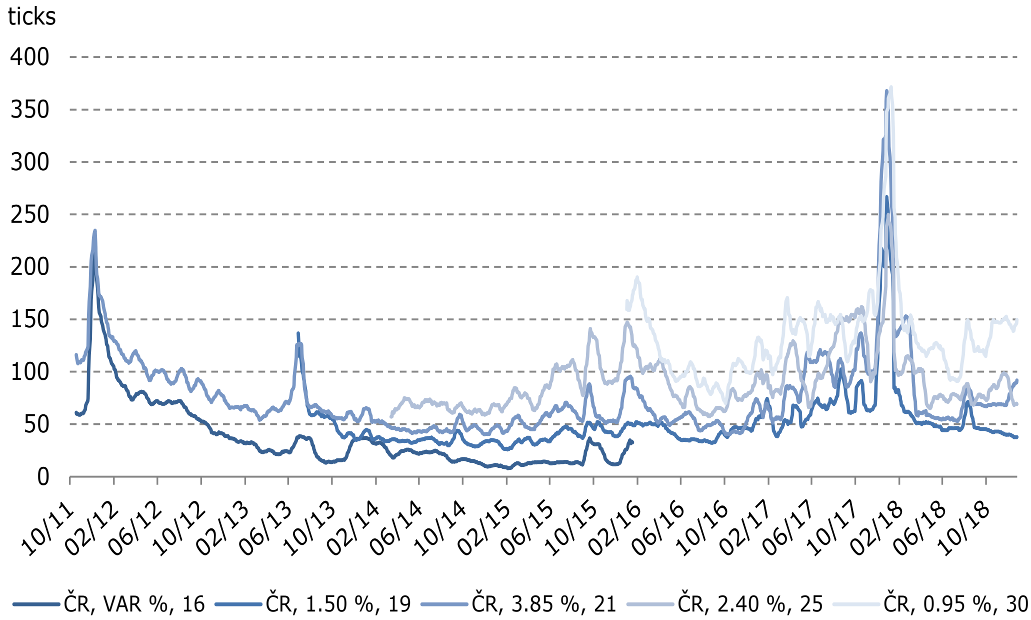
Figure 55: Traded Nominal Value on MTS Czech Republic



Note: Excl. trades of the Ministry on the secondary market.
Source: MoF, MTS

During 2018 the bid-offer spreads went through an unstable and volatile period. The growing trend of bid-offer spreads could be observed at the end of 2017. Then the bid-offer spreads were gradually reduced between January and July 2018. Subsequently, the bid-offer spreads started to increase significantly in August. The main reason was growing uncertainty regarding future development of CNB two-week repo rate. The bid-offer spreads were narrowing in September but another increase were recorded towards the end of the year. An unprecedented increase in the bid-offer spreads especially for regulatory reasons that occurred at the end of 2017 was not seen in 2018. Market stabilization and the long-term low levels of price spreads are also supported by the fact that the mandatory bid-offer spread is built on a relative basis compared to the market average of all primary dealers. This enables significant flexibility and adaptation to the continually changing and poorly predictable market environment as opposed to the fixed spreads.

Figure 56: Bid-Offer Spreads of Selected Bonds Quoted on MTS Czech Republic



Note: The bid-offer spreads are listed in 14-day moving averages.
Source: MoF, MTS

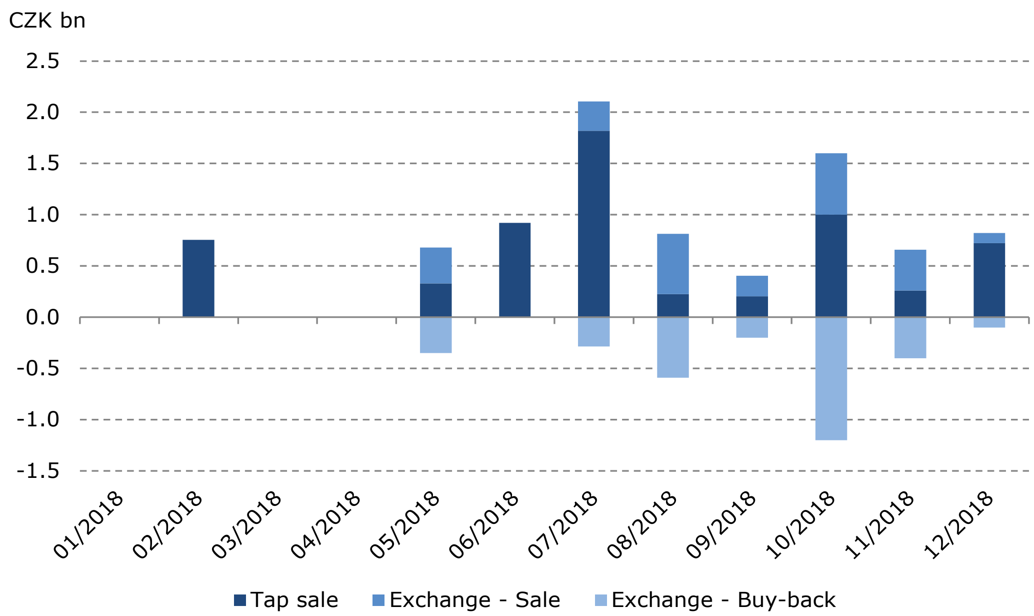
The strategy in relation to the development of the secondary market via MTS Czech Republic primarily focuses on the flexible use of all available MTS Czech Republic electronic platform instruments, smooth running of the system and achievement of consistency with the valid regulatory and institutional framework. The Ministry evaluates very positively the development of the fulfillment of the quotation, particularly with regard to the significant volatility on the financial markets, regulatory impacts on the market-makers' balance sheets, decreasing number of primary dealers and due to the limited auction offer of government bonds subject to quoting in 2018. Lending facilities in the form of repo operations and now also in the form of collateralized loans will continue to be the tools actively used by the Ministry for its direct impact on the secondary market liquidity in 2019.

Operations on the Secondary Market

Since December 2011, the Ministry has been operating actively on the secondary market, primarily through the MTS Czech Republic electronic trading platform. In order to ensure maximum transparency, the Ministry informs all primary dealers about the intention to conduct a buyback, exchange or a tap sale on the secondary market (type of transaction, government bond, the maximum nominal value of transactions, time limit, the conversion rate for exchanges, settlement date, contact person) at least one business day prior to the date on which the transaction is to occur. The Ministry publishes the result of the transactions (total nominal value of the transactions carried out within one buyback, exchange or tap sale, number of transactions and weighted average price) regularly on its website on the settlement date of the transactions.

All operations on the secondary market are executed flexibly depending on the Ministry's needs and the situation on the financial markets. In the course of 2018, due to the financial market conditions on the short end of the yield curve, the Ministry did not carry out any buybacks on the secondary market. Tap sales were executed all over the year witch the exception in January, March and April. Total nominal value of executed taps sales in 2018 was CZK 6.2 billion, which was by CZK 5.4 billion less than previous year.

Figure 57: Nominal Value of Tap Sales and Exchange Operations



Source: MoF, MTS

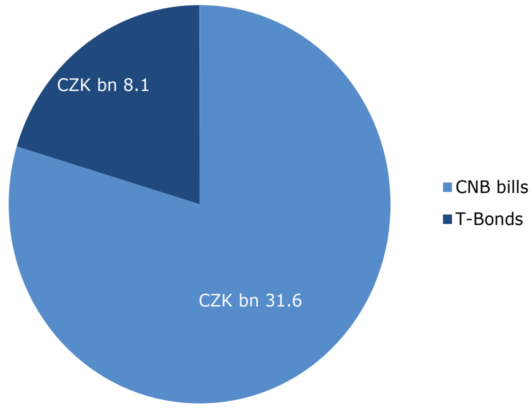
In 2018, nominal value of exchange operations slightly decreased, the Ministry exchanged government bonds of a total nominal value of CZK 3.1 billion for governments bond of a total nominal value of CZK 2.5 billion. In exchanges the Ministry focused primarily on Czech Republic Treasury Bond, 2009-2019, 5.00% and Government Bond of the Czech Republic, 2013-2019, 1.50%. Due to the lack of a source government bond in the primary dealers' balance sheets and the market situation at the short end of the yield curve (government bonds yield below CNB two-week repo rate), the Ministry only executed a limited amount of exchange operations. In the event of changes in market conditions, the Ministry will continue to use government bond exchanges to manage the state debt maturity profile as well as to support the market liquidity of the secondary government bond market.

The Ministry continued executing extensively the short-term lending facilities of medium-term and long-term government bonds for primary dealers in the form of repo operations and also in the form of loans of securities. Loans of securities, which are standard financial instrument in the world, will be supported by the Ministry also in the next period. Ministry observes steadily growing trend in demand for loan of securities mainly due to higher repo rates on the money market, which brings repo more costly. In 2018, loans of securities (non-cash collateral) became the main tool for supporting secondary market liquidity. Similar to repo operations a primary dealer may borrow securities from Ministry's asset accounts for a fee for a period of 90 days against the non-cash collateral in the form of state treasury bills, CNB bills or medium-term and long-term government bonds. The advantage of loans of securities is the bidirectional support of liquidity on the secondary market with no impact on the gross borrowing requirement of the Ministry and the debt portfolio's risk indicators.

Parallel market in the form of loans of securities has its importance when the repo market freezes or if some dysfunctions occurs, which could result in an increase in bid-offer spreads. Loans of securities are fully covered by the standard contractual documentation, i.e. the Master agreement for financial transactions and the international Global Master Securities Lending Agreement. Loans of securities also help primary dealers to optimize their business portfolio irrespective of their liquidity position as well as significantly reduce their dependence on the repo market.

Following the standardisation on the Czech government bond market in 2018, the total volume of the lending facility (both in the form of repo operations and loans of securities) expressed as the nominal value of provided collateral decreased from CZK 164.3 billion in 2017 to CZK 51.7 billion in 2018. Repo operation provided by Ministry accounted CZK 12.1 billion (23.4%) and loans of securities collateralized by non-cash collateral accounted CZK 39.6 billion (76.6%). Demand for lending facilities in the form of repo operations and in the form of loans of securities was strong mainly in the last quarter of 2018 when average monthly nominal amount of lending facilities reached CZK 7.4 billion. In December 2018 total provided nominal value of lending facilities rose to a level of over CZK 10.8 billion. This was influenced by the strong demand of primary dealers, who accumulated significant short position during 2018. Due to limited supply of government bonds in primary auctions in the last month of the year relative to overall demand, Ministry's lending facilities have allowed smooth operating of the secondary market without any price distortions. At the same time the Ministry accepted collateral in the nominal value of CZK 39.7 billion. The important change in collateral structure in favour of T-bonds occurred compared to last year. Its ratio rose to 20.3% that means year on year increase by 14.7 pp.

Figure 58: Received Collateral within Collateralized Loans of Securities in 2018



Note: Excl.T-Bonds issued on foreign markets.
Source: MoF

Interest in the short-term lending facilities in the form of repo operations in 2018 was relatively low due to increase in monetary policy rate, which resulted into higher costs of repo operations against loan of securities collateralized by non-cash collateral. The total amount of received cash resources from short-term lending facilities in 2018 was CZK 11.9 billion. Overall in 2018, Ministry executed 72 transactions in the form of repo operations and 162 in the form of loans of securities.

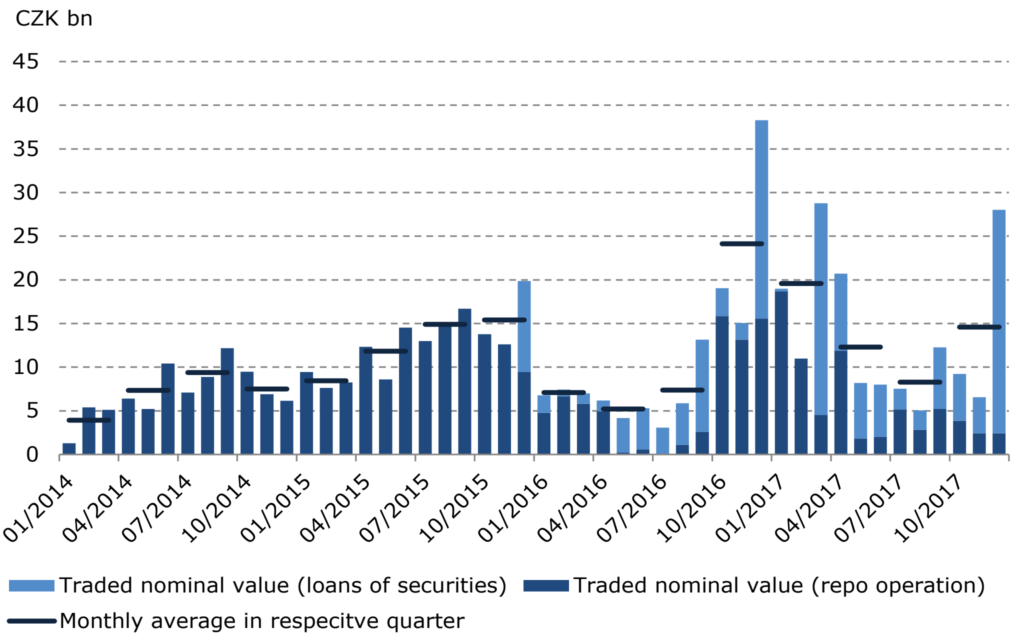
From the primary dealers' point of view, the Ministry's short-term lending facilities enable to cover their short positions and thus contribute to the smooth fulfilment of quoting obligations, maintaining sufficient depth of market and liquidity of government bonds even at times of unusual fluctuations on financial markets. The difference between the nominal value of trades on the MTS Czech Republic electronic trading platform and demand of primary dealers for government bonds may be filled through short-term lending facilities. Lending facilities thus form an important alternative for obtaining government bonds in the case of worsened conditions on the secondary market and contribute significantly to the business activity of primary dealers. It enables stabilisation of the market spread of quoted bonds, which is directly reflected in the reduction of the illiquidity premium as well as the end-investors' demand for

Czech government bonds.

Although the primary goal of these operations is to increase the liquidity of government bonds on secondary market, especially in case of the short-term excess of demand over the supply of the particular bond, income from lending facilities has a positive impact on increasing revenue of the state budget. The funds obtained from the repo operations are invested for higher return on the money market within the efficient state treasury liquidity management. This enables further increase in the investment income of the Ministry. In 2018, the contribution of the lending facilities to the total revenue from the investment activity amounted CZK 10.1 million.

In connection with the lending facilities, the Ministry actively manages the balance of government bonds in its asset accounts with respect to the demand of primary dealers. In 2018, the largest part of lending facilities in terms of nominal value of the provided bond was comprised of Government Bond of the Czech Republic, 2017-2027, 0.25% (CZK 10.4 billion), Government Bond of the Czech Republic, 2013-2028, 2.50% (CZK 6.8 billion), Government Bond of the Czech Republic, 2015-2026, 1.00% (CZK 5.8 billion), Czech Republic Treasury Bond, 2010-2021, 3.85% (CZK 5.6 billion) and Government Bond of the Czech Republic, 2017-2020, 0.00% (CZK 5.0 billion). For other bonds, the demand was evenly distributed along the entire yield curve.

Figure 59: Nominal Value of Carried out Lending Facilities



Note: The medium-term and long-term government bonds lending facilities are stated in the nominal value of collateral provided from the Ministry's asset account.
Source: MoF

Appendix I

Evaluation Methodology for Primary Dealers Valid for 2018

As part of criterion A. Evaluation of activities on the primary market, the share of the particular primary dealer in the primary market of government bonds, meaning the share of accepted bids at auctions of government bonds for the evaluated period, is monitored. Using the ratio of the accepted bids to the total nominal value of the submitted bids, the Ministry monitors the willingness of investors to hold medium-term and long-term government bonds. The important aspects of evaluating participation on the primary market include the auction pricing strategy, in which the Ministry evaluates the willingness of primary dealers to pay the highest price weighted by the nominal value of a government bond auction. In another sub-criterion, a primary dealer is evaluated with more points if he is a regular participant at auctions, regardless of the evaluation period. The maximum number of points in the final sub-criterion is received by the primary dealer who subscribes the largest share of state treasury bills sold by the Ministry during the particular period.

The quantitative evaluation within criterion B. Secondary market and liquidity operations, which is primarily based on available statistics and the monitoring tools of the MTS Czech Republic electronic trading platform, focuses on quotation activity, its quality, traded volumes and transactions with the Ministry. The evaluation of the fulfilment of the quoting obligations also forms the subject of the first sub-criterion. The quality of quotation activity is understood as an evaluation of the average quoted spread weighed by time and total nominal value, which is further taken into account in the time to maturity of the given bond. Similarly also in relation to other sub-criterion, the traded volumes are weighted based on the time to maturity of the bond. For the next sub-criterion, primary dealer is evaluated based on the share of total nominal value of executed trades with relevant instruments within the given group, when the primary dealer acted as a counterparty, in total nominal value of all executed trades with relevant instruments within given group executed with all primary dealers. Total evaluation for given sub-criterion is then determined by the weighted average of these shares for all three distinguished groups. The fifth sub-criterion evaluates the willingness of a primary dealer to pay the highest price or obtain the lowest price weighted by the nominal value and duration within tap sales, buy-backs of government bonds or exchanges of government bonds on the secondary market.

This methodology of primary dealers evaluation valid for 2018 remains unchanged for 2019.

Table 30: Criteria for Evaluation of Primary Dealers Valid for 2018

A. Primary market	55 p	B. Secondary market and liquidity operations	45 p
A.1. Share on the primary T-Bonds market	30 p	B.1. Quoting obligations on DETS	10 p
A.2. Dependability of auction demand	5 p	B.2. Qualitative of quoting performance on DETS	10 p
A.3. Auction pricing strategy	5 p	B.3. Traded Volume on DETS	10 p
A.4. Regularity of auction participation	5 p	B.4. Ministry of Finance's operations on the secondary market and liquidity operations	10 p
A.5. Share on the primary T-Bills market	10 p	B.5. Pricing strategy for tap sales, buy-backs and exchanges	5 p

Source: MoF

Appendix II

Table 31: State Debt and State Financial Assets Portfolios Parameters

	31/12/ 2017	31/3/ 2018	30/6/ 2018	30/9/ 2018	31/12/ 2018
Total state debt (CZK bn)	**1,624.7**	**1,712.1**	**1,713.5**	**1,671.4**	**1,622.0**
Market value of state debt (CZK bn)	1,751.0	1,829.6	1,797.3	1,741.2	1,700.7
Short-term state debt (%)	18.5	19.0	17.5	15.8	17.8
Medium-term state debt (%)	62.3	61.1	60.7	56.4	57.3
T-Bills and other money market instruments (%)	2.7	10.5	7.3	5.6	2.7
Average time to maturity (years)	5.0	4.8	5.2	5.4	5.4
Interest rate re-fixing up to 1 year (%)	33.5	33.3	32.1	31.3	33.6
Average time to re-fixing (years)	4.1	4.1	4.5	4.7	4.7
Variable-rate state debt (%)	12.7	11.9	12.2	13.1	13.4
Modified duration (years)	3.7	3.7	4.0	4.1	4.3
State debt level net foreign currency exposure (%)	10.9	10.4	10.5	10.7	10.3
Interest expenditure on state debt net foreign currency exposure (%)	11.0	10.4	10.6	10.7	10.3
Foreign currency state debt (%)	12.5	11.9	12.1	12.2	11.9
Share of € in state debt level net foreign currency exposure (%)	96.8	96.7	90.5	90.4	96.3
Share of € in interest expenditure on state debt net foreign currency exposure (%)	100.0	100.0	93.8	93.7	100.0
Non-marketable state debt (%)[1]	3.2	2.9	5.8	5.7	5.1
Share of savings government bonds in state debt (%)	1.3	1.3	0.9	0.9	0.3
Marketable state debt (CZK bn)	**1,552.0**	**1,641.6**	**1,598.9**	**1,560.8**	**1,534.1**
Market value of marketable state debt (CZK bn)	1,677.8	1,758.5	1,682.9	1,631.0	1,613.2
Short-term marketable state debt (%)	18.0	18.6	14.7	12.7	15.8
Medium-term marketable state debt (%)	62.6	61.3	59.7	55.0	56.5
T-Bills and other money market instruments (%)	2.8	11.0	4.6	2.7	0.3
Average time to maturity (years)	4.9	4.8	5.3	5.6	5.5
Interest rate re-fixing up to 1 year (%)	31.1	31.2	27.9	27.1	30.4
Average time to re-fixing (years)	4.2	4.2	4.7	4.9	4.9
Variable-rate marketable state debt (%)	10.4	9.9	10.4	11.5	11.7
Modified duration (years)	3.8	3.8	4.2	4.3	4.5
Marketable state debt level net foreign currency exposure (%)	11.5	10.8	8.1	8.2	8.4
Interest expenditure on marketable state debt net foreign currency exposure (%)	11.5	10.8	8.1	8.2	8.4
Foreign-currency marketable state debt (%)	13.1	12.4	9.7	9.8	10.0
Share of € in marketable state debt level net foreign currency exposure (%)	96.8	96.7	95.3	95.4	95.2
Share of € in interest expenditure on marketable state debt net foreign currency exposure (%)	100.0	100.0	100.0	100.0	100.0
Investment portfolios (CZK bn)[2]	**50.3**	**50.7**	**51.3**	**51.7**	**51.9**
Share of assets up to one year on total state debt (%)	2.8	2.7	2.8	2.9	3.0
Average yield (%)	0.8	0.9	1.0	1.3	1.8
Average time to maturity (years)	0.4	0.4	0.3	0.3	0.3
Modified duration (years)	0.3	0.2	0.3	0.2	0.2

[1] Excl.savings government bonds.
[2] Incl. nuclear and pension portfolio.
Source: MoF

Table 32: Medium-Term and Long-Term Government Bonds Issued on Domestic Market as at 31/12/2018

Issue name	Issue no.	ISIN	Maturity date	Nominal value outstanding	Nominal value booked on MoF's asset accounts
ČR, 5.00 %, 19	56	CZ0001002471	11/4/2019	84,779,000,000	1,980,000,000
ČR, 0.00 %, 19	98	CZ0001004717	17/7/2019	70,000,000,000	0
ČR, 1.50 %, 19	76	CZ0001003834	29/10/2019	83,358,200,000	0
ČR, 0.00 %, 20	101	CZ0001005011	10/2/2020	43,870,880,000	6,183,000,000
ČR, 3.75 %, 20	46	CZ0001001317	12/9/2020	75,000,000,000	0
ČR, VAR %, 20	91	CZ0001004113	9/12/2020	33,923,370,000	2,050,000,000
ČR, 0.75 %, 21	104	CZ0001005367	23/2/2021	25,618,110,000	1,000,000,000
ČR, 3.85 %, 21	61	CZ0001002851	29/9/2021	76,535,000,000	1,100,000,000
ČR, 0.00 %, 22	102	CZ0001005029	24/2/2022	1,245,780,000	4,600,000,000
ČR, 4.70 %, 22	52	CZ0001001945	12/9/2022	87,324,900,000	569,000,000
ČR, VAR %, 23	63	CZ0001003123	18/4/2023	87,197,380,000	1,900,000,000
ČR, 0.45 %, 23	97	CZ0001004600	25/10/2023	47,289,100,000	2,000,000,000
ČR, 5.70 %, 24	58	CZ0001002547	25/5/2024	87,600,000,000	2,400,000,000
ČR, 2.40 %, 25	89	CZ0001004253	17/9/2025	98,956,590,000	975,000,000
ČR, 1.00 %, 26	95	CZ0001004469	26/6/2026	68,710,820,000	2,633,000,000
ČR, 0.25 %, 27	100	CZ0001005037	10/2/2027	47,129,530,000	4,000,000,000
ČR, VAR %, 27	90	CZ0001004105	19/11/2027	58,592,400,000	1,000,000,000
ČR, 2.50 %, 28	78	CZ0001003859	25/8/2028	98,644,410,000	1,355,590,000
ČR, 2.75 %, 29	105	CZ0001005375	23/7/2029	58,481,520,000	900,000,000
ČR, 0.95 %, 30	94	CZ0001004477	15/5/2030	68,277,460,000	656,000,000
ČR, 2.00 %, 33	103	CZ0001005243	13/10/2033	23,151,360,000	924,820,000
ČR, 4.20 %, 36	49	CZ0001001796	4/12/2036	39,874,370,000	0
ČR, 4.85 %, 57	53	CZ0001002059	26/11/2057	11,530,000,000	6,470,000,000
		Total		**1,377,090,180,000**	**42,696,410,000**

Note: Excl. nominal values of government bonds provided and/or received by the Ministry as collateral when realizing repo operations under treasury single accounts liquidity management and/or under lending facilities.
Source: MoF

Table 33: Medium-Term and Long-Term Government Bonds Issued on Foreign Markets as at 31/12/2018

ISIN	Currency	Maturity date	Nominal value outstanding	Nominal value booked on MoF's asset accounts
XS0215153296	EUR	18/3/2020	1,000,000,000	0
XS0541140793	EUR	14/4/2021	2,000,000,000	0
XS0750894577	EUR	24/5/2022	2,750,000,000	0
XS0240954361	JPY	16/1/2036	30,000,000,000	0
	Total EUR		**5,750,000,000**	**0**
	Total JPY		**30,000,000,000**	**0**

Note: Excl. nominal values of government bonds provided and/or received by the Ministry as collateral when realizing repo operations under treasury single accounts liquidity management and/or under lending facilities.
Source: MoF

Table 34: Issued State Treasury Bills as at 31/12/2018

Issue no.	Maturity (weeks)	ISIN	Maturity date	Nominal value outstanding	Nominal value booked on MoF's asset accounts
803	3	CZ0001005656	11/1/2019	2,650,000,000	0
804	2	CZ0001005664	11/1/2019	1,500,000,000	0
		Total		**4,150,000,000**	**0**

Note: Excl. nominal values of government bonds provided and/or received by the Ministry as collateral when realizing repo operations under treasury single accounts liquidity management and/or under lending facilities.
Source: MoF

Table 35: Issued Savings Government Bonds as at 31/12/2018

Bond	Issue no.	ISIN	Maturity date	Nominal value outstanding	Nominal value booked on MoF's asset accounts
Inflation-linked savings government bond	70	CZ0001003586	12/6/2019	1,932,197,815	0
Reinvestment savings government bond	92	CZ0001004303	12/6/2019	745,436,333	0
Inflation-linked savings government bond	83	CZ0001003990	12/6/2020	392,461,983	0
Inflation-linked savings government bond	87	CZ0001004204	12/12/2020	2,118,045,359	0
Variable-rate savings government bond	93	CZ0001004311	12/12/2020	30,726,872	0
Total				**5,218,868,362**	**0**

Source: MoF

Table 36a: Medium-Term and Long-Term Government Bonds Issued in 2018

Issue name	Issue/ tranche no.		Auction date	Settlement date	Maturity date	CCY	Max. nominal value offered in the competitive part of auction	Total nominal value sold
ČR, 2.40 %, 25	89	15	3/1	5/1	17/9/2025	CZK	2,000,000,000	2,050,000,000
ČR, 0.25 %, 27	100	8	3/1	5/1	10/2/2027	CZK	4,000,000,000	3,660,800,000
ČR, 4.20 %, 36	49	12	3/1	5/1	4/12/2036	CZK	1,000,000,000	20,000,000
ČR, 0.45 %, 23	97	16	17/1	19/1	25/10/2023	CZK	4,000,000,000	1,490,000,000
ČR, 2.50 %, 28	78	23	17/1	19/1	25/8/2028	CZK	4,000,000,000	4,000,000,000
ČR, 2.00 %, 33	103	4	17/1	19/1	13/10/2033	CZK	4,000,000,000	1,700,000,000
ČR, 4.70 %, 22	52	13	7/2	9/2	12/9/2022	CZK	2,000,000,000	2,276,450,000
ČR, 0.25 %, 27	100	9	7/2	9/2	10/2/2027	CZK	4,000,000,000	4,543,730,000
ČR, 0.95 %, 30	94	14	7/2	9/2	15/5/2030	CZK	4,000,000,000	5,827,390,000
ČR, 0.75 %, 21	104	1	21/2	23/2	23/2/2021	CZK	4,000,000,000	1,978,200,000
ČR, 1.00 %, 26	95	13	21/2	23/2	26/6/2026	CZK	4,000,000,000	4,366,310,000
ČR, 2.75 %, 29	105	1	21/2	23/2	23/7/2029	CZK	4,000,000,000	4,276,540,000
ČR, 0.45 %, 23	97	17	7/3	9/3	25/10/2023	CZK	4,000,000,000	4,035,000,000
ČR, 2.50 %, 28	78	24	7/3	9/3	25/8/2028	CZK	4,000,000,000	4,535,000,000
ČR, 2.00 %, 33	103	5	7/3	9/3	13/10/2033	CZK	4,000,000,000	4,130,000,000
ČR, 0.75 %, 21	104	2	21/3	23/3	23/2/2021	CZK	4,000,000,000	5,012,760,000
ČR, 2.40 %, 25	89	16	21/3	23/3	17/9/2025	CZK	4,000,000,000	3,357,670,000
ČR, 2.75 %, 29	105	2	21/3	23/3	23/7/2029	CZK	4,000,000,000	6,002,470,000
ČR, 4.70 %, 22	52	14	11/4	13/4	12/9/2022	CZK	4,000,000,000	4,433,830,000
ČR, 0.25 %, 27	100	10	11/4	13/4	10/2/2027	CZK	5,000,000,000	6,431,980,000
ČR, 0.95 %, 30	94	15	11/4	13/4	15/5/2030	CZK	5,000,000,000	6,981,450,000
ČR, 0.75 %, 21	104	3	25/4	27/4	23/2/2021	CZK	6,000,000,000	5,292,990,000
ČR, 2.75 %, 29	105	3	25/4	27/4	23/7/2029	CZK	6,000,000,000	8,184,850,000
ČR, 2.00 %, 33	103	6	25/4	27/4	13/10/2033	CZK	5,000,000,000	4,463,880,000
ČR, 0.45 %, 23	97	18	9/5	11/5	25/10/2023	CZK	6,000,000,000	1,835,000,000
ČR, 0.25 %, 27	100	11	9/5	11/5	10/2/2027	CZK	6,000,000,000	5,030,000,000
ČR, 4.20 %, 36	49	13	9/5	11/5	4/12/2036	CZK	3,000,000,000	1,073,000,000
ČR, 4.70 %, 22	52	15	23/5	25/5	12/9/2022	CZK	4,000,000,000	1,424,560,000
ČR, 1.00 %, 26	95	14	23/5	25/5	26/6/2026	CZK	6,000,000,000	5,776,000,000
ČR, 0.95 %, 30	94	16	23/5	25/5	15/5/2030	CZK	6,000,000,000	6,580,530,000
ČR, 0.75 %, 21	104	4	6/6	8/6	23/2/2021	CZK	5,000,000,000	5,293,000,000
ČR, 2.40 %, 25	89	17	6/6	8/6	17/9/2025	CZK	5,000,000,000	5,000,000,000
ČR, 2.75 %, 29	105	4	6/6	8/6	23/7/2029	CZK	7,000,000,000	8,217,000,000
ČR, 2.40 %, 25	89	18	13/6	15/6	17/9/2025	CZK	5,000,000,000	4,411,000,000
ČR, VAR %, 27	90	10	13/6	15/6	19/11/2027	CZK	5,000,000,000	4,859,000,000
ČR, 2.75 %, 29	105	5	13/6	15/6	23/7/2029	CZK	7,000,000,000	5,502,000,000
ČR, 0.75 %, 21	104	5	20/6	22/6	23/2/2021	CZK	5,000,000,000	5,041,160,000
ČR, 2.50 %, 28	78	25	20/6	22/6	25/8/2028	CZK	7,000,000,000	8,243,260,000
ČR, 2.75 %, 29	105	6	20/6	22/6	23/7/2029	CZK	7,000,000,000	5,884,230,000
ČR, 1.00 %, 26	95	15	11/7	13/7	26/6/2026	CZK	6,000,000,000	9,026,830,000
ČR, VAR %, 27	90	11	11/7	13/7	19/11/2027	CZK	4,000,000,000	3,156,740,000
ČR, 2.75 %, 29	105	7	25/7	27/7	23/7/2029	CZK	4,000,000,000	6,478,760,000
ČR, 2.00 %, 33	103	7	25/7	27/7	13/10/2033	CZK	4,000,000,000	3,337,380,000
ČR, VAR %, 23	63	21	8/8	10/8	18/4/2023	CZK	4,000,000,000	5,989,510,000

Issue name	Issue/ tranche no.		Auction date	Settlement date	Maturity date	CCY	Max. nominal value offered in the competitive part of auction	Total nominal value sold
ČR, 2.40 %, 25	89	19	8/8	10/8	17/9/2025	CZK	6,000,000,000	7,211,840,000
ČR, VAR %, 27	90	12	22/8	24/8	19/11/2027	CZK	3,000,000,000	3,334,240,000
ČR, 2.75 %, 29	105	8	22/8	24/8	23/7/2029	CZK	7,000,000,000	10,265,030,000
ČR, 4.70 %, 22	52	16	5/9	7/9	12/9/2022	CZK	4,000,000,000	1,792,320,000
ČR, 4.20 %, 36	49	14	5/9	7/9	4/12/2036	CZK	2,000,000,000	2,323,000,000
ČR, 0.75 %, 21	104	6	19/9	21/9	23/2/2021	CZK	3,000,000,000	3,000,000,000
ČR, 2.40 %, 25	89	20	19/9	21/9	17/9/2025	CZK	5,000,000,000	11,395,940,000
ČR, 0.25 %, 27	100	12	10/10	12/10	10/2/2027	CZK	2,000,000,000	2,229,070,000
ČR, 2.00 %, 33	103	8	10/10	12/10	13/10/2033	CZK	2,000,000,000	2,046,940,000
ČR, 2.75 %, 29	105	9	21/11	23/11	23/7/2029	CZK	3,000,000,000	3,570,640,000
ČR, 2.00 %, 33	103	9	21/11	23/11	13/10/2033	CZK	2,000,000,000	2,075,180,000
				Total				**250,454,460,000**

Source: MoF, CNB

Table 36b: Medium-Term and Long-Term Government Bonds Issued in 2018

Issue name	Issue / Tranche no.		Coupon	Average net price	Average yield to maturity (% p.a.)	Bid-to-cover ratio	Sold in the competitive part of the auction / max. nominal value offered (%)	Sold in the non-competitive part of the auction / max. nominal value offered (%)
ČR, 2.40 %, 25	89	15	2.40%	107.362	1.385	1.64	100.00	2.50
ČR, 0.25 %, 27	100	8	0.25%	88.545	1.614	1.20	82.50	9.02
ČR, 4.20 %, 36	49	12	4.20%	128.000	2.349	3.00	2.00	0.00
ČR, 0.45 %, 23	97	16	0.45%	95.530	1.259	1.49	37.25	0.00
ČR, 2.50 %, 28	78	23	2.50%	105.622	1.909	1.54	100.00	0.00
ČR, 2.00 %, 33	103	4	2.00%	95.106	2.376	1.15	41.25	1.25
ČR, 4.70 %, 22	52	13	4.70%	116.307	1.043	2.49	100.00	13.82
ČR, 0.25 %, 27	100	9	0.25%	87.462	1.769	1.58	100.00	13.59
ČR, 0.95 %, 30	94	14	0.95%	87.096	2.159	1.79	125.85	19.83
ČR, 0.75 %, 21	104	1	0.75%	99.546	0.904	1.18	43.25	6.21
ČR, 1.00 %, 26	95	13	1.00%	94.700	1.687	1.55	100.00	9.16
ČR, 2.75 %, 29	105	1	2.75%	107.244	2.033	1.55	100.00	6.91
ČR, 0.45 %, 23	97	17	0.45%	95.646	1.256	1.30	100.00	0.88
ČR, 2.50 %, 28	78	24	2.50%	105.443	1.920	1.95	113.38	0.00
ČR, 2.00 %, 33	103	5	2.00%	94.511	2.426	1.17	100.00	3.25
ČR, 0.75 %, 21	104	2	0.75%	99.544	0.909	1.75	115.13	10.19
ČR, 2.40 %, 25	89	16	2.40%	105.313	1.639	1.20	75.28	8.67
ČR, 2.75 %, 29	105	2	2.75%	106.346	2.113	1.62	135.13	14.94
ČR, 4.70 %, 22	52	14	4.70%	116.234	0.928	1.76	100.00	10.85
ČR, 0.25 %, 27	100	10	0.25%	89.144	1.577	1.83	110.14	18.50
ČR, 0.95 %, 30	94	15	0.95%	89.103	1.972	1.66	119.90	19.73
ČR, 0.75 %, 21	104	3	0.75%	99.679	0.865	1.23	79.00	9.22
ČR, 2.75 %, 29	105	3	2.75%	108.529	1.898	1.42	121.42	15.00
ČR, 2.00 %, 33	103	6	2.00%	97.086	2.224	1.18	79.50	9.78
ČR, 0.45 %, 23	97	18	0.45%	95.947	1.222	1.20	30.58	0.00
ČR, 0.25 %, 27	100	11	0.25%	88.468	1.677	1.14	83.83	0.00
ČR, 4.20 %, 36	49	13	4.20%	125.813	2.452	1.16	35.77	0.00
ČR, 4.70 %, 22	52	15	4.70%	114.545	1.205	1.47	33.50	2.11
ČR, 1.00 %, 26	95	14	1.00%	93.622	1.856	1.10	93.88	2.38
ČR, 0.95 %, 30	94	16	0.95%	86.515	2.247	1.34	100.00	9.68
ČR, 0.75 %, 21	104	4	0.75%	99.050	1.107	1.22	104.40	1.46
ČR, 2.40 %, 25	89	17	2.40%	104.406	1.749	1.14	100.00	0.00
ČR, 2.75 %, 29	105	4	2.75%	105.336	2.202	1.15	117.39	0.00
ČR, 2.40 %, 25	89	18	2.40%	103.550	1.872	1.12	88.22	0.00
ČR, VAR %, 27	90	10	VAR%	100.833	-19.167[1]	1.80	97.18	0.00
ČR, 2.75 %, 29	105	5	2.75%	104.202	2.314	1.05	78.60	0.00
ČR, 0.75 %, 21	104	5	0.75%	98.702	1.246	1.09	95.90	4.92
ČR, 2.50 %, 28	78	25	2.50%	102.918	2.177	1.27	100.54	17.22
ČR, 2.75 %, 29	105	6	2.75%	103.870	2.347	1.14	79.46	4.60
ČR, 1.00 %, 26	95	15	1.00%	92.376	2.048	1.54	143.15	7.30
ČR, VAR %, 27	90	11	VAR%	100.070	-11.861[1]	1.52	77.25	1.67
ČR, 2.75 %, 29	105	7	2.75%	105.046	2.225	1.37	155.70	6.27
ČR, 2.00 %, 33	103	7	2.00%	94.481	2.438	1.09	81.63	1.81
ČR, VAR %, 23	63	21	VAR%	103.985	-30.169[1]	1.56	140.45	9.29

Issue name	Issue / Tranche no.		Coupon	Average net price	Average yield to maturity (% p.a.)	Bid-to-cover ratio	Sold in the competitive part of the auction / max. nominal value offered (%)	Sold in the non-competitive part of the auction / max. nominal value offered (%)
ČR, 2.40 %, 25	89	19	2.40%	102.742	1.982	1.30	109.98	10.21
ČR, VAR %, 27	90	12	VAR%	100.538	-17.747[1]	4.35	100.00	11.14
ČR, 2.75 %, 29	105	8	2.75%	103.860	2.342	1.36	130.91	15.73
ČR, 4.70 %, 22	52	16	4.70%	112.060	1.576	1.50	42.82	1.99
ČR, 4.20 %, 36	49	14	4.20%	122.089	2.656	1.28	113.65	2.50
ČR, 0.75 %, 21	104	6	0.75%	97.751	1.704	1.34	100.00	0.00
ČR, 2.40 %, 25	89	20	2.40%	102.217	2.056	1.29	220.70	7.22
ČR, 0.25 %, 27	100	12	0.25%	86.265	2.061	3.04	100.00	11.45
ČR, 2.00 %, 33	103	8	2.00%	94.622	2.432	1.56	100.00	2.35
ČR, 2.75 %, 29	105	9	2.75%	105.615	2.153	1.33	111.00	8.02
ČR, 2.00 %, 33	103	9	2.00%	95.834	2.334	1.73	100.00	3.76
Average						**1.52**	**95.41**	**6.30**

[1] Average spread to PRIBOR in basis points (discount margin).
Source: MoF, CNB

Table 37: State Treasury Bills Issued in 2018

Issue No.	Maturity (Weeks)	Auction Date	Issue Date	Maturity Date	Max. Offered Nominal Amount	Total Placed Nominal Amount	Yield to Maturity (% p.a.)
776	13	4.1.	5.1.	6.4.2018	5,000,000,000	12,650,000,000	0.175
777	13	11.1.	12.1.	13.4.2018	5,000,000,000	22,358,000,000	0.050
778	13	18.1.	19.1.	20.4.2018	5,000,000,000	4,928,000,000	0.050
779	13	25.1.	26.1.	27.4.2018	5,000,000,000	10,850,000,000	0.200
780	13	1.2.	2.2.	4.5.2018	5,000,000,000	1,610,000,000	0.300
781	13	8.2.	9.2.	11.5.2018	5,000,000,000	7,650,000,000	0.400
782	13	15.2.	16.2.	18.5.2018	5,000,000,000	30,843,000,000	0.400
783	13	22.2.	23.2.	25.5.2018	5,000,000,000	9,488,000,000	0.400
784	26	1.3.	2.3.	31.8.2018	5,000,000,000	16,260,000,000	0.520
785	26	8.3.	9.3.	7.9.2018	5,000,000,000	17,288,000,000	0.540
786	39	15.3.	16.3.	14.12.2018	5,000,000,000	2,078,000,000	0.500
787	39	22.3.	23.3.	21.12.2018	5,000,000,000	126,000,000	0.500
788	26	5.4.	6.4.	5.10.2018	5,000,000,000	5,927,000,000	0.500
789	13	12.4.	13.4.	13.7.2018	5,000,000,000	3,324,000,000	0.500
790	26	19.4.	20.4.	19.10.2018	5,000,000,000	1,309,000,000	0.500
791	26	26.4.	27.4.	26.10.2018	5,000,000,000	2,263,000,000	0.500
792	26	3.5.	4.5.	2.11.2018	5,000,000,000	1,955,000,000	0.500
793	26	10.5.	11.5.	9.11.2018	5,000,000,000	3,185,000,000	0.500
794	26	17.5.	18.5.	16.11.2018	5,000,000,000	2,503,000,000	0.550
795	26	24.5.	25.5.	23.11.2018	5,000,000,000	2,051,000,000	0.570
796	26	31.5.	1.6.	30.11.2018	5,000,000,000	14,990,000,000	0.590
797	26	7.6.	8.6.	7.12.2018	5,000,000,000	844,000,000	0.550
798	26	14.6.	15.6.	14.12.2018	5,000,000,000	19,000,000	0.550
799	13	9.8.	10.8.	9.11.2018	5,000,000,000	3,449,000,000	0.995
800	13	13.9.	14.9.	14.12.2018	5,000,000,000	494,000,000	1.000
801	13	20.9.	21.9.	21.12.2018	5,000,000,000	1,340,000,000	0.937
802	8	11.10.	12.10.	7.12.2018	5,000,000,000	45,000,000	0.500
803	3	20.12.	21.12.	11.1.2019	3,000,000,000	2,650,000,000	-0.500
804	2	27.12.	28.12.	11.1.2019	2,000,000,000	1,500,000,000	-1.500
			Total			**183,977,000,000**	**0.363**[1]

[1] Average weighted yield to maturity of state treasury bills issued in 2018.
Source: MoF, CNB

Table 38: Savings Government Bonds Issued in 2018

Bond	Issue no.	Settlement date	Maturity date	Original maturity (years)	Nominal value
Inflation-linked savings government bond[1]	70	12/6	12/06/2019	7.0	18,260,801
Inflation-linked savings government bond[1]	83	12/6	12/06/2020	7.0	4,002,780
Inflation-linked savings government bond[1]	87	12/6	12/12/2020	7.0	21,748,434
Reinvestment savings government bond[1]	92	12/6	12/06/2019	5.0	12,493,298
Variable-rate savings government bond[1]	93	12/6	12/12/2020	6.5	116,609
Inflation-linked savings government bond[1]	70	12/12	12/06/2019	7.0	23,698,261
Inflation-linked savings government bond[1]	83	12/12	12/6/2020	7.0	4,960,349
Inflation-linked savings government bond[1]	87	12/12	12/12/2020	7.0	26,982,125
Variable-rate savings government bond[1]	93	12/12	12/12/2020	6.5	145,782
	Total				**112,408,439**

[1] Incl. tranches issued in the form of reinvestment of yields.
Source: MoF

Table 39a: Realized Lending Facilities in the Form of Repo Operations in 2018

Issue name	ISIN	Collateral nominal amount	Financial resources received	Financial resources paid[1]
ČR, 0.00 %, 20	CZ0001005011	3,915,000,000	3,856,085,500.00	3,855,945,879.89
ČR, 3.85 %, 21	CZ0001002851	840,000,000	936,918,655.55	936,900,422.00
ČR, 0.00 %, 22	CZ0001005029	50,000,000	47,621,000.00	47,620,074.04
ČR, 0.45 %, 23	CZ0001004600	175,000,000	167,092,133.56	167,090,509.05
ČR, 5.70 %, 24	CZ0001002547	300,000,000	371,433,500.00	371,426,277.68
ČR, 1.00 %, 26	CZ0001004469	800,000,000	755,917,143.84	755,903,718.56
ČR, 0.25 %, 27	CZ0001005037	931,000,000	814,996,882.32	814,983,455.12
ČR, VAR %, 27	CZ0001004105	758,000,000	766,995,283.34	766,976,580.14
ČR, 2.50 %, 28	CZ0001003859	1,980,000,000	2,088,925,325.00	2,088,880,017.66
ČR, 2.75 %, 29	CZ0001005375	300,000,000	318,725,910.96	318,722,302.26
ČR, 0.95 %, 30	CZ0001004477	1,700,000,000	1,470,505,500.00	1,470,476,906.84
ČR, 2.00 %, 33	CZ0001005243	340,000,000	323,505,908.22	323,499,617.82
Total		**12,089,000,000**	**11,918,722,742.79**	**11,918,425,761.06**

[1] Incl. financial resources from lending facilities realized in 2018, which has not been paid during this period.
Note: The average interest rate achieved under lending facilities during 2018 amounted to -0.07% p.a
Source: MoF

Table 39b: Realized Lending Facilities of Government Bonds in the Form of Collateralized Loans of Securities in 2018

Issue name	ISIN	Nominal value	Revenue[1]
ČR, 0.00 %, 20	CZ0001005011	1,040,000,000	72,671.71
ČR, VAR %, 20	CZ0001004113	440,000,000	55,490.95
ČR, 0.75 %, 21	CZ0001005367	350,000,000	28,474.78
ČR, 3.85 %, 21	CZ0001002851	4,715,000,000	993,084.42
ČR, 4.70 %, 22	CZ0001001945	1,937,000,000	408,485.79
ČR, VAR %, 23	CZ0001003123	141,000,000	9,959.19
ČR, 0.45 %, 23	CZ0001004600	637,000,000	75,754.58
ČR, 5.70 %, 24	CZ0001002547	3,187,000,000	1,113,852.87
ČR, 2.40 %, 25	CZ0001004253	1,487,000,000	195,989.48
ČR, 1.00 %, 26	CZ0001004469	4,979,000,000	988,127.54
ČR, 0.25 %, 27	CZ0001005037	9,426,000,000	2,367,260.93
ČR, VAR %, 27	CZ0001004105	3,339,000,000	404,220.13
ČR, 2.50 %, 28	CZ0001003859	4,838,000,000	1,123,023.86
ČR, 2.75 %, 29	CZ0001005375	340,000,000	54,962.69
ČR, 0.95 %, 30	CZ0001004477	2,092,000,000	589,876.74
ČR, 2.00 %, 33	CZ0001005243	400,000,000	18,129.45
ČR, 4.20 %, 36	CZ0001001796	180,000,000	32,207.54
ČR, 4.85 %, 57	CZ0001002059	46,000,000	23,037.48
Total		**39,574,000,000**	**8,554,610.13**

[1] Incl. financial resources from lending facilities realized in 2018, which has not been terminated during this period.
Source: MoF

Table 40: Realized Exchange Operations of Government Bonds in 2018

Settlement date	Tap-sale			Buy-back		
	Issue name	Nominal value	Average price	Issue name	Nominal value	Average price
1/6/2018	ČR, 0.95 %, 30	150,000,000	86.500	ČR, 5.00 %, 19	150,000,000	103.632
4/6/2018	ČR, 0.95 %, 30	200,000,000	86.500	ČR, 5.00 %, 19	200,000,000	103.597
17/7/2018	ČR, 0.25 %, 27	100,000,000	86.352	ČR, 5.00 %, 19	100,000,000	102.902
20/7/2018	ČR, 0.95 %, 30	35,000,000	85.992	ČR, 5.00 %, 19	35,000,000	102.869
23/7/2018	ČR, 0.25 %, 27	50,000,000	86.900	ČR, 5.00 %, 19	50,000,000	102.836
23/7/2018	ČR, 0.95 %, 30	50,000,000	86.100	ČR, 5.00 %, 19	50,000,000	102.836
25/7/2018	ČR, 0.25 %, 27	50,000,000	87.000	ČR, 5.00 %, 19	50,000,000	102.814
9/8/2018	ČR, 0.95 %, 30	200,000,000	86.131	ČR, 5.00 %, 19	200,000,000	102.486
13/8/2018	ČR, 0.95 %, 30	140,000,000	86.200	ČR, 5.00 %, 19	140,000,000	102.445
29/8/2018	ČR, 0.95 %, 30	50,000,000	87.500	ČR, 1.50 %, 19	50,000,000	100.286
29/8/2018	ČR, 0.95 %, 30	200,000,000	87.500	ČR, 5.00 %, 19	200,000,000	102.280
19/9/2018	ČR, 0.95 %, 30	200,000,000	87.200	ČR, 1.50 %, 19	200,000,000	100.273
4/10/2018	ČR, 0.25 %, 27	200,000,000	86.100	ČR, 1.50 %, 19	400,000,000	99.999
4/10/2018	ČR, 0.95 %, 30	300,000,000	86.820	ČR, 1.50 %, 19	600,000,000	99.999
5/10/2018	ČR, 0.25 %, 27	100,000,000	86.400	ČR, 1.50 %, 19	200,000,000	99.999
29/11/2018	ČR, 4.20 %, 36	50,000,000	124.050	ČR, 1.50 %, 19	50,000,000	99.772
4/12/2018	ČR, 4.20 %, 36	195,000,000	124.450	ČR, 1.50 %, 19	195,000,000	99.775
4/12/2018	ČR, 4.20 %, 36	155,000,000	124.450	ČR, 5.00 %, 19	155,000,000	101.119
7/12/2018	ČR, 4.85 %, 57	100,000,000	141.701	ČR, 1.50 %, 19	100,000,000	99.777
Total		**2,525,000,000**			**3,125,000,000**	

Source: MoF

Table 41: Tap Sales of Government Bonds in 2018

Issue name	Issue no.	Settlement date	Maturity date	Average price	Nominal value
ČR, 4.85 %, 57	53	20/2/2018	26/11/2057	146.800	90,000,000
ČR, 0.95 %, 30	94	27/2/2018	15/5/2030	87.700	200,000,000
ČR, 4.20 %, 36	49	27/2/2018	4/12/2036	127.500	115,000,000
ČR, 4.85 %, 57	53	27/2/2018	26/11/2057	146.800	50,000,000
ČR, 0.95 %, 30	94	28/2/2018	15/5/2030	87.850	300,000,000
ČR, 4.20 %, 36	49	29/5/2018	4/12/2036	123.952	50,000,000
ČR, 4.85 %, 57	53	29/5/2018	26/11/2057	141.498	20,000,000
ČR, 4.70 %, 22	52	31/5/2018	12/9/2022	114.724	11,000,000
ČR, 4.20 %, 36	49	31/5/2018	4/12/2036	124.417	100,000,000
ČR, 4.20 %, 36	49	1/6/2018	4/12/2036	124.486	50,000,000
ČR, 4.70 %, 22	52	1/6/2018	12/9/2022	114.754	100,000,000
ČR, 4.20 %, 36	49	5/6/2018	4/12/2036	124.486	70,000,000
ČR, 4.70 %, 22	52	20/6/2018	12/9/2022	113.826	400,000,000
ČR, 4.70 %, 22	52	27/6/2018	12/9/2022	113.600	200,000,000
ČR, VAR %, 20	91	28/6/2018	9/12/2020	100.625	150,000,000
ČR, 4.70 %, 22	52	29/6/2018	12/9/2022	113.600	100,000,000
ČR, 4.70 %, 22	52	4/7/2018	12/9/2022	113.450	330,000,000
ČR, 4.70 %, 22	52	11/7/2018	12/9/2022	113.300	400,000,000
ČR, 4.70 %, 22	52	12/7/2018	12/9/2022	113.300	140,000,000
ČR, 4.70 %, 22	52	18/7/2018	12/9/2022	113.450	200,000,000
ČR, 4.70 %, 22	52	20/7/2018	12/9/2022	113.600	50,000,000
ČR, 2.40 %, 25	89	31/7/2018	17/9/2025	103.364	200,000,000
ČR, VAR %, 27	90	31/7/2018	19/11/2027	100.418	500,000,000
ČR, 4.85 %, 57	53	27/8/2018	26/11/2057	138.440	100,000,000
ČR, 4.20 %, 36	49	28/8/2018	4/12/2036	122.500	100,000,000
ČR, 4.20 %, 36	49	29/8/2018	4/12/2036	122.700	25,000,000
ČR, 4.20 %, 36	49	27/9/2018	4/12/2036	120.600	125,000,000
ČR, 4.20 %, 36	49	1/10/2018	4/12/2036	120.600	80,000,000
ČR, 0.00 %, 20	101	31/10/2018	10/2/2020	98.360	500,000,000
ČR, 0.00 %, 20	101	2/11/2018	10/2/2020	98.393	500,000,000
ČR, 0.00 %, 20	101	6/11/2018	10/2/2020	98.410	150,000,000
ČR, 0.00 %, 20	101	9/11/2018	10/2/2020	98.430	110,000,000
ČR, 2.40 %, 25	89	20/12/2018	17/9/2025	103.000	25,000,000
ČR, 2.75 %, 29	105	21/12/2018	23/7/2029	106.300	100,000,000
ČR, 0.00 %, 20	101	27/12/2018	10/2/2020	98.300	97,000,000
ČR, 2.40 %, 25	89	31/12/2018	17/9/2025	103.180	500,000,000
		Total			**6,238,000,000**

Source: MoF

Table 42: Issues and Redemptions on Savings Government Bonds

CZK bn	2012	2013	2014	2015	2016	2017	2018
Total nominal value of savings government bonds issued	45.3	38.8	1.4	0.0	0.0	0.0	0.0
Reinvestment of yields	0.1	0.3	0.7	1.0	1.0	0.6	0.1
Early redemptions	0.1	0.2	0.3	0.4	0.1	0.1	0.0
Early redemptions (% savings government bonds outstanding as at the end of the previous year)	0.4	0.4	0.4	0.5	0.2	0.2	0.1
Regular redemptions	9.5	7.5	11.6	11.5	30.0	16.8	16.3
Total redemptions	9.6	7.7	11.9	11.9	30.2	16.9	16.4
Savings government bonds outstanding	56.2	87.6	77.8	66.9	37.8	21.5	5.2

Source: MoF

Table 43: Detailed Overview of Budgetary Transfers from the State Debt Chapter Realized in 2018

Chapter number	Chapter	Fund allocation	Amount (CZK)
329	Ministry of Agriculture	Compensation for damage caused by spring frost and drought in 2017	300,000,000
322	Ministry of Industry and Trade	Provision of repayable financial assistance from ČVUT associated with GE Aviation's investment	59,414,328
313	Ministry of Labour and Social Affairs	Increase in spending on national active labor market policy	500,000,000
304	The Office of the Government	Increase in spending on non-investment transfers under the Drugs Policy Program	50,000,000
306	Ministry of Foreign Affairs	Compensation for increased cost of living associated with a job function performance abroad	100,000,000
334	Ministry of Culture	Restoration of the roof of Large infantry barracks in Terezín	3,000,000
334	Ministry of Culture	Project Narozeni 1918	11,200,000
329	Ministry of Agriculture	Mitigating of damage caused by drought on agricultural crops and planting material of forest trees in 2018	950,000,000
329	Ministry of Agriculture	Forestry support - struggle with bark beetle calamity	200,000,000
329	Ministry of Agriculture	Support for the agrofoodcomplex - support of subsidy programs within national subsidies	350,000,000
343	The Office for Personal Data Protection	Ensuring the necessary restoration and sustainability of the base registers project	10,000,000
314	Ministry of Interior	Ensuring the necessary restoration and sustainability of the base registers project	140,000,000
314	Ministry of Interior	Payment of pension benefits and special social benefits to members of the armed forces	125,000,000
398	General Treasury Management	Covering the lack of funds to cover the own resources contributions to the EU budget in 2018	522,000,000
334	Ministry of Culture	Project Pixar - 30 let animace	9,000,000
		Total	**3,329,614,328**

Source: MoF

Key Information 2018

- State debt at the level of CZK 1,622.0 bn, i.e. 30.5% GDP
- Share of the state debt, which is not connected to any net interest expenditure: 11.0%
- Financing needs: CZK 304.4 bn
- Gross borrowing requirement: CZK 303.1 bn
- Gross issue of T-Bonds on domestic market: CZK 259.2 bn
- Gross issue of T-Bonds on foreign markets: CZK 0.0
- Gross issue of savings government bonds: CZK 0.1 bn
- Redemptions of T-Bonds issued on domestic market: CZK 187.5 bn
- Redemptions of T-Bonds issued on foreign markets: EUR 2.0 bn
- Redemptions of savings government bonds: CZK 16.4 bn
- Average weighted time to maturity of T-Bonds sold on domestic market: 9.1 years
- Average weighted yield to maturity of T-Bonds sold on domestic market: 1.88% p.a.
- Average weighted yield to maturity of T-Bills sold in auctions: 0.36% p.a.
- Net revenue within liquidity management and borrowing operations with negative yield: CZK 2.3 bn
- Average time to maturity of state debt: 5.4 years
- Short-term state debt: 17.8%
- Average time to re-fixing of state debt: 4.7 years
- Interest re-fixing of the debt portfolio within 1 year: 33.6%

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